Housing Development Capacity Assessment 2021

Queenstown Lakes District

15 September 2021 – Final

m.e consulting

Otago Regional Council

QUEENSTOWN LAKES DISTRICT COUNCIL

Housing Development Capacity Assessment

Queenstown Lakes District

Prepared for

Queenstown Lakes District Council
and
Otago Regional Council

Document reference: QLDC 024.21/Report/QLD HBA 2021 Main Report FINAL 150921.docs

Date of this version: 15 September 2021

Report authors: Douglas Fairgray, Susan Fairgray, Natalie Hampson

Director approval: Natalie Hampson (15 September 2021)

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Executive Summary

This report has been prepared to provide a robust assessment of Queenstown Lakes District's housing market in accordance with the requirements of the National Policy Statement on Urban Development 2020 (NPS-UD). It includes a detailed analysis of housing demand and supply patterns, including recent trends and future projections of demand over the short, medium, and long term (2020-2050). It quantifies capacity for additional housing development that is commercially feasible, serviced by infrastructure and reasonably expected to be realised. It addresses the sufficiency of that capacity to meet projected future demand for additional dwellings and it discusses the impact of Council planning and infrastructure on housing affordability and the competitiveness of the housing market.

The key patterns of total resident dwelling and holiday home demand by location over the short, medium, and long term are contained in Council's preferred High Growth projections released in July 2020. This research has extended those projections to distinguish projected demand for housing in the district's defined urban environment from demand directed to the rural environment. Modelling has also been carried out to distinguish current and future demand in each urban environment location by attached and detached housing types, using Census 2018 data and assumptions around shifting housing trends (locally and nationally).

Allowance is made for a long term demand trend away from detached dwellings toward attached dwellings of around 2.3% per annum. This would see total long-term urban dwelling demand growth split 49% for attached dwellings and 51% for detached dwellings (excluding any margin on top of demand required by the NPS-UD). When combined with the existing housing estate (which is still dominated by detached housing), by 2050, attached housing could make up an estimated 31% of the total urban environment (compared to just 16% now).

There will be important but not huge shifts in the structure of housing demand over the next 30 years. One-Person and Couple households are projected to make up a greater share of the housing market over the long term than they do currently. With a changing household structure comes changes in the structure of household incomes over time. Lower and lower-middle income households are expected to account for a greater share of future housing demand (25% in the long term compared with 20% currently). Households earning more than $50,000 would still be in the majority (76%), but a less significant share than currently. High income earners (i.e., those with household incomes greater than $100,000) would make up a lesser share in the future, albeit projected to be around 45% of the total by 2050. Home ownership patterns for different segments of the market have been held constant, with any changes in future ownership structure related to shifts in household and income structures over time. This would see ownership in the resident community increase from 64% to an estimated 70% (2020-2050).

However, the increase in the size of demand is probably the most important change, with every segment of the housing market larger in the medium and long term than it is currently, placing greater demand on the housing estate. In the long term, the approximate projected district wide housing demand is for another

16,300 dwellings to house the resident population, an increase of some 99% by 2050. The projected increase in total dwellings is just over 17,000, with holiday dwellings increasing by 14% over the long term. In the urban environment, long term total dwelling growth is projected to increase by nearly 16,500 (accounting for 97% of total district housing growth), or by 19,200 inclusive of the NPS-UD competitiveness margins.

The demand for dwellings will be shared over all locations in the urban (and rural environment), although not evenly. The projections direct the greatest quantum of long term urban demand to the Wānaka Town Centre (which includes Albert Town), followed by the Southern Corridor, Frankton, the Eastern Corridor, and the Queenstown Town Centre (which includes Sunshine Bay/Fernhill, Frankton Arm and Gorge Road).

The Operative and Proposed District Plans, combined with the Draft Spatial Plan (indicative urban expansion areas only), [1] enable significant zoned dwelling capacity to accommodate housing growth across the urban environment (based on greenfield capacity plus the maximum of infill and redevelopment capacity)[2] – nearly 48,000 additional dwellings in the medium term (66,670 dwellings including existing houses), increasing to nearly 65,000 additional dwellings in the long term (or 83,260 dwellings including existing houses). An estimated 67% of this additional capacity would be commercially feasible to develop in the medium term (based on current prices and construction costs), and 80% would be commercially feasible by 2050 (capacity of just over 51,300 additional dwellings or 70,130 total dwellings); more than sufficient capacity to meet projected demand in all locations (Figure A).

Modelling has indicated that land transport constraints on key State Highway bridges significantly reduce (and in some cases eliminate) feasible capacity in some locations (particularly the Eastern and Southern Corridor), but not others. Of the total commercially feasible capacity in the urban environment, an estimated 27% is also infrastructure serviced in the medium term and 38% is feasible and infrastructure serviced in the long term (capacity of just over 19,720 additional dwellings to cater for demand growth, or total capacity including existing serviced houses of 38,480). That is capacity that is serviced by planned Three Waters and land transport infrastructure, including key bridges on the State Highway network.[3]

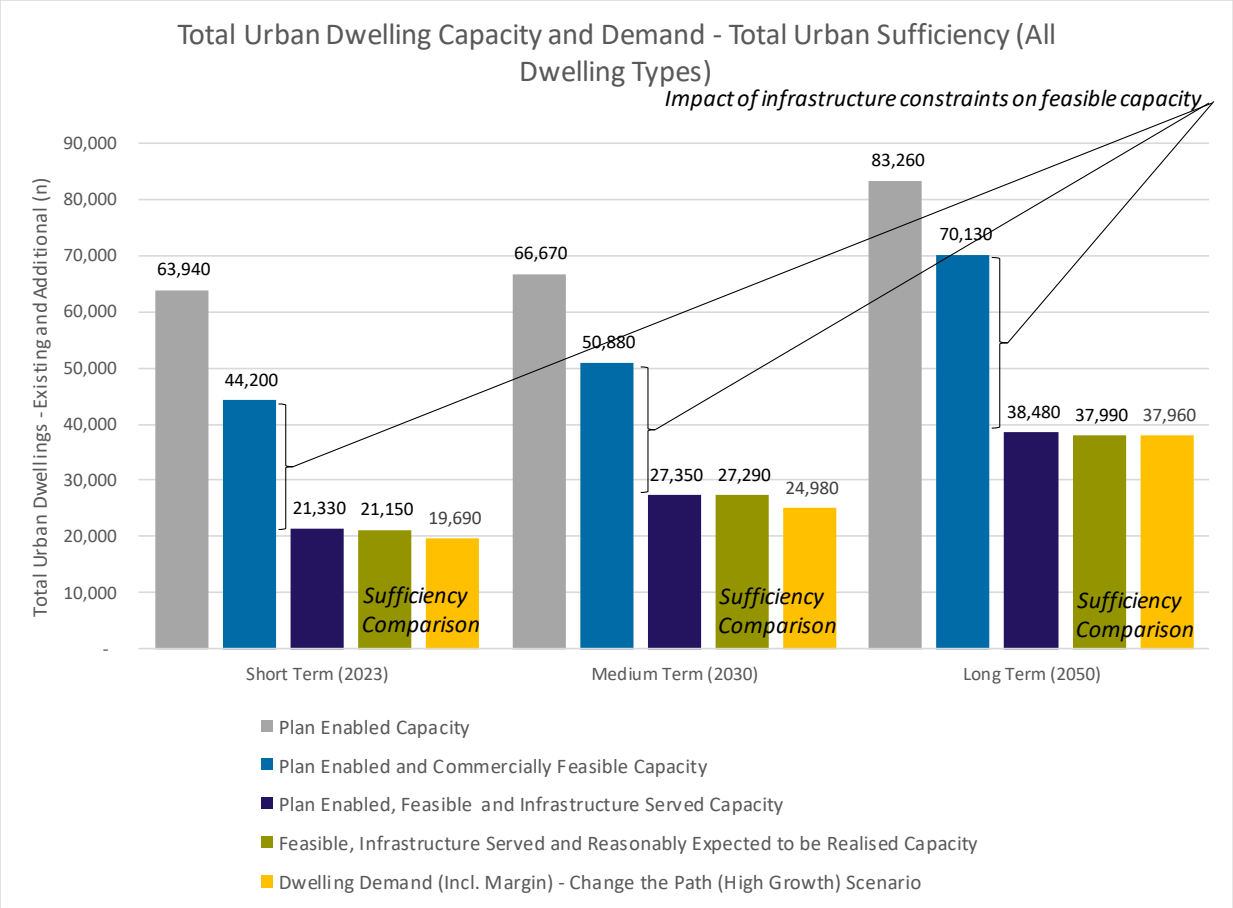
Feasible and reasonably expected to be realised dwelling capacity ("RER") is slightly lower again once the expected yields and densities of developments, particularly in some greenfield areas, is factored in. Overall, capacity of just over 8,500 additional dwellings is estimated to be feasible, serviced and expected to be realised in the medium term, increasing to over 19,200 additional dwellings in the long term (37,990 total dwellings including existing houses). As with all the capacity estimates, this is based on greenfield capacity and the maximum of infill or redevelopment capacity (Figure A).

[1] Significant infill and redevelopment is also envisaged in the Priority Development Areas of the Spatial Plan. A very rough estimate predicts this could increase density by an additional 10,000 houses. Infill capacity of the draft Spatial Plan has not been included in this assessment as these areas need to be investigated in more detail. They will form part of the next update of the HBA.

[2] The maximum is calculated at the individual parcel level and these are then aggregated to get the total for each location.

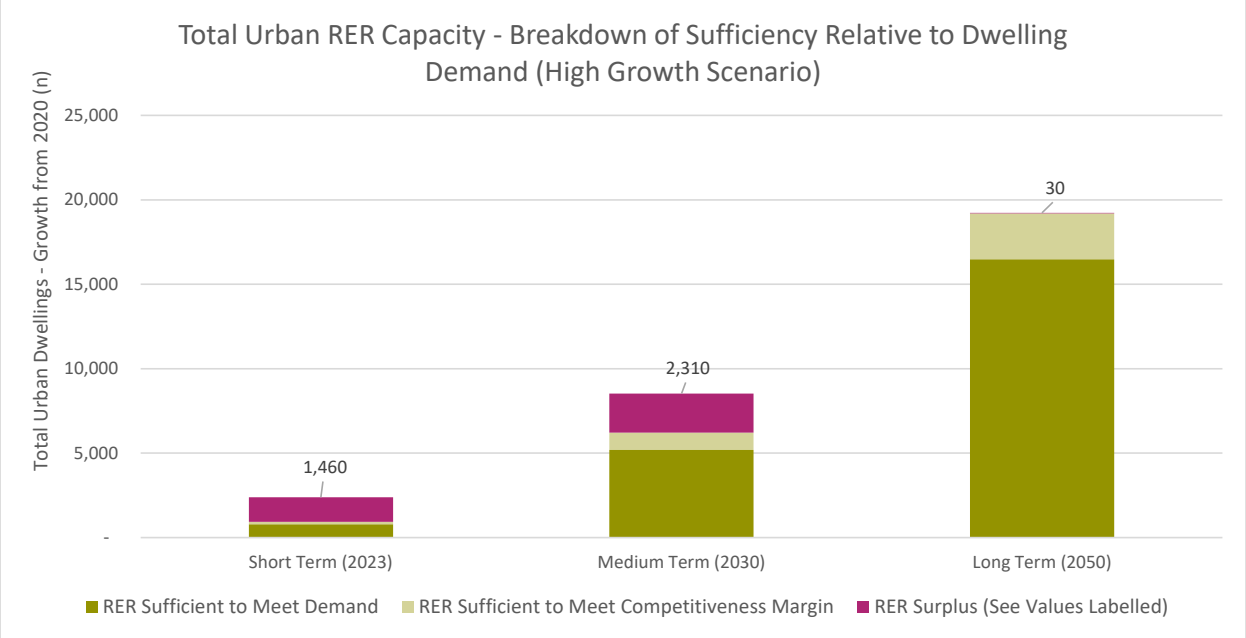
[3] Due to timings, the 30Y infrastructure strategy, and draft Spatial Plan are not fully integrated. So, what may be an infrastructure constraint for this HBA may not be in the future once the timings of these documents have been synchronized.

Figure A – Urban Environment Dwelling Capacity Assessment Compared with Dwelling Demand



Relative to projected dwelling demand across the urban environment (inclusive of a competitiveness margin of 20% in the short-medium term and 15% in the long term), this RER capacity is sufficient to meet total projected demand in the medium term (there is surplus capacity of 2,310 dwellings). The total urban capacity is also sufficient (just) to meet projected long term demand. This satisfies a core requirement of the NPS-UD and is summarised in Figure B below.

Figure B - Summary of Sufficiency of Urban Dwelling Capacity (All Types) in Queenstown Lakes District



At a more detailed level, Wakatipu Ward shows a very minor shortfall of housing capacity (attributable to the inclusion of the margin and not demand itself), while the Wānaka Ward shows a very minor surplus (above the competitiveness margin). In all time periods, shortfalls in some locations can be met by surpluses in a range of other locations nearby which means that there is no scarcity of supply, and a competitive market is enabled. Key long term urban environment sufficiency results by location are summarised in Figure C below.

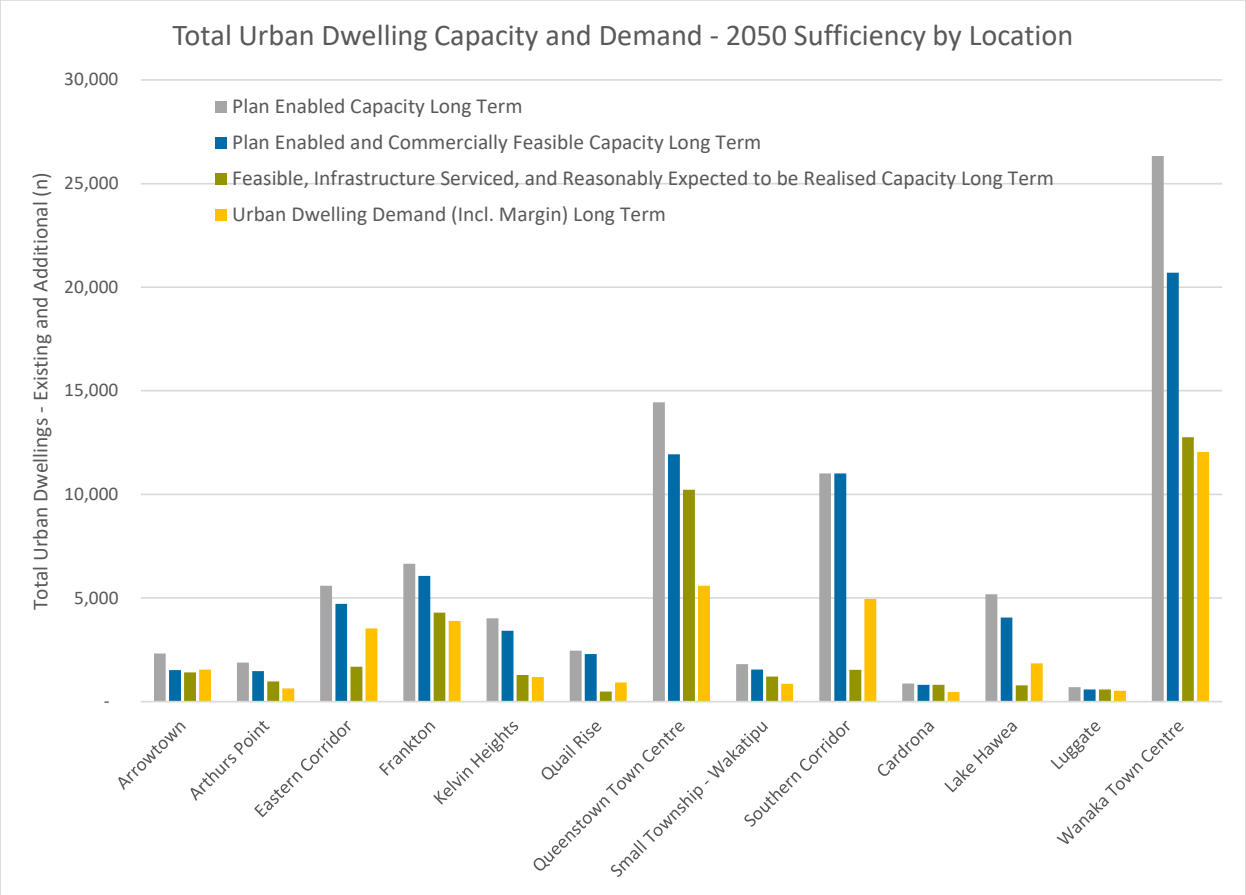
Across the total urban environment, there is a very minor shortfall in detached housing capacity projected, but a slightly larger, but still very minor surplus of attached housing in the long term (hence the overall minor surplus). Again, this is attributable to the inclusion of the margin as capacity is sufficient relative to demand exclusive of the margin.

Wakatipu Ward indicates potential for a shortfall of detached housing, with an equivalent surplus of attached housing, while the opposite is indicated in the Wānaka Ward. If modelled infrastructure (land transport) constraints were removed for the Kawarau Falls Bridge, the additional feasible capacity able to be realised in the Southern Corridor would resolve this shortage of detached housing (and a long term surplus would be likely for the Wakatipu Ward). If modelled constraints on the Shotover Bridge were also removed, the additional feasible capacity able to be realised in the Eastern Corridor would further increase the long term sufficiency of dwelling capacity in the Wakatipu Ward across both dwelling types.

In the Wānaka Ward, the shortfall of reasonable expected attached housing capacity is driven more by the current zoning structure and the relative mix of greenfield versus existing urban area development opportunities, than it is a land transport issue (which only impacts on the growth potential of Lake Hawea, particularly in the long term based on modelling assumptions).

As capacity in the rural environment is also sufficient to meet projected long term dwelling demand, this research finds that there is at least sufficient feasible, serviced and reasonably expected to be realised capacity to meet projected dwelling growth across the total district out to 2050.

Figure C - Summary of Long Term Sufficiency of Urban Dwelling Capacity (All Types) by Location in Queenstown Lakes District[4]



In terms of whether there is sufficient feasible, serviced and reasonably expected to be realised housing capacity in price bands affordable for non-owner resident households to buy, the current situation is that there is a shortfall of housing in price bands below $500,000 (-2,350 affordable dwellings in 2020, with the majority of these households in rental accommodation) (Figure D).

Over time, house price growth is expected to be faster than growth in real incomes in the district and housing affordability is projected to decline over the long term to a shortfall of 6,960 affordable dwellings by 2050 for non-owner resident households. While in the long term, new dwellings expected to be built are concentrated in price bands more affordable to non-owner resident households, there is a still insufficient feasible and infrastructure ready capacity expected to be realised in the lowest price bands. This is particularly in price bands up to $600,000[5] but also includes small-moderate shortfalls of dwelling for those that could afford to pay up to $1.2m (Figure E). Many of these resident households with lower incomes that could not afford to buy in the district in the future would be expected rent, as they do now.[6]

[4] Feasible and infrastructure ready capacity is not shown here, but is largely the same as RER capacity shown in each location.

[5] Shown by the large gaps in existing and expected future built supply (bars) below the resident demand line to the left of the graph, with these gaps much larger than in 2020.

[6] Figures C and D do not show rental affordability, or affordability for those already in the housing market.

Figure D - Current (2020) Shortfall of Dwellings Affordable to Resident Non-Owner Households – Total District

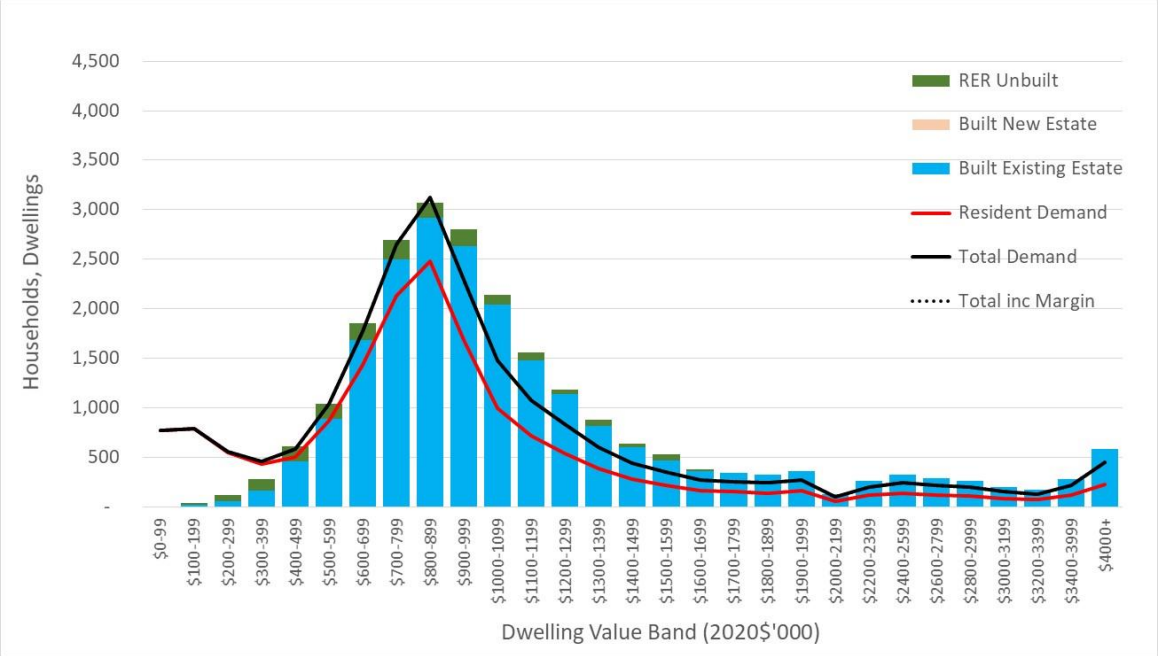
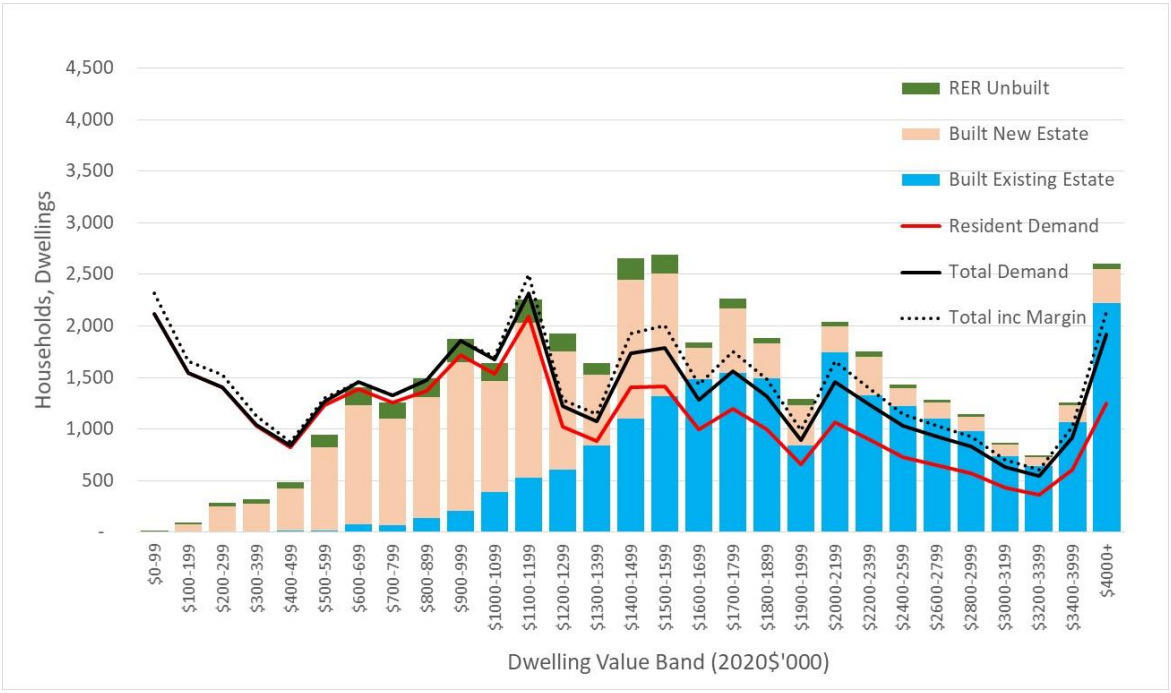


Figure E - Long Term (2050) Shortfall of Dwellings Affordable to Resident Non-Owner Households – Total District, Change the Path Future, Base Case Housing Price Growth



Importantly, this research has shown that because there is sufficient long term RER housing capacity in the total urban environment (across all price bands) (Figure B above) – spread over a range of locations (Figure C above) and providing for a mix of dwelling types - Council planning and infrastructure is not putting any

upwards pressure on dwelling prices. Rising prices and therefore declining housing affordability is being driven by a range of other local and national factors that are not impacted or influenced by the District Plan and Council's infrastructure funding and planning. This research concludes that Council's planning (including through the District Plan/Proposed District Plan, Long Term Plan, Infrastructure Strategies and Draft Spatial Plan) satisfies the requirements of the NPS-UD to provide at least sufficient development capacity to meet expected demand for urban housing in the short, medium, and long term out to 2050. This has been based on Council's preferred dwelling growth projection which is a high growth scenario (inclusive of a competitiveness margin). As part of the research, feedback was collected from stakeholders in the district's housing development sector. Results of that survey were consistent with the findings of this desktop research.

Several recommendations for future planning and decision making are informed by this research. In the short term, these include continuation of initiatives and incentives to support the supply of affordable housing in the district, and further assessment to examine the issues and opportunities for realising future growth potential zoned and/or identified in Lake Hawea, the Eastern Corridor and the Southern Corridor, which are all shown in modelling to be constrained by land transport infrastructure. The Eastern and Southern Corridor are priority development areas in the Draft Spatial Plan. These areas will be looked at in more detail as part of the implementation of the Spatial Plan.

At a broader level, it is recommended that Council focus on strategies which will help maintain current housing market conditions, which have shown to be increasingly delivering attached housing and developments that use zoned land more efficiently, which is a specific outcome of the Draft Spatial Plan. This will be important to meet changing housing needs over the long term. In addition, it will be important to further refine the indicative long term urban expansion areas identified in the Draft Spatial Plan and fine tune the next additional capacity for the district, to cater for growth beyond the NPS-UD long term. Given the ongoing evolution of the district's housing and property market over the next 30 years, this opportunity will include options for intensification of existing urban areas.

1 Introduction

This report is the Housing Development Capacity Assessment ("HBA") 2021 for Queenstown Lakes District ("QLD" or "the district"). The requirement for this three-yearly report is set out in the National Policy Statement for Urban Development 2020 ("NPS-UD"). The report complies with the requirement for Tier 2 local authorities to assess the demand for housing land in urban environments, and the development capacity that is sufficient to meet that demand in its district in the short, medium, and long term.

1.1 Urban Growth in QLD – Key Issues and Policy Context

1.1.1 Growth

Leading up to the COVID-19 pandemic, QLD 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. In addition to high levels of migration over the last 2-3 years, there has also been an increase of around 1,000 new houses per year and over 1,000 new accommodation units built or currently being constructed. The QLD population grew by approximately 27,000 over the past 30 years (increasing from 15,000 to 42,000 residents).

The impact of COVID-19 has had a profound impact on QLD. However, it is believed that QLD will continue to grow strongly, and visitors will return, as it remains an attractive place to live, work and visit. These are the key assumptions that have underpinned the Council July 2020 demand projections. Post-recovery the long term average net increase in migration is predicted to be 1,100 per annum over the next 30 years and visitor growth is projected to be 1-2% per year (consistent with previous projections). QLDC July 2020 projections predict an additional 35,000 residents over the next 30 years – a doubling of the current population and growing at a slightly higher rate than the previous 30 years.

1.1.2 Protected Areas and Constraints

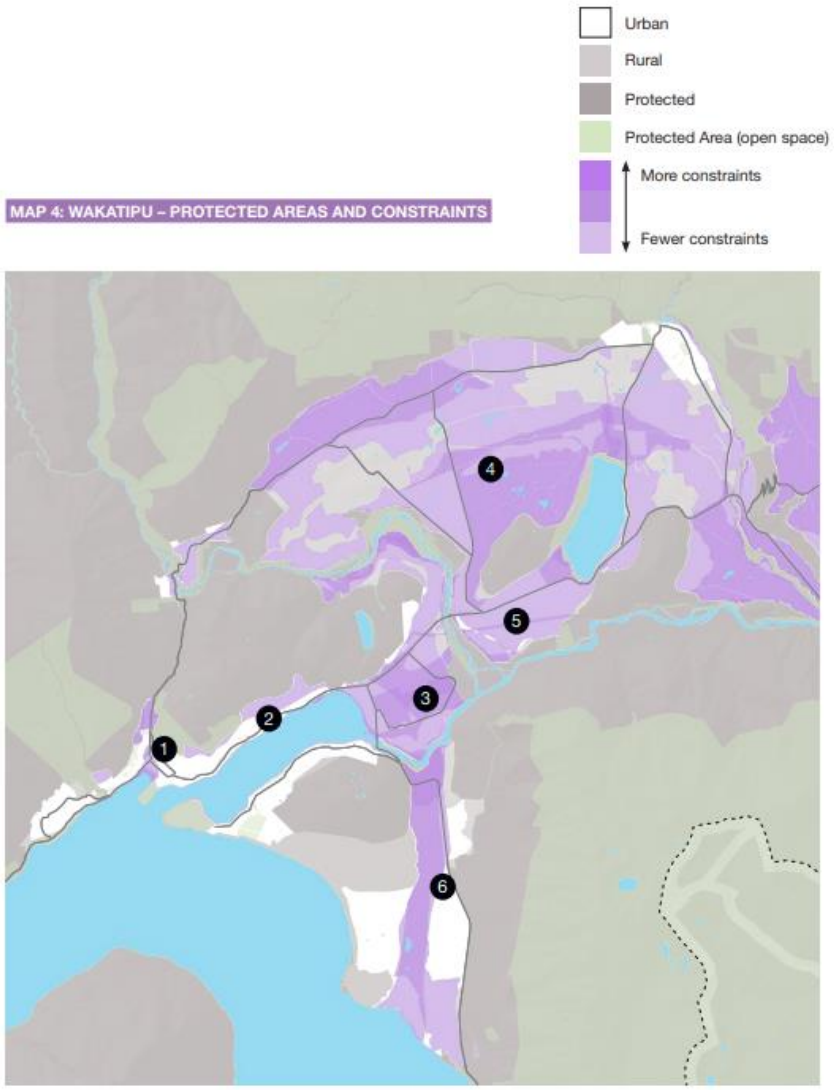
Much of the district is subject to constraints and protections that limit further urban development. Approximately 97% of the district is considered to be located within an Outstanding Natural Landscape ("ONL") or Outstanding Natural Feature ("ONF") – the protection of which is a matter of national importance under the RMA. The alpine terrain, extent of ONLs and ONFs as well as the provision of open space limit urban development mostly to the Wakatipu and Upper Clutha areas.

The location of areas that hold natural and cultural values, or are subject to hazards, further impact where and how urban development and growth may occur in the district. There are also extensive areas of public conservation estate and land subject to QEII trust covenants, such as Motatapu Valley, that contribute to the extent of protected land. The Wakatipu Basin and the Upper Clutha area are the largest locations that are not categorised as protected areas. However, within these locations substantial areas are subject to development constraints.

1.1.3 Wakatipu Ward – Implications for Urban Development

The expansion of the Queenstown Town Centre (location 1 in Figure 1.1) and corridor to Frankton (location 2) is constrained by topography, ONLs and ONFs identified in the District Plan. In respect of location 1, geotechnical hazards and heritage values may limit or add cost to development in the centre of town towards Gorge Road. There are fewer constraints along the corridor to Frankton, although the topography limits expansion of the urban area. The current Air Noise Boundary of the international airport in Frankton and the national electricity grid transmission corridor restrict some development outcomes in parts of Frankton, the Frankton to Queenstown Corridor and the Eastern Corridor (locations 3 and 5 below). The landscape and rural character of the Wakatipu Basin (location 4) are highly valued by the community and visitors, and further urbanisation in this area may compromise this.

Figure 1.1 – Map of Wakatipu Ward Projected Areas and Constraints (Source: Draft Spatial Plan)

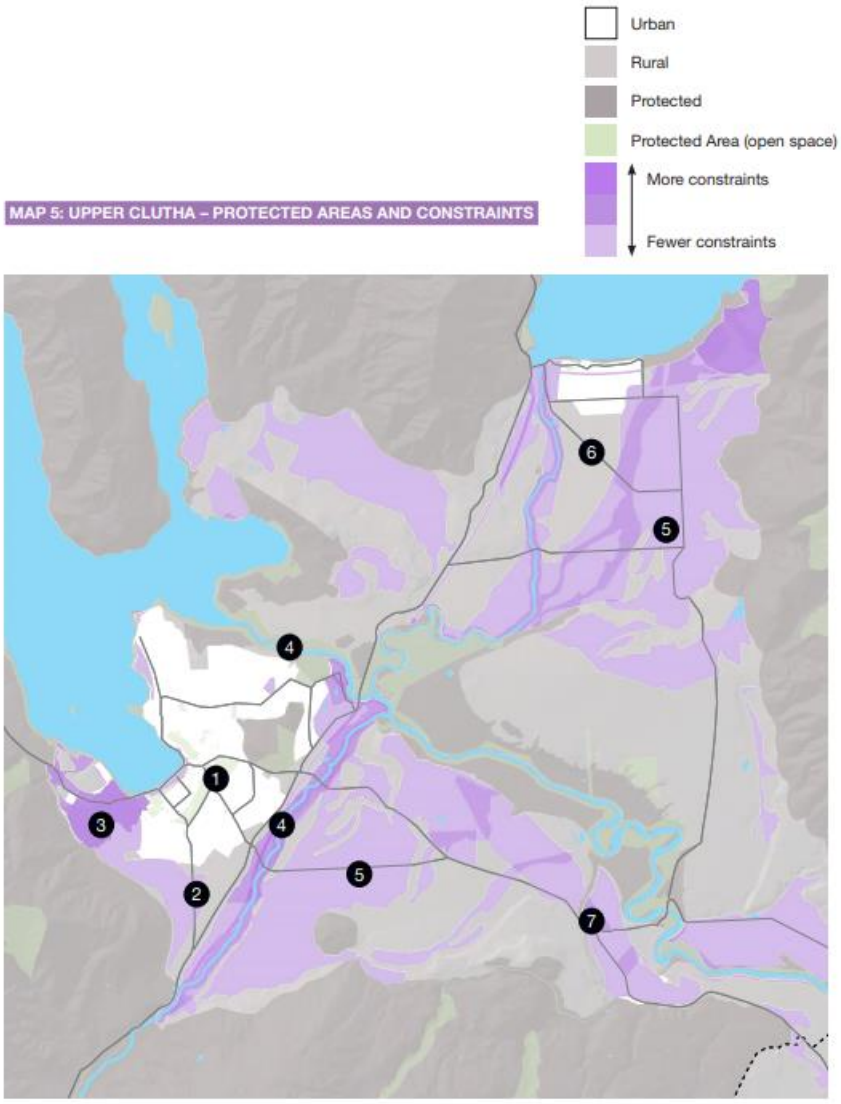


Note: The constraint mapping shows the number of layers present in each area (more or fewer).
It does not represent the severity of risk or ability to mitigate.
The mapping is based on existing information and data that was available to the Partnership.
Refer to Spatial Plan Scenario Analysis Report, Appendix A for further details.

There are two main opportunities for expansion of the urban area in Wakatipu - eastwards, towards Lake Hayes / Waiwhakaata (location 5 referred to in this HBA as the Eastern Corridor), and south of the Kawarau River (location 6, referred to in this HBA as the Southern Corridor). Both locations have a range of cultural values and hazards that require further investigation and more detailed planning to confirm their suitability for urban development.

1.1.4 Wānaka Ward – Implications for Urban Development

Figure 1.2 – Map of Wānaka Ward Projected Areas and Constraints (Source: Draft Spatial Plan)



Note: The constraint mapping shows the number of layers present in each area (more or fewer).
It does not represent the severity of risk or ability to mitigate.
The mapping is based on existing information and data that was available to the Partnership.
Refer to Spatial Plan Scenario Analysis Report, Appendix A for further details.

The existing urban area of Wānaka (location 1 in Figure 1.2) is relatively free of constraints. There are few constraints to expanding Wānaka south towards Cardrona Valley (location 2) up to the ONL boundary. Geotechnical, flooding and contamination hazards limit expanding to the west towards Waterfall Creek (location 3). The Cardrona / Ōrau and Clutha / Mata-Au Rivers (location 4) present clear boundaries to the expansion of Wānaka and are subject to a range of natural and cultural values. Areas of potentially

productive soils are located east of the Cardrona River and across Hāwea Flat (location 5). Flood risk limits where Hāwea could grow, with opportunities for expansion immediately south (location 6). The proximity to Wānaka Airport potentially restricts expansion of Luggate towards the north-east (location 7).

1.1.5 Zoning

The district plan consists of two volumes. The relationship between the Operative District Plan ("ODP") and Proposed District Plan ("PDP") is set out in Section 1.1B of the PDP.[7]

The PDP provides for residential development within the urban environment (Part 3 of the PDP). Residential zones are contained within the Urban Growth Boundary ("UGB"), which functions to focus and contain urban development, assisting to protect the district's landscapes.

The residential zones provide for a range of densities. The High Density Residential zone provides a 450m² minimum lot size with allowance for multi-unit development; the Medium Density Residential zone provides a minimum lot size of 250m², anticipating town-house and duplex type development; the Lower Density Suburban Residential zone provides a 450m² minimum lot size where stand-alone residences are more typical with some allowances for residential flats; and the Large Lot Residential zone provides lower density of between 2000m² and 4000m² minimum lot size, and acts as a buffer between the urban environments and rural zones.

Settlements are located within and outside of UGBs and surrounded by rural areas, enable low density residential (800m²) living. Settlements may also include Commercial Precincts.

Commercial zones are also within the urban environment and UGB. Queenstown and Wānaka are the town centres that are the key commercial, civic and cultural hubs of the district. Frankton serves as the major commercial and service centre for the community, along with community facilities, through a mix of Business Mixed Use zoning (which also allows residential development), Industrial and Service zoning, and Open Space zoning. Big box retail is provided in the Three Parks Commercial zone along with business areas to service Wānaka and its surrounds. Other commercial areas include Arrowtown Town Centre, various Local Shopping Centres, and areas of Business Mixed Use zoning. Industrial areas are located in Wānaka, Frankton, Arrowtown, and Coneburn. The Airport zone covers both Queenstown and Wānaka airports and provides for freight and industrial activities along with airport related activities.

Within the rural environment (Part 4 of the PDP), the focus is on development occurring in areas where the landscape is able to absorb change. Rural living opportunities are provided within the Rural Residential and Rural Lifestyle Zones, and the Wakatipu Basin Lifestyle Precinct subzone. Outside of these rural living areas, residential development is generally limited to a single building platform per site allowing only one residential unit and, in some instances, a residential flat. The location of building platforms is carefully considered to minimise impact on the district's landscapes, in particular the ONFs and ONLs, which make up over 97% of the district. The Gibbston Character zone provides primarily for viticulture and associated viticulture activities with residential development managed in a similar way to the Rural Zone.

In addition, both the ODP & PDP provides for a number of special zones that enable urban residential development, the ODP includes: Shotover Country, Meadow Park, Penrith Park, Kingston Village, Quail Rise

[7] https://www.qldc.govt.nz/media/r0ynzlgu/pdp-chapter-01-introduction-apr-2021.pdf

and Northlake.[8] There is also; Mount Cardrona Station, Remarkables Park, and Frankton Flats B which are mixed use (either visitor accommodation or commercial) but also include a residential development component. These ODP special zones are due for review, but it is unclear when that review will take place.

Within the PDP, the Jacks Point Zone provides for predominantly residential development plus a mixture of other activities such as commercial and visitor accommodation, more limited residential development is enabled in Gibbston Valley Resort zone, Waterfall Park, and Millbrook special zones. The Rural Visitor Zone does not anticipate residential activities. The intention of these special zones is to provide for visitors through accommodation and related visitor activities.

In addition to the above, there are also a number of Special Housing Areas ("SHAs"). These are consented developments in the rural-urban fringe that do not form part of the defined urban environment (due to having an underlying rural or rural lifestyle zone) and yet deliver urban density housing. Nine of the approved 11 SHA's are proceeding and are expected to deliver approximately 1,500 residential sections and 550 retirement units when complete. More information on the consented SHA's can be viewed on QLDC's website[9].

1.1.6 Nature of Growth

Housing growth numbers have been increasing steadily, with 2,691[10] housing units delivered since the 2017 HBA. Growth is occurring in multiple locations, however the housing stock being delivered is predominantly within the larger greenfield areas, such as Shotover Country, Jacks Point, Hanley Downs, Northlake and Hāwea. These larger areas are typically delivering standalone houses.

Other growth areas of note include the Remarkables Park Special Zone, Frankton Flats B and Three Parks. These are zoned for mixed uses such as; commercial, recreation, visitor accommodation and residential, and have predominantly delivered non-residential development since 2017, with the Wakatipu Ward zones delivering a small amount of attached style housing, albeit at a noticeably slower rate when compared to the greenfield developments in the district. As per the 2017 HBA reporting, these growth areas contain a significant proportion of the district's available greenfield capacity but are also tied up with a small number of landowners.

From a review of building consents, some areas, such as Shotover Country and the Jacks Point Resort Zone ("JPRZ") - consisting of Jacks Point and Hanley Downs, are recording a noticeable increase in residential flats. With 35% of the building consents issued within the JPRZ now including a residential flat build. Analysis shows that these numbers have been increasing year on year, with 0% of house builds including a residential flat in 2017, to 63% of house builds in the first two quarters of 2020 including a residential flat. Shotover Country was developed earlier than the JPRZ (and is now almost fully developed), 28% of existing housing stock including a residential flat.

[8] These zones are now mostly developed, with the exception of Northlake and Kingston Village.

[9] https://www.qldc.govt.nz/your-council/council-documents/policies/special-housing-areas

[10] Councils Total Houses Projections – Change the Path (July 2020).

1.1.7 Challenges in Affordability and Supply

Whilst housing numbers are increasing, housing affordability has been steadily decreasing, with the average median house price in the QLD increasing from $873,469 in June 2017[11] to $1,018,250 in March 2021.[12] This is a significant issue for QLD, as analysis shows that currently over 83% of our first-home buyer households and 37% of renters are spending more than 30% of their income on housing costs.[13] These are at levels far higher than other parts of the country, and can result in overcrowding, some households working longer hours, or people leaving the district seeking a more affordable home elsewhere.

Whilst the 2017 HBA identified sufficient zoned land, there are still challenges in realising supply, this includes the slow uptake of residential development within a number of existing high growth areas. For example, in the Queenstown area (Queenstown East and Kelvin Heights), there are a two large undeveloped residentially zoned land parcels. These land parcels are held in the ownership of two landowners, making up almost 18% of available developable land within Queenstown.[14]

In addition, the Remarkable Park Special Zone ("RPSZ") in Frankton has been zoned as a growth area since the early 1990s for residential, commercial, visitor accommodation and recreational activities. Whilst enabling of residential development, and expected to eventually yield around 3,000 attached units, the residential development component over the last two decades has been slow, with development (controlled by a single developer) mainly focused on commercial, recreation and visitor accommodation.

The one notable exception in the RPSZ, is the Toru apartments, a development by New Ground Capital, who obtained a resource consent in 2017 for three apartment buildings, comprising of 236 affordable and rental apartments. Construction of the first stage (78 apartments) commenced in early 2019, with the apartments sold to a mix of owner occupiers, including the Queenstown Lakes Community Housing Trust ("QLCHT") who purchased 50 apartments for affordable housing. However, it is understood that completion of the remaining stages is uncertain due a range of external factors which relate to commercial feasibility.

The increase in residential flats noted above, also appear to have added to the district's unaffordability issues. House and income sale prices are high, typically $1.1m upwards **with anecdotal evidence that banks are requiring new builds to come with a flat because of the 2nd income opportunity**. There is no data on whether these flats form part of the short term accommodation (such as Airbnb) or long term rental markets. But when COVID-19 hit, the district saw some freezes in rent and additional housing availability,[15] with a reported 15% reduction in rental prices as many short term rentals switched to long term accommodation.[16] More recently and corresponding with the opening and closing of the Australian travel

[11] https://www.qldc.govt.nz/your-council/council-documents/national-policy-statement-urban-development-2020-nps-ud#quarterly-reports – 1 Quarter June 2017 report.

[12] https://www.qldc.govt.nz/your-council/council-documents/national-policy-statement-urban-development-2020-nps-ud#quarterly-reports - 12 Quarter March 2020 report.

[13] These Housing Affordability Measure (HAM) figures are updated periodically by MHUD and Stats NZ. These are the September 2018 figure and were sourced in May 2021 from https://huddashboards.shinyapps.io/urban-development/#

[14] (https://huddashboards.shinyapps.io/urban-development/#).

[15] https://www.rnz.co.nz/news/national/446016/number-of-overcrowded-costly-rentals-in-queenstown-area-reaches-pre-covid-19-levels

[16] https://www.oneroof.co.nz/news/how-would-trans-tasman-travel-bubble-effect-queenstowns-housing-market-39230

bubble, media reporting suggests that rents had started to rise to pre-COVID levels, and with the latest border closures, prices are again decreasing.[17]

In regard to short term visitor accommodation activities, many residential zones are now enabling of residential visitor accommodation activities. Economic evidence[18] provided during the District Plan Review process found that between October 2016 – February 2018, Airbnb activity in the low density residential areas was estimated to have grown by around 85% over that 18 month period.

Whilst the growth was fastest within the low density residential zone, the economic evidence analysis identified that the density of listings is highest in the High Density Residential ("HDR") zone, with one listing for every 2,028m2, followed by the Queenstown Town Centre ("QTC") at 4,641m2. The concerning issues here, is that those HDR and QTC zones (such as Gorge Road and surrounds) are projected to be delivering attached housing within the lower to medium price bands, however a lot of this stock appears to be ending up in the short term rental market.

It is also worth noting, that parts of Gorge Road have been rezoned as Business Mixed Use ("BMU"), a zone that is enabling of six storey residential development. To date only one four storey apartment has been consented and constructed, described by a real estate company as a boutique development and an outstanding investment that is the "perfect lock-up and leave apartment or alternatively a great rental with 365-day visitor accommodation approval".[19]

So, despite some increases in household numbers, anecdotal and media reporting still demonstrates that affordable and suitable accommodation for long term occupation can be a challenge for resident households.

1.1.8 Existing Research and Strategies

The NPS-UD came into effect 20 August 2020, replacing the National Policy Statement on Urban Development Capacity 2016 (NPS-UDC).

The 2016 NPS-UDC's intent was to require medium and high growth Councils to provide sufficient housing and business land development capacity to meet demand, with Queenstown identified as a 'high-growth' urban area. Demand for housing and business land was required to be assessed over the short (3 years), medium (3-10 years), and long term (10-30 years); and in response, ensure that enough feasible development capacity is provided in district plans to meet this demand. To meet the requirements of the NPS-UDC, Council was required to produce the following key deliverables:

- Housing and Business Development Capacity Assessments (HBA) every three years;
- Monitoring of indicators and price signals to inform planning decisions in urban environments on a quarterly basis;
- Setting minimum development targets within the District Plan to meet demand for housing;

[17] https://www.scene.co.nz/queenstown-news/rental-remedy/

[18] https://www.qldc.govt.nz/media/mtojxggp/economic-evidence-for-visitor-accommodation-s2239-qldc-t15-heyes-r-evidence-30909970-v-1.pdf - p.12 & 13.

[19] https://www.bayleys.co.nz/1692033

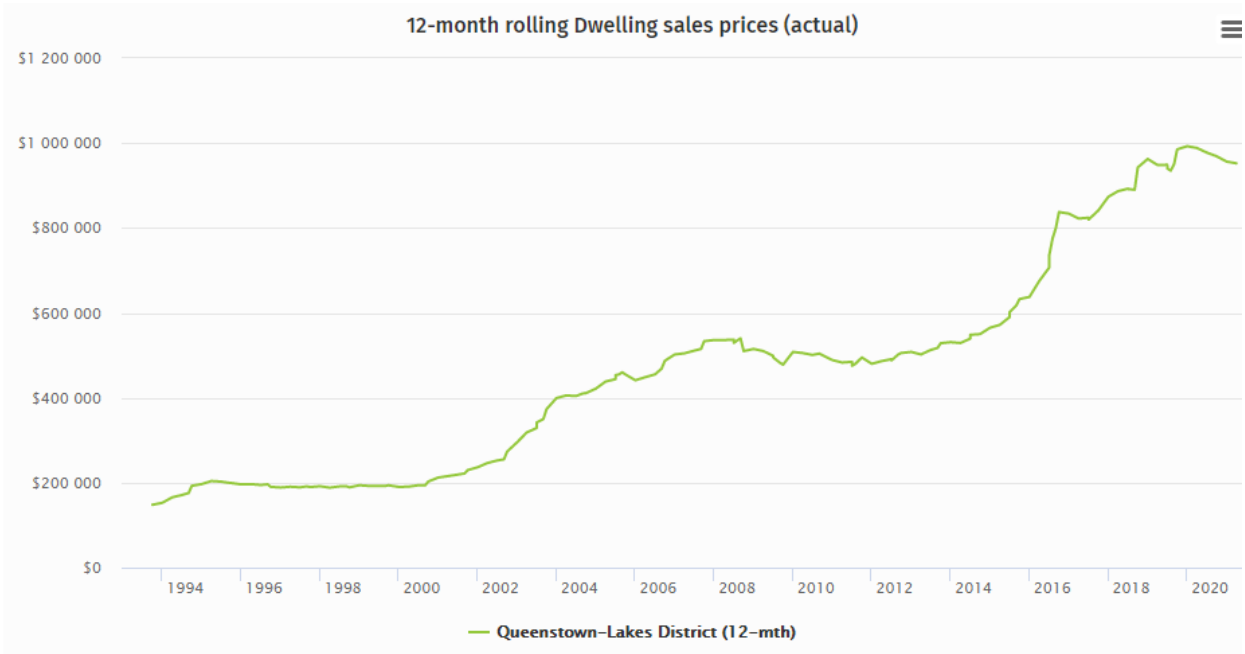
- Preparation of a Future Development Strategy ("FDS") to demonstrate sufficient, feasible development capacity.

Council published its first HBA in late 2018 ("2017 HBA"), this assessment found that whilst the district had enough zoned capacity to meet dwelling projections over the next 30 years, the:

- Predominant typology of resident housing was standalone at 71%, with 21.5% of resident housing attached (town houses, terraced houses, apartments)[20].
- In respect of housing, there was a shortfall of feasible capacity in the lower to medium band priced housing.
- This shortfall of capacity in the lower to medium band priced housing was projected to continue even though demand for this housing would increase.

Quarterly monitoring has been undertaken by Council, and these monitoring reports are available on Council's website.[21] In general, and as shown in the MHUD dwelling sales price graph below (Figure 1.3), house prices have been steadily increasing since 2017, with a slow-down/decrease only evidence in the most recent quarters.

Figure 1.3 – Median House Price Growth in Queenstown Lakes District (Source: MHUD)



Work on the setting of minimum development targets (housing bottom lines) and the FDS is intended to be prepared as part of the development of Council's 2024 Spatial Plan. In respect of the current Spatial Plan (draft at the time of preparing this HBA), QLDC, central government and Kāi Tahu are working in partnership to produce a joint Spatial Plan that aims to set the strategic direction for the district's growth, investment and development for the next 30 years plus.

[20] The balance was not further classified in the data.

[21] https://www.qldc.govt.nz/your-council/council-documents/national-policy-statement-urban-development-2020-nps-ud#quarterly-reports

The Draft Spatial Plan, promotes a consolidated and mixed-use approach to accommodating growth in the district, with future growth focusing on locations with good access to facilities, jobs, and public transport. Development within these areas will require:

- enabling higher densities of development;
- enabling a greater mix of uses within existing urban areas; and
- Efficiently developing new urban areas that are serviced by public transport.

The Draft Spatial Plan identifies a number of future urban and key priority development areas, these include the; Southern Transit Corridor, Te Pūtahi - Ladies Mile (Eastern Corridor) and the Five Mile Urban Corridor in the Wakatipu and then the Wānaka Town Centre – Three Parks Corridor and Southern Wānaka in the Upper Clutha.

Work on the first key priority development area 'Te Pūtahi – Ladies Mile' is underway, with the development of a masterplan and associated planning provisions focused on offering a variety of different housing choices as well as trying to address the complex transport constraints on the Eastern Corridor through the inclusion of a wide mixture of development densities, that would provide an opportunity for improved bus services, local facilities such as a town centre, a primary school and a high school and a community and sports centre to reduce travel across the Shotover Bridge.

It is noted that at this time, endorsement of the masterplan by Council has been postponed, subject to additional work on the transport issues, with a resolution that further work with Waka Kotahi and the Otago Regional Council is required to bring forward decisions on the transport interventions required to address traffic congestion and capacity constraints along the Eastern Corridor (and the Shotover Bridge).

Other Council initiatives to address housing supply and affordability include intensification and supply focus measures through the Spatial Plan and District Plan as well as the Mayor's Taskforce on housing affordability. The Mayor's Taskforce included recommendations, such as that inclusionary zoning be implemented in the District Plan and that an updated housing strategy be published. Both these work areas have been progressing well since 2017 and are intended to go out for non-statutory consultation in the third quarter of 2021.

In addition, the QLCHT has developed the Secure Home Programme, a unique leasehold ownership model, developed collaboratively with the Council and the QLCHT. The objective of Secure Home is not only to provide decent and affordable housing, but by ensuring long term housing stability and security through of mechanisms such as the homes not being able to be transferred or on-sold on the open market, with QLCHT having the legal mechanisms to purchase the house back at the original purchase price.

Since January 2017, QLCHT has assisted 83 households into either permanent affordable rentals or assisted ownership predominantly through the Secure Home Programme. In addition, they have completed five new housing projects in various locations (Wānaka, Albert Town, Shotover Country and Frankton). In progress, QLCHT is currently building 13 new homes in Lake Hayes Estate and has lodged a resource consent for a 68-Lot development in Arrowtown (Jopp Street).[22] In total, QLCHT has housed a total of 222 households, however, there are 740 more on its waiting list (20% in Wānaka and 80% in Queenstown).

[22] Jopp Street in Arrowtown was donated to the Trust by QLDC to be used solely for the secure home programme.

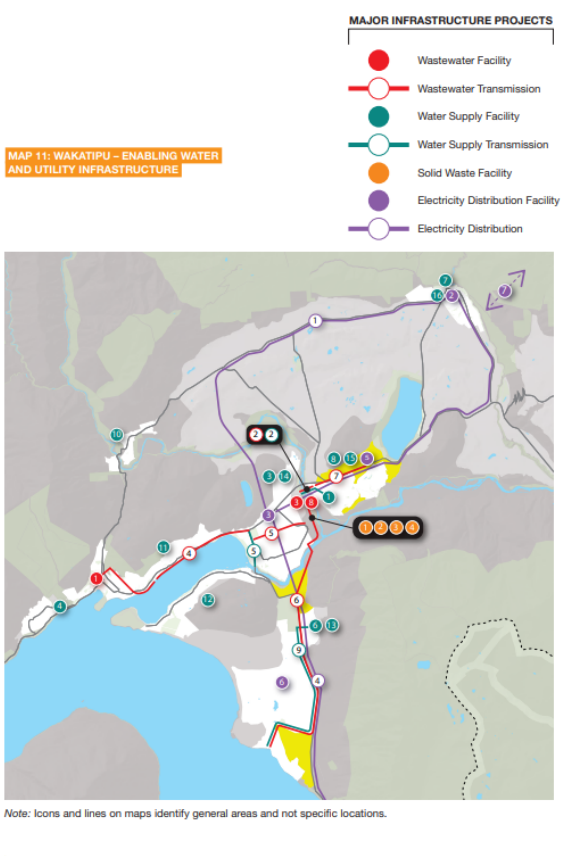
1.1.9 Key Infrastructure Projects That Will Influence Growth

There are a number of key infrastructure projects in the short, medium, and long term that will help facilitate growth in a number of areas. For the Wakatipu Ward, these include the below projects (see also Figure 1.4 for a more detailed breakdown of major infrastructure projects enabling growth).

Wakatipu:

Short term:	Medium Term:	Long Term:
Shotover Wastewater Treatment Plant Upgrades – 7,250 houses	Southern Corridor wastewater scheme and a new water reservoir and water scheme – 3,850 houses	Eastern Corridor wastewater upgrades and a 2nd reservoir – 2,500 houses
The wastewater CDB to Frankton project – 700 houses	New Ladies Mile (Eastern corridor) reservoir – 1,000 houses	New reservoirs in Queenstown East, Kelvin Heights, Quail Rise and Ladies Mile – 4,000 houses

Figure 1.4 – Enabling Water and Utility Infrastructure – Wakatipu Ward (Draft Spatial Plan)



Note: Icons and lines on maps identify general areas and not specific locations.

WASTEWATER		WATER SUPPLY		SOLID WASTE		ELECTRICITY	
Existing: Currently existing or is a committed project that will be completed in the next three years:							
1	Recreation ground pump station and rising main	1	Shotover Country bores and treatement plant upgrade	1	Shotover material recycling facility		
2	Shotover Country wastewater bridge crossing	2	Shotover Country water bridge crossing	2	Organics recovery and biological treatment facility		
3	Shotover treatment plant capacity upgrade	3	Quail Rise reservoir and main	3	Organics recovery processing and construction waste facility		
N/A	Kingston wastewater scheme	N/A	Kingston water supply	4	Community eco park		
Planned: Likely to occur in the next 4–10 years. Typically included in long-term investment plans. May be subject to further feasibility:							
4	Queenstown CBD to Frankton conveyance upgrade	4	Two Mile treatment plant			1	Arrowtown 33kv
5	Frankton Flats conveyance (incl. stormwater)	5	Frankton Flats water reticulation			2	Arrowtown zone substation upgrade
6	Southern Corridor conveyance scheme	6	Coneburn reservoir			3	Upgrade to Frankton distribution substation
N/A	Glenorchy wastewater scheme	7	Arrowtown reservoir			4	Kingston to Frankton 66kv
		8	Ladies Mile reservoir				
		9	Southern Corridor water supply				
Vision: Likely to occur beyond the next 10 years and subject to further investigation:							
7	Eastern Corridor conveyance upgrades	10	Arthurs Point reservoir	N/A	Landfill gas capture facility upgrade	5	Eastern Corridor substation
8	Shotover treatment plant capacity upgrade	11	Middleton reservoir			6	Southern corridor substation
		12	Kelvin Heights reservoir			7	New transmission to Cardrona
		13	Coneburn reservoir #3				
		14	Quail Rise reservoir #2				
		15	Ladies Mile reservoir #2				

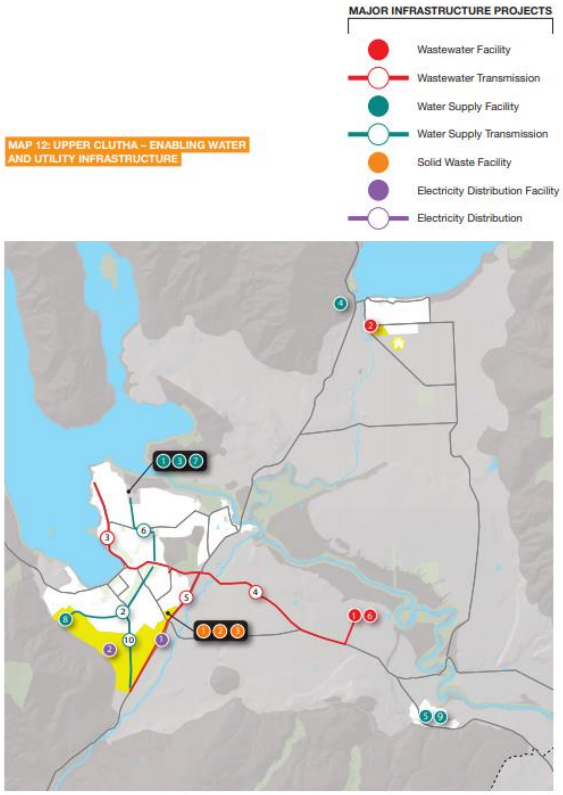
For the Wanaka Ward these include the following projects (see also Figure 1.5 for a more detailed breakdown of major infrastructure projects enabling growth). The provision of planned development and additional infrastructure and its effect on dwelling capacity is discussed further in Section 7 of this HBA. Noting that Council does have flexibility when it comes to how infrastructure delivery is prioritised, meaning that the below projects could yet be reprioritised (or additional ones added) through the Annual Plan and

Ten-Year Plan processes if more advanced strategic planning determines better ways to meet the needs of their local population.

Upper Clutha:

Short term:	Medium Term:	Long Term:
Project Pure treatment plan upgrade – 4,000 houses	Wānaka to Project Pure conveyance – 2,000 houses	South Wānaka, new water and wastewater supply reticulation – 4,000 houses
Hawea wastewater disposal upgrades – 650 houses	New Hawea water reservoir – 1,000 houses	New Luggate reservoir - 375 houses

Figure 1.5 – Enabling Water and Utility Infrastructure – Wanaka Ward (Draft Spatial Plan)



WASTEWATER		WATER SUPPLY		SOLID WASTE		ELECTRICITY	
Existing: Currently existing or is a committed project that will be completed in the next three years:							
1	Project Pure treatment plant upgrade	1	Beacon Point reservoir	1	Wānaka Transfer Station upgrade (stage 1)		
2	Hāwea wastewater disposal upgrade	2	Wānaka trunk watermain upgrade				
3	North Wānaka pump station and wastewater conveyance						
N/A	Cardrona treatment plant, pump station and rising main						
Planned: Likely to occur in the next 4–10 years. Typically included in long-term investment plans. May be subject to further feasibility:							
4	Wānaka to Project Pure wastewater conveyance	3	Beacon Point treatment plant capacity upgrade	2	Wānaka Transfer Station upgrade (stage 2)	1	Riverbank Road substation upgrade
		4	Hāwea reservoir #2				
		5	Luggate bores, treatment plant and reservoir upgrade				
		6	Beacon Point falling main				
		N/A	Cardrona water supply				
Vision: Likely to occur beyond the next 10 years and subject to further investigation:							
5	Reticulation to south Wānaka	7	Beacon Point treatment plant capacity upgrade	3	Organics recovery processing and construction waste facility	2	South Wānaka substation
6	Project Pure treatment plant upgrade	8	South West Wānaka reservoir #1, #2				
		9	Luggate reservoir #2				
		10	Reticulation to South Wānaka				

1.2 HBA Objectives

The objectives of this report[23] are to:

- Provide robust information on the demand and supply and capacity of housing;
- Quantify the development capacity that is sufficient to meet expected demand for housing land in the short, medium and long term;

[23] As set out in clause 3.20 of the NPS-UD.

- Provide information on the impact of Council planning and infrastructure decisions on future affordability and competitiveness of the housing market; and
- Inform housing bottom lines, Resource Management Act ("RMA") planning documents and decision making, the Future Development Strategy ("FDS") and the Ten Year Plan (LTP).

1.3 Approach Summary

The approach to this HBA (2021) has been designed to meet the requirements of the NPS-UD for a Tier 2 local authority – which Queenstown Lakes District Council ("QLDC") and Otago Regional Council ("ORC") are now classified as a result of Queenstown being identified as a Tier 2 urban environment in the NPS-UD Appendix 2. The following is a high-level summary of the adopted approach. Further detail is provided throughout the report and in the supporting Technical Report.

The housing market and demand assessment builds on detailed information of district level customised and standard Census 2018 data, other StatisticsNZ data including, but not limited to, dwelling consent data, data purchased from CoreLogic on housing values, sale prices and purchaser patterns, and Council's dwelling growth projections. This data is used to build a comprehensive profile of current housing demand as at June 2020 (the base year of this HBA), housing supply, future housing demand and housing affordability. It provides specific insight on how the current and likely future demands for housing by different groups in the community are met, including the demand for different types and forms of housing. It also estimates future demand for housing by location within the urban environment (discussed below) and by attached and standalone dwelling types, as well as future dwelling demand by price band for the urban environment and district as a whole.

The housing capacity assessment draws on the capacity modelling completed for the HBA 2017, updated to account for up-take (growth) between June 2016 and the current base year (June 2020), expanded to include the new areas now included in the district's urban environment, and modified to meet the changes introduced in the NPS-UD. Specifically, to distinguish housing development capacity that is plan enabled in the following ways:

- Short term (2020 – 2023) – includes land zoned for housing[24] in the ODP. And as the Council is part way through a staged district plan review, includes any zones 'treated as operative' by Council in the PDP.
- Medium term (2023 – 2030) – as above plus land that is zoned for housing in a PDP. This HBA adopts the short term zoning above except where it has been changed by the decisions version of zones included in stage 3 of the PDP.[25]
- Long term (2030 – 2050) – as above plus land indicatively identified for urban expansion in the draft Queenstown Lakes Spatial Plan (2021).[26]

[24] Refer clause 3.4(2) of the NPS-UD. Zoned means residential dwellings have a permitted, controlled, or restricted discretionary activity status.

[25] These are still subject to appeals and therefore are not yet treated as operative.

[26] The NPS-UD specifies long term plan enabled capacity can include land identified for future urban use or urban intensification in an FDS or other relevant plan or strategy where this supersedes either the ODP or the PDP. Council is not required to have an FDS

The assessment of plan enabled capacity in the urban environment in the short, medium, and long term is a parcel level analysis that relies on the relevant development rules/standards of the zone in which it is located to quantify net additional dwelling potential for attached and standalone dwelling types. The analysis takes into consideration any sub-zones, precincts or sub-areas that apply to each parcel that may impact on future dwelling potential.

The modelling considers potential for:

- infill development (i.e., where subdivided sections are vacant and where existing sections can be further subdivided to accommodate one or more additional dwellings),
- net additional capacity through redevelopment (i.e., where any existing dwellings are removed and existing residential sections are developed to their maximum density[27], and
- greenfield development (applicable only to land that has not yet been subdivided for urban development).

Plan enabled capacity in the rural environment has also been assessed by Council at a high-level. This includes remaining infill and/or greenfield capacity in rural zones and special zones in the rural environment, including approved but not yet developed building platforms in the Rural Zone. The same rural capacity is assumed to be applicable in the short, medium, and long term.

The NPS-UD requires that Council provides at least sufficient development capacity in its district to meet expected demand for housing in each time period. This is not limited to plan enabled capacity. In order to be sufficient, the development capacity must be plan enabled, infrastructure ready, and feasible and reasonably expected to be realised. The NPS-UD guidance sets out the indicative relationship between these four aspects of capacity, replicated in the left hand side of Figure 1.6 (note, the circles are not to scale). As indicated in the image, the guidance assumes that not all infrastructure ready capacity is likely to be commercially feasible (i.e., feasible to a developer).

The HBA has determined that the relationship between these four aspects of development capacity is different within QLD due to the way in which infrastructure constraints limit growth across the urban area. This is because infrastructure constraints are not geographically tied to a specific area of capacity (e.g. if it was about whether a particular parcel was served by water, roads, etc) - rather, they apply at the catchment level as a whole, where the constraint comes in when the level of catchment growth exceeds the downstream infrastructure capacity (e.g. ability of a bridge to serve a wider catchment). This means that growth can continue to occur at multiple locations within a catchment till the limit is reached overall, and it does not matter where the growth occurs within the catchment. The nature of the infrastructure constraints correspondingly guides the order of the assessment, to ensure they are appropriately applied.

Our approach to the different stages of capacity is shown conceptually in the right hand side of Figure 1.6 (with some indication of relative scale applied). In QLD, a significant portion of plan enabled capacity is commercially feasible, and a much smaller portion is (or will be) infrastructure served. As such, all capacity

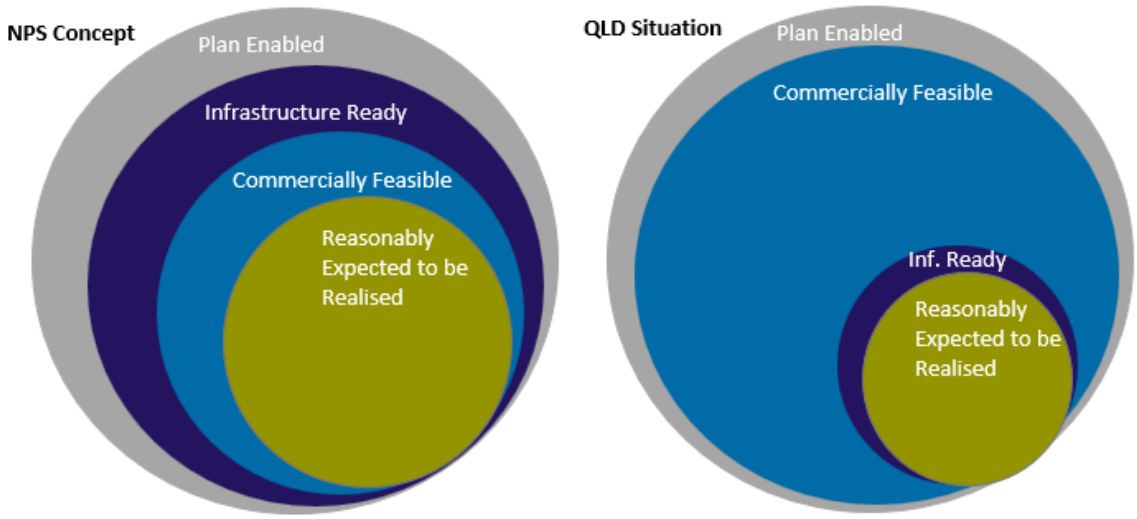
until 2024, however a draft Spatial Plan had been released at the time of preparing this report. As such, this HBA adopts the land indicatively identified for urban expansion only in the draft Spatial Plan. Areas of intensification identified in the draft Spatial Plan were not modelled in this HBA as these are subject to further detailed investigation.

[27] This HBA considers only redevelopment potential based on existing parcel boundaries and does not test outcomes if parcel boundaries are adjusted or adjoining parcels are aggregated.

that is infrastructure served, is also commercially feasible. This finding has guided the approach taken in this HBA to model and discuss development capacity in Part 2 of this report, including the order in which it is assessed.

Firstly, plan enabled dwelling capacity in the short, medium, and long term is assessed through the lens of what is commercially feasible. At a broad level, this modelling considers the costs of delivering housing to the market (i.e., build costs by type) relative to the potential sales price of those dwellings (influenced by location in the urban environment) to determine if they are commercially feasible (profitable) to develop.

Figure 1.6 – Development Capacity Model – NPS-UD Concept v QLD Situation



Feasible plan enabled capacity in the urban environment in the short, medium, and long term is then assessed through the lens of what is infrastructure served in each time period. That will be, or is, already serviced by adequate development infrastructure in the short term, will be serviced by infrastructure identified for funding in the LTP in the medium term, or will be serviced by infrastructure identified in the Council's Infrastructure Strategy (2021-2031) in the long term.[28] The HBA relies on data supplied by Council on the quantum of dwelling growth that is, or will be, infrastructure ready in regards to three waters infrastructure (water supply, waste water and storm water) and land transport infrastructure (taking into consideration roading managed by Council and Waka Kotahi). The capacity of additional infrastructure[29] to service development capacity over time is also considered at a high-level.

Finally, feasible plan enabled and infrastructure served dwelling capacity in the short, medium and long term is assessed through the lens of what is reasonably expected to be realised.[30] This considers what quantum and type of dwellings may be expected to be delivered once commercial feasibility, infrastructure constraints, development/site constraints and market/developer preferences (based on recent trends and anticipated shifts) are factored in, given that zoning provisions enable the maximum development outcomes and what may be reasonably expected to be developed in some locations can be an outcome

[28] Refer clause 3.4(3) of the NPS-UD.

[29] Refer Glossary.

[30] Refer clause 3.26 of the NPS-UD.

less than the maximum yield. Information and commentary from stakeholders in the residential development market of the district has been incorporated in this assessment via a targeted online survey.[31] Where practical, this feedback has been used to validate or adjust modelling assumptions specifically around commercial feasibility and reasonably expected to be realised development capacity.

The HBA concludes with an assessment of the sufficiency of development capacity for housing in the urban environment in the short, medium, and long term. This compares demand for dwellings by type and location in the urban environment, inclusive of a competitive margin of an additional 20% in the short and medium term and an additional 15% in the long term, with development capacity that is plan enabled, infrastructure ready, commercially feasible and reasonably expected to be realised by type and location. For the rural environment, total demand (all types and locations) is compared with total plan enabled dwelling capacity.[32] Sufficiency of total dwelling capacity (all types) in the district by price band is also assessed relative to total dwelling demand by non-owner households (plus a competitiveness margin) based on the price band they can afford in the short, medium, and long term.

The final step in the HBA approach is to provide a discussion on the impact of council planning and the provision of infrastructure on the operation of the land market, and where possible the affordability of housing that may be constructed on that land.

1.3.1 Business as Usual Platform

It is important to recognise that this assessment is based as much as possible on a 'Business as Usual' ("BAU") base case, in which the current revealed housing preferences[33] and capabilities for each socio-demographic group are assumed to continue into the medium and long term.

This is because one key purpose of the HBA is to identify the potential effects of planning provisions and infrastructure on future housing provision, with a particular focus on affordability. However, affordability is affected by a wide range of factors, including dwelling typology and size, income trends, economic conditions, migration and so on, which are outside the control or influence of the Council as well as by factors where Council does have close influence – notably the sufficiency of plan enabled and estimated feasible capacity, including provision of infrastructure.

In order to understand the likely effect of those Council controlled or influenced factors, it is preferable to hold other influences as continuing at the current situation or trend, at least in the first instance. This becomes especially important for understanding the parameters of housing affordability in the future. Accordingly:

[31] See the supporting Technical Report for detailed results.

[32] Commercial feasibility modelling has not been carried out in the rural environment. All plan enabled capacity is assumed to be feasible and expected to be realised.

[33] It is acknowledged that the current 'revealed preferences' of housing may not necessarily align to household's underlying preferences. I.e., they assume that households are living where they prefer, and in the dwelling they prefer. This does not reflect the trade-offs that may have been made by some households. In the absence of better data, this HBA assumes that current patterns are the revealed preferences.

1. Population and households are estimated from current and projected demographic trends, to reflect shifts in population size and age structure, and the numbers of households of each type expected in the district over time.

2. For future household incomes, in the first instance, the current (2020) household income distribution for households of each age and type are assumed to continue over the long term. This allows for overall household incomes and distributions (i.e., budget for housing controlling affordability) to shift according to expected demographic changes only, in the base situation.

3. New housing typology, particularly the detached:attached split is assumed to follow the current trend based on consents received over the past 7 years. This allows for the expected mix of additional dwellings to reflect more recent trends (again reflecting revealed preferences, but also potentially influenced by planning and infrastructure parameters over that) where attached dwellings account for around half of new dwellings consented, rather than reflecting the current stock where detached dwellings account for over 80% of the total estate. This means the additional dwellings to accommodate the larger population are estimated according to the typology-and-value mix of current additions, or the typology-and-value mix of dwellings identified in the feasibility analysis. The nature of the mix has direct implications for the expected price of new dwellings as detached dwellings are generally higher priced largely due to the cost of the land underlying them and the ratio of floorspace to land area possible.

4. For housing tenure, the starting assumption is that the owned vs not-owned split for each household group (household type and income) persists into the future. This is on the basis that households in each group will achieve the same levels of ownership in the future as the equivalent group in 2020. It is recognised that those future households will have had a different history and path to dwelling ownership or otherwise from the current households. However, rather than speculate how the mix of economic and other circumstances might see higher or lower levels of ownership in the future, the most useful starting point is simple projection of the status quo for each group.

   In particular, that provides a starting estimate of the numbers of future households in each group who would be non-owners, for the assessment of future affordability. Otherwise, there is potential to cloud the affordability assessment with normative assumptions about changing ownership levels.

This approach is to provide a basis for assessing the impacts of planning and infrastructure which is as clean as possible. These matters are addressed in Section 10.

1.3.2 Future Outcomes

An HBA is necessarily forward-looking, into the long term future, and housing and business outcomes in QLD will be driven by a wide range of influences - some having effect at the national level, some at the Otago regional level, others at the local QLD level. The requirement to project forward and examine outcomes over 30 years requires multi-faceted analysis including household growth, demographic change, land supply and development, housing demands, household incomes, housing costs, land value trends, built improvement trends, and others. These are all inter-related aspects of the economy, with their own growth and change trends going forward. Importantly too, economies are characterised by cycles as well

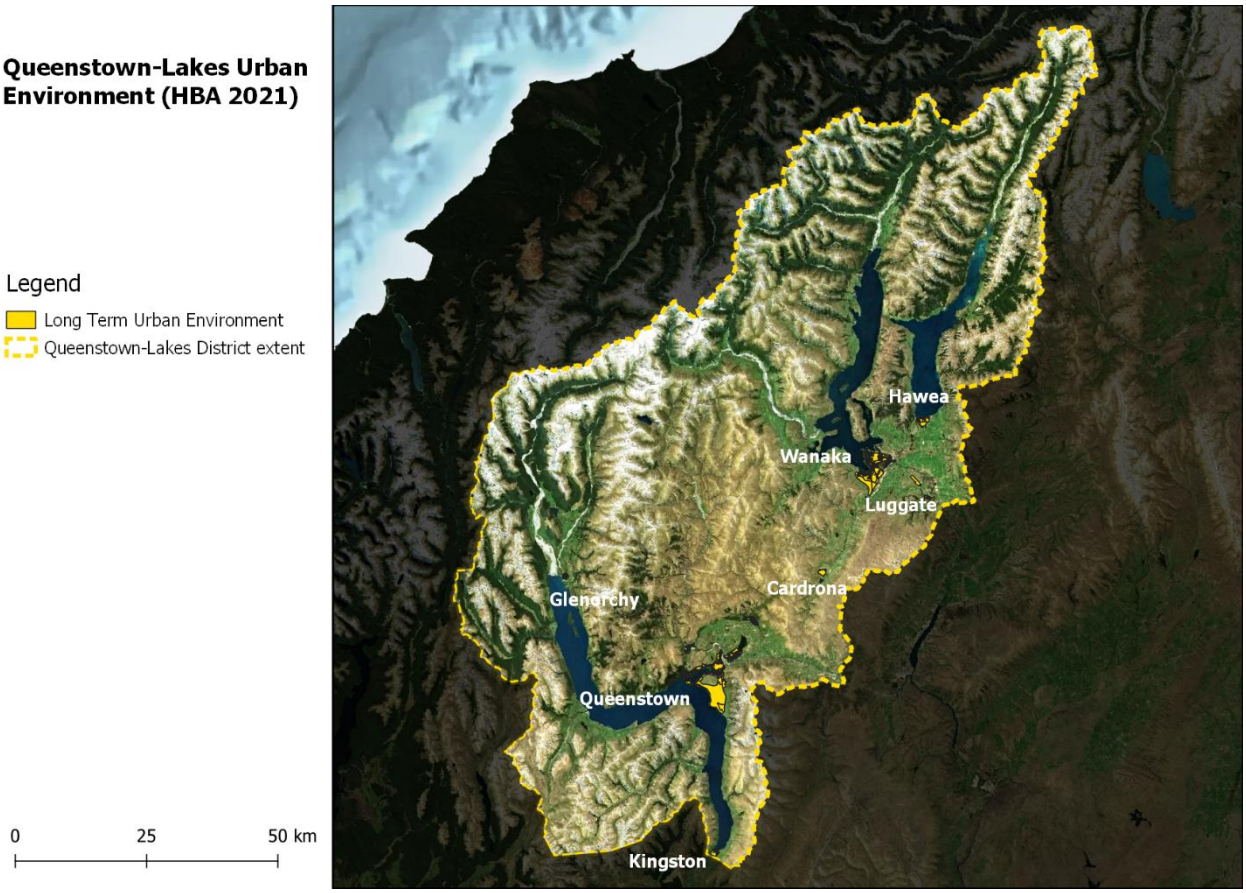
as trends, with both upward and downward shifts occurring over time, to temper the effects of short term surges.

The future outlook for each, and their combined influence on housing outcomes, needs to be informed by actual trends to date, and assumptions as to future trends. This is nothing new for future projections. However, it is important to understand that many aspects need to be examined in combination and over a long time period with effects which are cumulative and often compounding. This means that even small and apparently conservative assumptions about change and growth may have significant effects, especially on the medium and long term futures which the HBA requires to be estimated.

ME have been careful to draw on reliable external sources where available and adopt a generally conservative line. However, an important caveat is to state that the projected outcomes and findings in this report are very sensitive to the assumptions which are applied to the analysis and projections.

1.4 Urban Environment

Figure 1.7 – Map of Long Term Urban Environment for QLD – Total District



An HBA is an assessment of the demand for housing land in urban environments, and the development capacity that is sufficient to meet that demand in the short, medium and long term. In accordance with the NPS-UD definition, an urban environment means any area of land that is, or is intended to be, predominantly urban in character, and that is, or is intended to be, part of a housing and labour market of

at least 10,000 people. This definition allows areas identified[34] or zoned for future urban development to be included in the defined urban environment. It also allows discrete locations of urban land that have a functional relationship with each other in terms of a housing and labour market to be part of the urban environment, even when they are not contiguous.

The urban environment of QLD has been defined in collaboration with Council and is illustrated in Figure 1.7, and in more detail in Figure 1.8.[35] It makes up just a small fraction of the total district area, which is dominated by mainly mountainous rural land. As discussed above, approximately 97% of the QLD is classified as an ONL/ONF in the PDP.

The urban environment has been defined at a zone level, with the PDP providing a clear distinction between urban and rural zone types and the outcomes expected within them. As Special Zones are treated differently, they have been characterised as urban or rural based on their location and intended development character. The Mount Cardrona Station Special Zone and Kingston Special Zone are examples that have been included in the urban environment. The urban environment incorporates all zones within the defined UGBs, but also includes existing urban zones that do not fall inside an UGB. This includes urban environments in Luggate, Wānaka Airport, [36] Cardrona, Glenorchy, Lake Hayes and Kingston[37]. It also takes a long term perspective – including indicative areas of future urban expansion as identified in the draft Spatial Plan (2021) as they are "intended to be predominantly urban in character". These are located in Hawea, Wānaka South, the Eastern Corridor, and the Southern Corridor.

The rest of the district area being outside of the defined urban environment, is the 'rural environment' for the purpose of this HBA. The HBA is focussed primarily on the urban environment but includes analysis at the total district level and rural environment level where appropriate. This approach satisfies the requirements of the NPS-UD while also meeting the broader needs of Council for this report and evidence base as pressure from non-urban growth is a key resource management issue for the district.

Figure 1.9 illustrates the locations adopted to report demand (and later capacity and sufficiency) of housing in the QLD (in the Wakatipu and Wānaka Ward respectively). There are 10 locations making up the Wakatipu Ward and 5 locations making up the Wānaka Ward. The maps show the spatial relationship between these locations and the long term urban environment (shaded pink). Some reporting locations include areas of urban environment and rural environment, although some locations are wholly rural (such as Outer Wānaka), and others are wholly urban (such as Queenstown Town Centre). Where applicable, the modelling of demand and capacity is split according to the urban environment and the rural environment part of each location so that they can be reported separately and in aggregate.

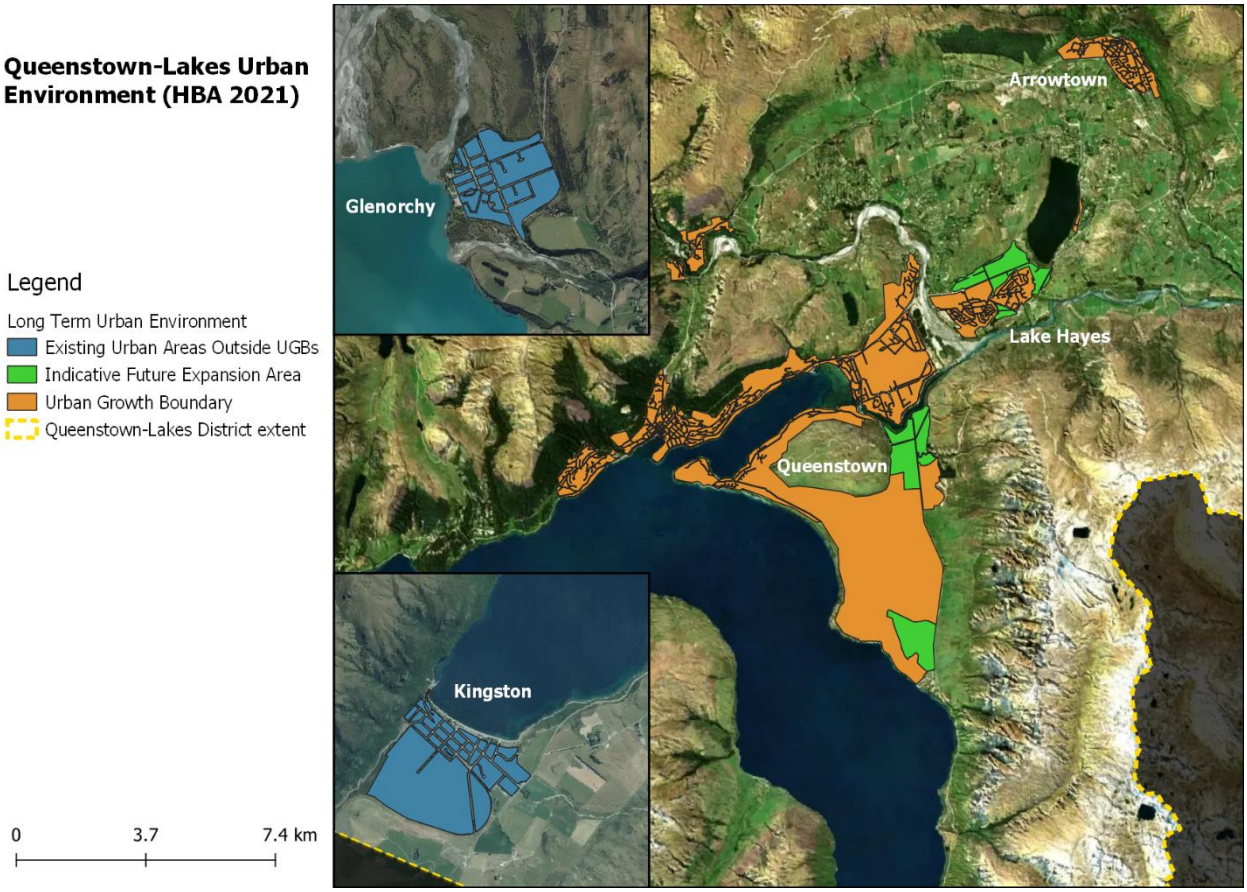
[34] I.e., in a growth strategy, spatial plan or FDS.

[35] Refer the supporting Technical Report for a map showing ward boundaries adopted for this HBA. 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".

[36] Limited to the Airport Zone.

[37] With the exception of Luggate and Lake Hayes (not to be confused with Lake Hayes Estate), these urban environments have all been added for this HBA update. They were not included in the urban environment in the 2017 HBA.

Figure 1.8 – Map of Long Term Urban Environment for QLD – Wakatipu and Wānaka Wards



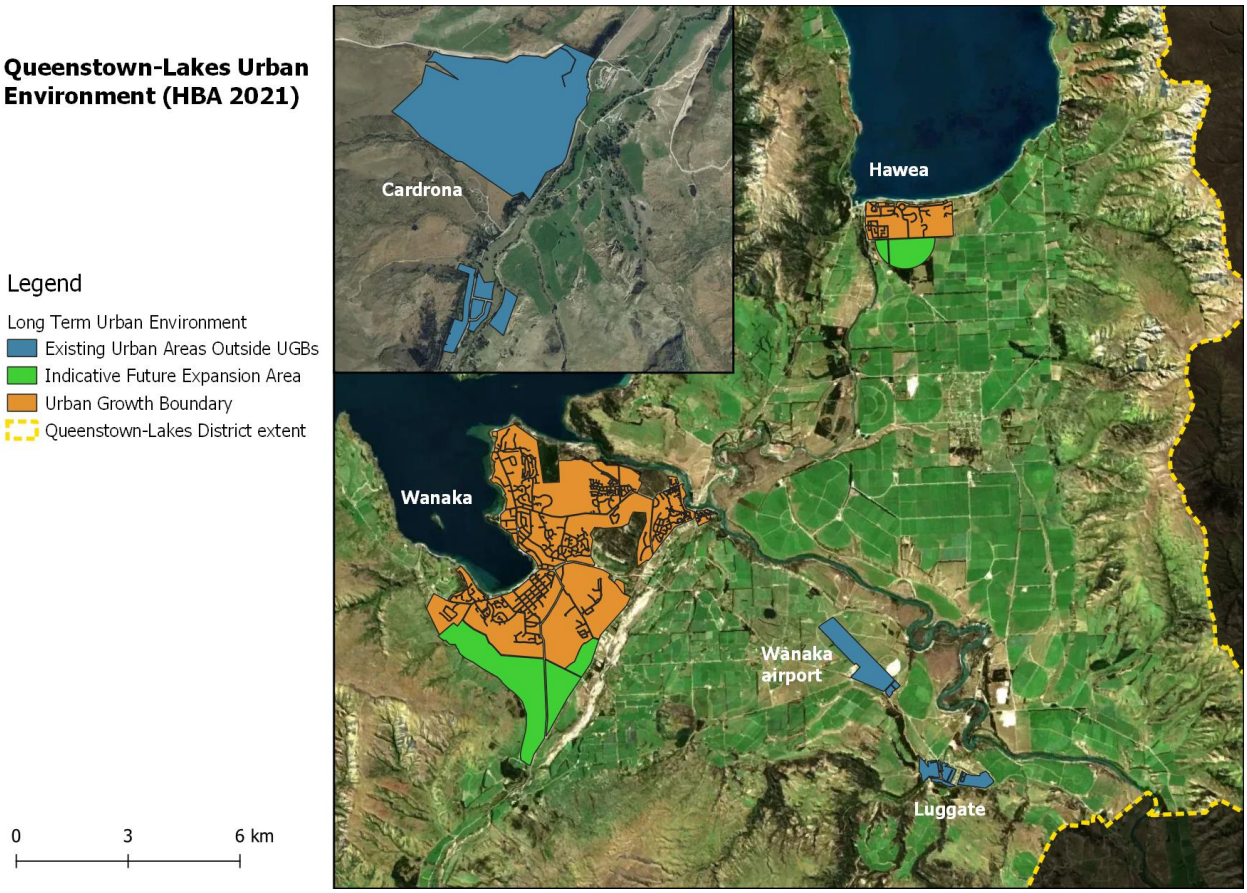
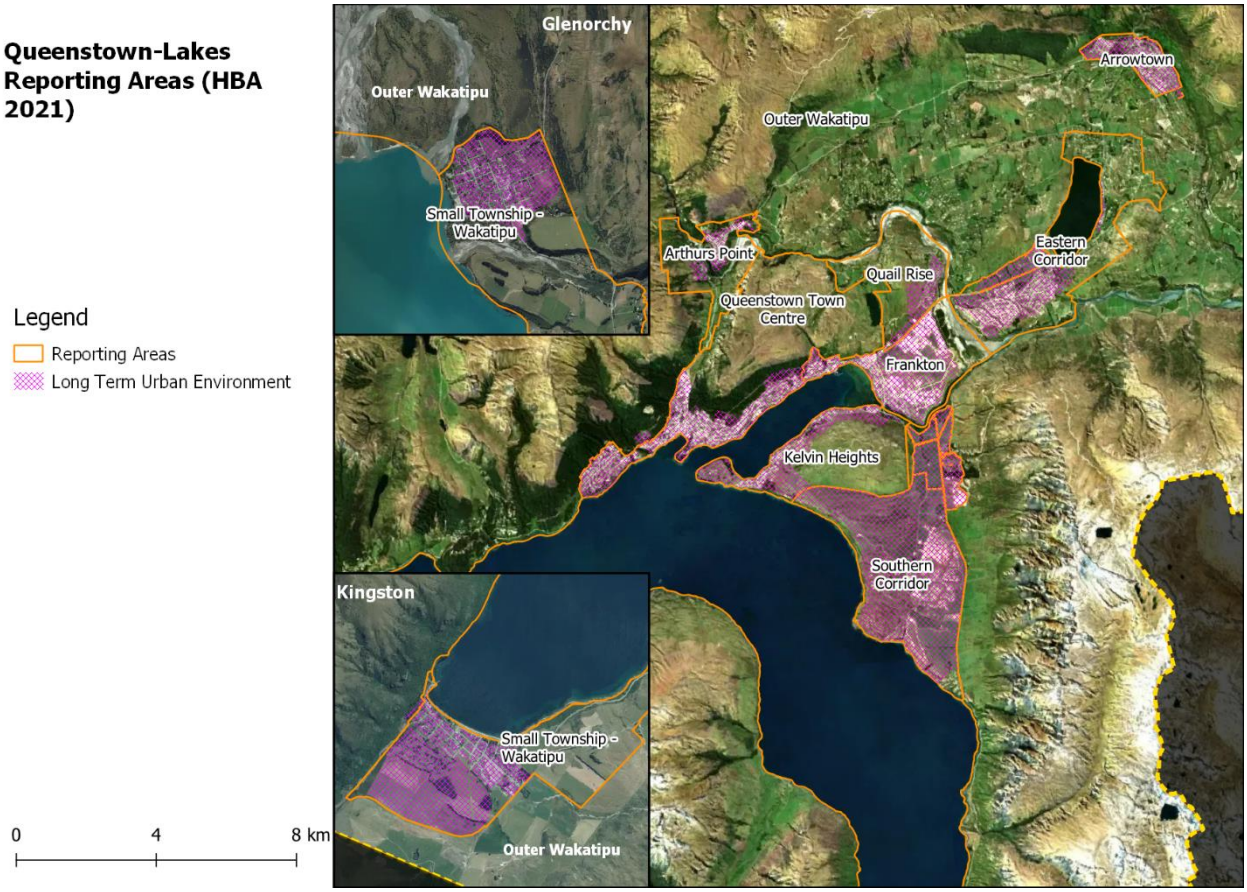
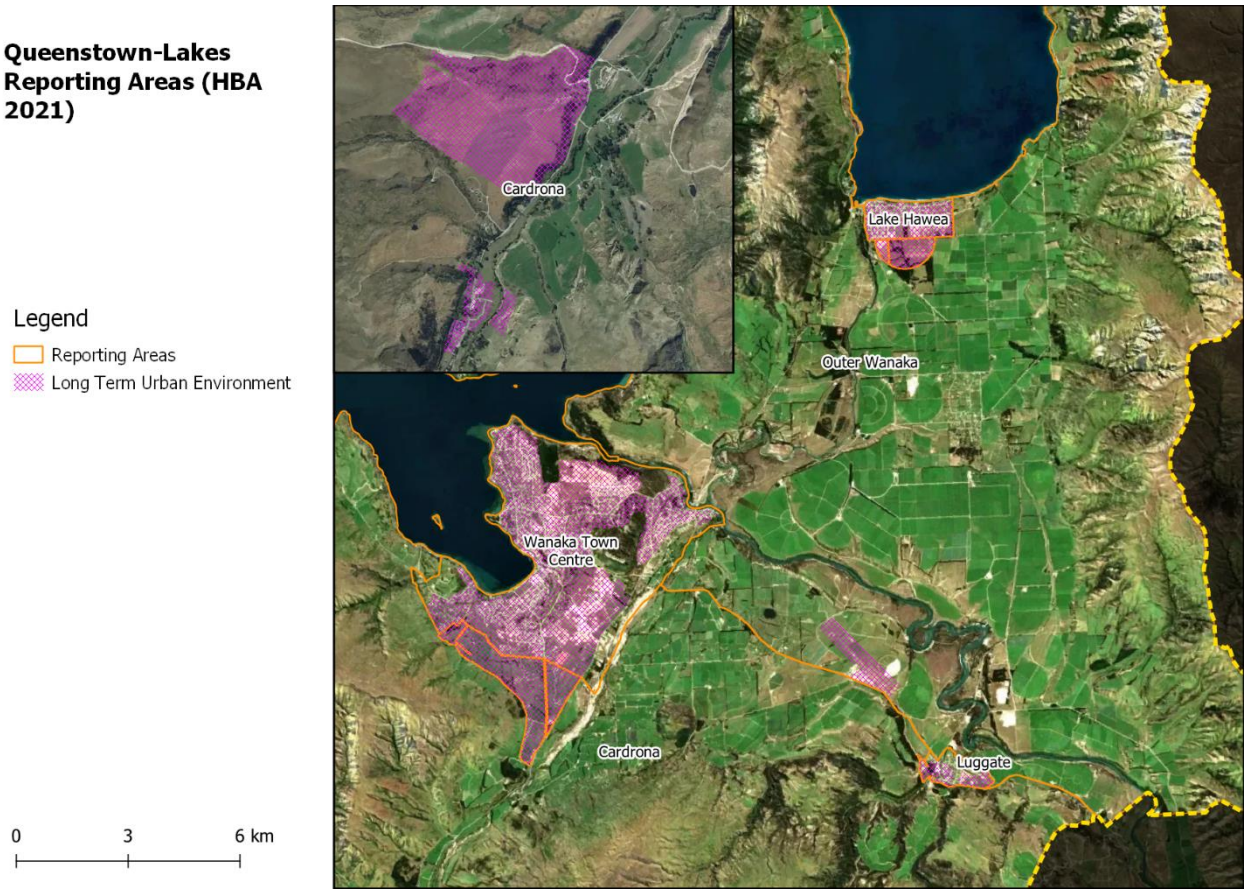


Figure 1.9 – HBA 2021 Location (Reporting Area) Boundaries – Wakatipu and Wānaka Wards





1.5 Report Structure

The report is organised into three parts:

1. Housing market assessment.[38] This also includes the housing demand, supply, and current affordability assessment.[39]
2. Housing development capacity assessment.[40]
3. Conclusions. This covers assessment of the sufficiency of capacity[41], a discussion on future affordability and the impacts of planning and infrastructure.[42]

Appendix A contains a glossary of commonly used terms. This report is supported by a condensed Summary Report and a Technical Report that provides further detail on certain aspects of the methodology, additional analysis tables, as well as analysis based on Council's alternative dwelling growth projections (that is, projections other than Council's preferred growth outlook for planning purposes).[43] The Technical Report functions as a series of appendices for this Main Report and is not a standalone document.

[38] This responds to clause 3.23 of the NPS-UD.

[39] This responds to clause 3.24 of the NPS-UD.

[40] This responds to clause 3.25 and 3.27 of the NPS-UD.

[41] This responds to clause 3.27 of the NPS-UD.

[42] This responds to clause 3.23 of the NPS-UD.

[43] Dwelling growth projections are discussed further in Part 1 of this report.

PART 1 – HOUSING MARKET ASSESSMENT

2 Housing Demand

The section presents estimates of demand for housing in QLD in the short, medium, and long term. It takes account of expected growth in household numbers, and the socio-demography of household growth, to identify total and additional demand for housing, in relation to dwelling types and locations within the district.

A high level summary of the approach to modelling housing demand is contained in the supporting Technical Report.

The NPS-UD identifies affordability as an issue and includes requirements of how well future demands will be met for "Māori and different groups in the community". It provides a non-exhaustive list of household types – those of Māori ethnicity (including demand for papakainga housing), older households, renters and homeowners, low income households, seasonal workers, visitors and student accommodation. The guidance is clear that the assessment should cover at least these types.

All of those groups are counted within the usually resident households of an area, except for visitors, who are either residents of other parts of New Zealand or overseas visitors temporarily in a city or district and if present are captured in the Census night population (a Tuesday in March). If seasonal workers are present at the time of the Census they are counted, though there are not specific statistics on seasonal workers at a fine grained level and household scale outside this time.

The following analysis provides key summary information on these groups (with the exception of visitors) within the QLD community to the extent that they are captured in the available data. This assessment identifies households of Māori ethnicity and other main ethnicity groups, and identifies older households, those in the 65-74 years and 75 years and over age groups. It also differentiates households according to dwelling tenure (including those with and without mortgages, or dwellings owned by a trust), and differentiates among households according to income, since income is one of the major influences on housing affordability, the other aspect being price.

Since the NPS-UD focus is on housing affordability, these matters are examined in more detail in Section 4 with assessment of dwelling tenure and housing affordability, including detail on tenure, incomes, and affordability for each ethnic group in the community (Section 4.2).

In relation to seasonal workers, it is noted that there is very limited information from which to identify numbers or socio-demographic characteristics, or dwelling tenure. Since they are most commonly short to medium term visitors for employment purposes, this group is characterised by relatively lower or middle to low incomes, and most are likely to be tenants (renters) rather than owners of dwellings. To that extent, seasonal workers – if they are counted at Census time as being part of the usually resident population – are most frequently included in the lower income and non-owner segments within the total population. This means they are likely to be generally counted within those identified segments, though given the timing of the Census in March are not counted specifically within the analysis and are likely to be undercounted relative to peak seasonal demands.

2.1 Population and Households

The starting point for assessing future housing demand is the outlook for population and household numbers. The NPS-UD specifies that future demand for housing be assessed on the basis of one dwelling per net additional household.

This HBA has adopted Council's July 2020 demand projections[44]. These projections include three scenarios of future growth:

- 'Change the Path' – high growth scenario (and preferred growth outlook)
- '5 year lag' – medium growth scenario
- '10 year lag' – low growth scenario(the lowest projection).

Assessment in this HBA is based primarily on Council's high growth scenario, with some alternative assessment based on the medium growth scenario. For brevity, this HBA does not include detailed assessment of the low growth scenario.

2.1.1 Total Population

Council's population projections are set out in Table 2.1. The QLDC high projection (Change the Path scenario) would see an additional 10,800 persons over the decade to 2030 (+27%) and an additional 36,000 by 2050 to reach 76,600 residents (+87%). For comparison, Table 2.1 also shows the most recent StatisticsNZ ("SNZ") projections (March 2021) for QLD[45]. The SNZ series indicates substantially faster population growth than the QLDC projections in the short term and into the medium term, then somewhat slower growth in the long term.

For this HBA, the QLDC projections have been adopted to reflect Council's position. The focus is on the Change the Path (preferred) growth future, which is prudent as more capacity (plan enabled and the infrastructure to support it) would be required than in the medium and lowest growth future. This future allows for very little growth in the short term, but in the medium term (2023-2030) and again in the long term (2030-2050) it shows faster growth than the SNZ high projection (Figure 2.1).

Importantly, the base population in the QLDC projections at 40,903 in 2020 is substantially lower than the SNZ series, which indicates 45,400 in 2020 (medium series). This is a difference of 4,490 persons or just under 10%. The SNZ estimates of resident population show 47,400 by June 2020, an increase of 4,900 persons (+12%) since June 2018 and equating to around 1,950 additional households. In contrast, the QLDC projection shows an additional 703 persons between 2018 and 2020, equating to around 280 additional households.

[44] Further discussion on the development of the Council's July 2020 projections, and why the 'Change the Path' scenario is preferred can be found in the supporting Technical Report.

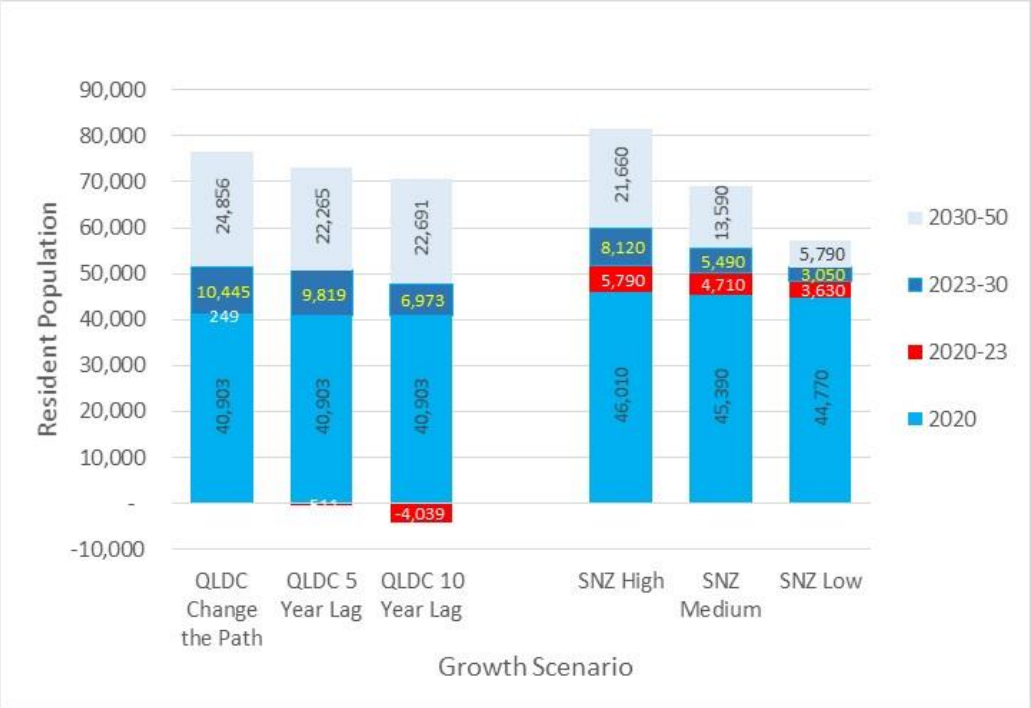
[45] Released subsequent to the commencement of the HBA assessment.

Table 2.1 – Population Growth Outlook – Short, Medium and Long Term by Scenario and Source

Projection	Current	Short Term			Medium Term			Long Term		
	2020	2023	2020-23	2020-23 %	2030	2020-30	2020-30 %	2050	2020-50	2020-50 %
QLDC										
Change the Path	40,903	41,152	249	0.6%	51,410	10,507	26%	76,453	35,550	87%
5 Year Lag	40,903	40,392	- 511	-1.2%	50,122	9,219	23%	72,476	31,573	77%
10 year Lag	40,903	36,864	- 4,039	-9.9%	43,842	2,939	7%	66,528	25,625	63%
Statistics NZ (2021)										
High	46,000	51,800	5,800	12.6%	59,900	13,900	30%	81,600	35,600	77%
Medium	45,400	50,100	4,700	10.4%	55,600	10,200	22%	69,200	23,800	52%
Low	44,800	48,400	3,600	8.0%	51,500	6,700	15%	57,200	12,400	28%

Source: ME Housing Demand Model 2021

Figure 2.1 – Population Growth Futures QLDC and SNZ 2020-2050



It is noted that any projections of future growth are subject to uncertainties, and unforeseen events. That said, there is a considerable science base for demographic projections based on statistics on mortality and birth rates and supported by information on migration flows both within New Zealand, and to and from overseas countries. Further, the spread of demographic projections offers scope to cover a range of reasonable outcomes. The SNZ series does not indicate probability of particular outcomes, though it does indicate that at the national level, the low population can be expected to be equalled or exceeded in 95% of future combinations (scenarios), the medium projection equalled or exceeded in 50% of scenarios, and the high outcome equalled or exceeded in 5% of scenarios. Equivalent indications are not available for the QLDC series. The QLDC series represents a slightly more cautious approach for Council in the long term, given the NPS-UD requirement to provide for at least sufficient capacity for growth. Adopting a relatively strong rate of growth reduces the prospect of under-estimating future housing needs. Importantly, projections are not forecasts. Projections are commonly used to indicate a range of possible outcomes, so

that their implications and differences may be understood, without tying analysis to a specific forecast of what will or is most likely to happen.

2.1.2 Population Ageing

Similar to most areas of New Zealand, the QLD population is expected to gradually age (the average age will increase) over time. This means that children and younger age groups will make up a relatively smaller proportion of the future population, while the share in mature and older age groups increases.

Importantly, that does not mean that the total population in younger age groups actually decreases, as the change is driven by the increased longevity of people, the expected age and family structure of local and international migrants, and the well-recognised demographic 'bump' of the post-War baby boom. The changes in the medium and long terms for each age cohort are detailed in Table 2.2, and illustrated in Figure 2.2. The tables show that for most age cohorts, numbers increase in the medium and longer term futures.

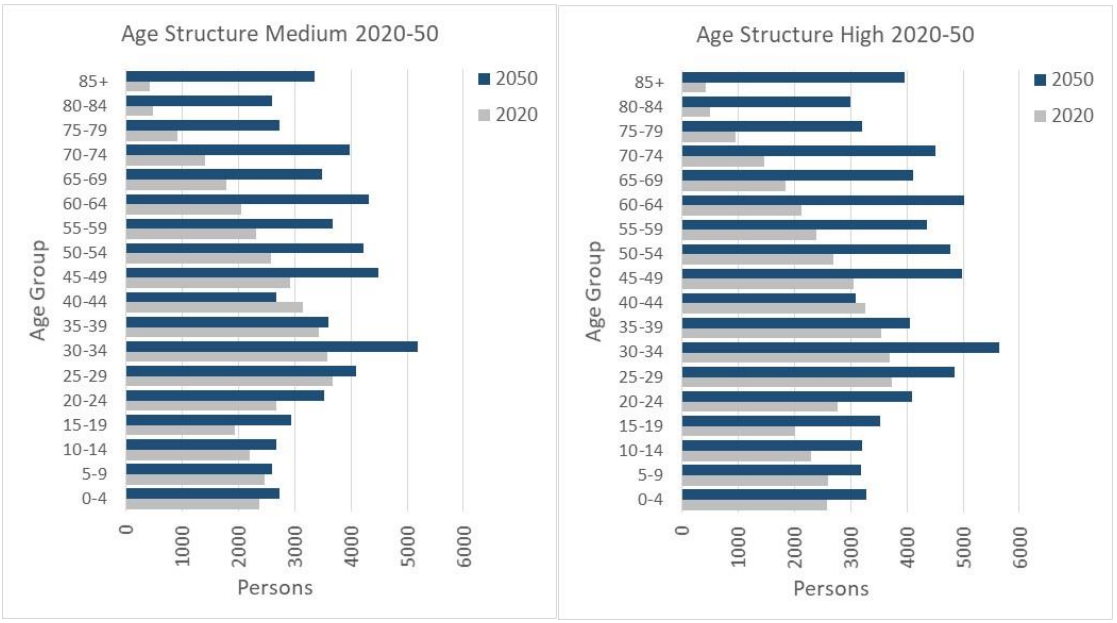
Table 2.2 – Population Growth Outlook (5 Year Lag & Change the Path Future) by Age Cohort

Age Cohort	5 Year Lag					Change the Path				
	2020	2030	2020-30 %	2050	2020-50 %	2020	2030	2020-30 %	2050	2020-50 %
0-4yrs	2,051	2,209	8%	2,601	27%	2,106	2,467	17%	3,029	44%
5-9yrs	2,220	2,261	2%	2,629	18%	2,223	2,491	12%	3,032	36%
10-14yrs	2,068	2,256	9%	2,621	27%	2,064	2,388	16%	3,046	48%
15-19yrs	1,638	2,301	40%	2,583	58%	1,635	2,352	44%	2,998	83%
20-24yrs	2,684	2,941	10%	3,742	39%	2,688	2,954	10%	4,034	50%
25-29yrs	5,397	5,024	-7%	6,313	17%	5,394	5,059	-6%	6,471	20%
30-34yrs	4,769	4,743	-1%	5,515	16%	4,759	4,862	2%	5,580	17%
35-39yrs	3,672	4,595	25%	5,406	47%	3,658	4,709	29%	5,498	50%
40-44yrs	2,997	4,376	46%	4,428	48%	2,991	4,442	49%	4,649	55%
45-49yrs	2,783	3,793	36%	4,046	45%	2,778	3,851	39%	4,380	58%
50-54yrs	2,350	3,212	37%	4,839	106%	2,342	3,285	40%	5,147	120%
55-59yrs	2,070	2,969	43%	5,543	168%	2,069	3,021	46%	5,691	175%
60-64yrs	1,847	2,544	38%	5,600	203%	1,845	2,586	40%	5,636	205%
65-69yrs	1,572	2,149	37%	4,435	182%	1,570	2,189	39%	4,522	188%
70-74yrs	1,210	1,750	45%	3,586	196%	1,209	1,787	48%	3,699	206%
75-79yrs	781	1,319	69%	3,335	327%	779	1,347	73%	3,384	334%
80-84yrs	440	931	112%	2,173	394%	439	942	115%	2,272	418%
85-89yrs	228	516	126%	1,635	617%	227	524	131%	1,724	659%
90+yrs	126	322	156%	1,445	1047%	127	341	169%	1,661	1208%
Total	40,903	50,211	22.8%	72,475	77.2%	40,903	51,597	26%	76,453	87%

Source: Statistics NZ 2021 ;QLDC

That said, the population structure in the long term is expected to be significantly different from currently, with a more even distribution of population across the age cohorts (Figure 2.2).

Figure 2.2 – Population Age Structure 2020-50 (5 Year Lag (Left) & Change the Path Future)



2.1.3 Population Ethnicity Trends

The growth projections also indicate trends in ethnicity into the long term. Nationally, the expected trend is for increases in the shares of the population of Māori, Pacific and Asian ethnicities, and a corresponding decrease in the proportional share of those of European and other ethnicities[46]. Total population of all ethnicities will also increase, but the rate at which they increase is the key driver of the proportional changes.

There are SNZ projections by ethnicity which come with caveats because the Census 2018 records all ethnicities identified by respondents, and many persons specify two or more ethnicities. Accordingly, the SNZ ethnicity-based projections recognise two (or more) ethnicities, and so the base populations and the future projections sum to more than the counts and projections for the total population. To adjust for the over-projection, for this assessment each ethnicity-based projection has been factored down, so that the sum of the ethnicity-based projections matches the total projection. It is assumed that the degree of over-count applies *pro rata* to each ethnicity.

Applying the SNZ figures to QLD, the projections indicate a long term decrease in the share of European ethnicity, falling slowly from the current 80% to reach 72% by 2050 in the medium projection and 70% in the high projection (Table 2.3). The share of Māori ethnicity is projected to increase, from the current 5% to 8% (medium future), while the projected share of Pacific persons remains low (1% currently, 2% in the long term). The share of Asian ethnicity is quite substantial (13%) and projected to increase to 18-21% by 2050. The projections indicate a similar path for QLD compared with the national pattern, where medium and long term the European share of the total population is expected to decrease, while Māori, Pacific and Asian ethnicities' shares are expected to increase.

[46] http://nzdotstat.stats.govt.nz/wbos/Index.aspx

Table 2.3 – Population Growth Outlook by Ethnicity Medium and Long Term Future

Ethnicity	5 Year Lag					Change the Path				
	2020	2023	2030	2050	2020-50 %	2020	2023	2030	2050	2020-50 %
European	32,867	31,944	39,015	52,537	60%	32,523	32,075	39,176	53,411	64%
Māori	2,237	2,249	3,014	5,462	144%	2,224	2,287	3,048	5,483	147%
Pacific	496	508	713	1,282	158%	534	564	807	1,577	195%
Asian	5,303	5,691	7,381	13,195	149%	5,622	6,226	8,379	15,982	184%
Total	40,903	40,392	50,123	72,476	77%	40,903	41,152	51,410	76,453	87%
Share %										
European	80%	79%	78%	72%		80%	78%	76%	70%	
Māori	5%	6%	6%	8%		5%	6%	6%	7%	
Pacific	1%	1%	1%	2%		1%	1%	2%	2%	
Asian	13%	14%	15%	18%		14%	15%	16%	21%	
Total	100%	100%	100%	100%		100%	100%	100%	100%	

Source: Statistics NZ 2021

2.2 Household Socio-demography 2020

The key driver of housing demand is the number of resident households, while the socio-demographic characteristics of households are important influences on the nature of housing demand, and the affordability of housing. There is considerable detail from Census 2018 and other sources about QLD households which gives scope for analysis in some detail. That said, this section focuses on the major household characteristics known to influence housing demand and affordability – household type, especially as between one-person and couple households, and family households; household age, since stage in the life cycle is the other key driver of housing need; household ethnicity, also influencing housing preferences; and household income from all sources as the main influence on ability to pay for housing, and therefore housing affordability. These aspects are examined as two-way combinations, with household type as the common factor.

As at 2020, QLD has an estimated 16,410 households, an increase of 400 over the 2018 Census figure[47].

2.2.1 Household Type and Income

The current household structure is shown in Table 2.4. Couple households are the most numerous followed by Family households and then One-person households. Multi-family households and Non-family households, typically flatting situations, make up small shares of the total.

There is a wide spread of household incomes, with 20% of all households with incomes of less than $50,000, a lower share than the national pattern. At the other end of the spectrum, just over a third of households have incomes of $120,000 or higher. This is significantly higher than at the national level. The largest share of households lies in the mid-income bands between $50,000 and $120,000 per year. SNZ income data suggests that household incomes in the Otago region increased slightly by 0.2% per annum between 2015 and 2020. There are important segments in the lower income bands which include single person

[47] QLDC July 2020 Projections.

households (many of them retired persons) and 1-parent families., both in the relatively vulnerable categories for non-owner households.

Table 2.4 – Households by Type and Income Band 2020

Household Type	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person household	1,036	892	630	398	99	56	153	3,264
Couple household	208	509	802	1,246	1,077	711	1,713	6,266
2 Parents 1-2 children	43	92	316	698	730	477	1,254	3,610
2 Parents 3+ children	9	15	27	130	113	66	300	660
1 Parent Family	181	181	178	167	88	49	99	943
Multi-family household	-	-	3	30	59	39	348	479
Non-family household	23	71	110	250	229	143	366	1,192
Total Households	1,500	1,760	2,066	2,919	2,395	1,541	4,233	16,414
One Person household	6.3%	5.4%	3.8%	2.4%	0.6%	0.3%	0.9%	19.9%
Couple household	1.3%	3.1%	4.9%	7.6%	6.6%	4.3%	10.4%	38.2%
2 Parents 1-2 children	0.3%	0.6%	1.9%	4.3%	4.4%	2.9%	7.6%	22.0%
2 Parents 3+ children	0.1%	0.1%	0.2%	0.8%	0.7%	0.4%	1.8%	4.0%
1 Parent Family	1.1%	1.1%	1.1%	1.0%	0.5%	0.3%	0.6%	5.7%
Multi-family household	0.0%	0.0%	0.0%	0.2%	0.4%	0.2%	2.1%	2.9%
Non-family household	0.1%	0.4%	0.7%	1.5%	1.4%	0.9%	2.2%	7.3%
Total Households	9.1%	10.7%	12.6%	17.8%	14.6%	9.4%	25.8%	100.0%
Relative Concentration								
One Person household	**3.47**	**2.55**	**1.53**	0.69	0.21	0.18	0.18	
Couple household	0.36	0.76	**1.02**	**1.12**	**1.18**	**1.21**	**1.06**	
2 Parents 1-2 children	0.13	0.24	0.70	**1.09**	**1.39**	**1.41**	**1.35**	
2 Parents 3+ children	0.15	0.21	0.33	**1.11**	**1.17**	**1.07**	**1.76**	
1 Parent Family	**2.10**	**1.79**	**1.50**	**1.00**	0.64	0.55	0.41	
Multi-family household	-	-	0.05	0.35	0.84	0.87	**2.82**	
Non-family household	-	-	0.73	**1.18**	**1.32**	**1.28**	**1.19**	

Source: ME Housing Demand Model 2021

To illustrate the important relationships between household types and income levels, the lower part of Table 2.4 indicates the relative concentration of each type by income segment within the community. Values shaded blue show higher than just *pro rata* incidence.[48] To illustrate, one person households are strongly represented in the lowest income band, as are 1-parent families. Couple households and 2-parent families with children have a relatively high incidence in the middle and upper income bands. Values of less than 1.0 indicate relatively lower incidence.

2.2.2 Household Age

Table 2.5 shows the distribution of household types across the age cohorts. As expected, in the younger age cohorts, families with children dominate, whereas in the older age cohorts, single person households and couples dominate.

This pattern is as expected given the changes as households progress through the life stages, and families with children then give way to "empty nester" couples and singles later in life. That said, the affordability issue often becomes progressively more important for non-owner households in the middle and later years, as remaining lifetime earning potential reduces, and ability to access housing finance often reduces.

[48] This is in effect a 'location quotient' where values greater than 1.0 show higher than pro rata incidence.

The relative concentration ratio shows more one-person and couple households in the older age cohorts, and families with children relatively grouped into the younger age bands, consistent with their respective place and movement through the life stages.

Table 2.5 – Households by Type and Age 2020

Household Type	15-29	30-39	40-49	50-64	65-74	75+	Total
One Person household	296	442	400	943	583	600	3,264
Couple household	851	1,151	636	1,827	1,297	504	6,266
2 Parents 1-2 children	279	1,164	1,372	739	56	-	3,610
2 Parents 3+ children	4	210	349	95	1	1	660
1 Parent Family	59	171	382	284	26	21	943
Multi-family household	167	154	59	99	-	-	479
Non-family household	575	328	143	111	26	9	1,192
Total Households	2,231	3,620	3,341	4,098	1,989	1,135	16,414
One Person household	1.8%	2.7%	2.4%	5.7%	3.6%	3.7%	19.9%
Couple household	5.2%	7.0%	3.9%	11.1%	7.9%	3.1%	38.2%
2 Parents 1-2 children	1.7%	7.1%	8.4%	4.5%	0.3%	0.0%	22.0%
2 Parents 3+ children	0.0%	1.3%	2.1%	0.6%	0.0%	0.0%	4.0%
1 Parent Family	0.4%	1.0%	2.3%	1.7%	0.2%	0.1%	5.7%
Multi-family household	1.0%	0.9%	0.4%	0.6%	0.0%	0.0%	2.9%
Non-family household	3.5%	2.0%	0.9%	0.7%	0.2%	0.1%	7.3%
Total Households	13.6%	22.1%	20.4%	25.0%	12.1%	6.9%	100.0%
Relative Concentration							
One Person household	0.67	0.61	0.60	**1.16**	**1.47**	**2.66**	
Couple household	**1.00**	0.83	0.50	**1.17**	**1.71**	**1.16**	
2 Parents 1-2 children	0.57	**1.46**	**1.87**	0.82	0.13	-	
2 Parents 3+ children	0.04	**1.44**	**2.60**	0.58	0.01	0.02	
1 Parent Family	0.46	0.82	**1.99**	**1.21**	0.23	0.32	
Multi-family household	**2.57**	**1.46**	0.61	0.83	-	-	
Non-family household	**3.55**	**1.25**	0.59	0.37	0.18	0.11	

Source: ME Housing Demand Model 2021

2.2.3 Household Ethnicity

Table 2.6 shows the estimated distribution of household types across the ethnicity groups. Households of European ethnicity are relatively concentrated in the One person and Couple household segments, a pattern generally consistent with their older average ages. Households of Māori, Pacific and Asian ethnicities show relatively stronger incidence across family households with children, both 2-parent and 1-parent.

Table 2.6 – Households by Type and Ethnicity 2020

Household Type	European	Māori	Pacific	Asian	Total
One Person household	2,754	136	32	346	3,268
Couple household	5,205	266	62	733	6,266
2 Parents 1-2 children	2,852	167	41	557	3,617
2 Parents 3+ children	522	28	7	102	659
1 Parent Family	760	40	6	129	935
Multi-family household	370	26	4	77	477
Non-family household	917	65	14	196	1,192
Total Households	13,380	728	166	2,140	16,414
One Person household	16.8%	0.8%	0.2%	2.1%	19.9%
Couple household	31.7%	1.6%	0.4%	4.5%	38.2%
2 Parents 1-2 children	17.4%	1.0%	0.2%	3.4%	22.0%
2 Parents 3+ children	3.2%	0.2%	0.0%	0.6%	4.0%
1 Parent Family	4.6%	0.2%	0.0%	0.8%	5.7%
Multi-family household	2.3%	0.2%	0.0%	0.5%	2.9%
Non-family household	5.6%	0.4%	0.1%	1.2%	7.3%
Total Households	81.5%	4.4%	1.0%	13.0%	100.0%
Relative Concentration					
One Person household	**1.03**	0.94	0.97	0.81	
Couple household	**1.02**	0.96	0.98	0.90	
2 Parents 1-2 children	0.97	**1.04**	**1.12**	**1.18**	
2 Parents 3+ children	0.97	0.96	**1.05**	**1.19**	
1 Parent Family	**1.00**	0.96	0.63	**1.06**	
Multi-family household	0.95	**1.23**	0.83	**1.24**	
Non-family household	0.94	**1.23**	**1.16**	**1.26**	

Source: ME Housing Demand Model 2021 *(note European includes other ethnicities)*

2.3 Household Growth

The population growth underpins the growth in household numbers. Generally, household numbers tend to increase slightly ahead of population growth. There are a number of reasons for this, notably because the ageing of the population sees higher shares in the adult age groups with potential to form their own households, while social trends have seen higher shares of one-person households.

This section addresses overall household growth at the district level, and projected changes in key factors influencing housing demand, notably household type, and household incomes. The household projections are derived from the QLDC projections of resident houses – further detail is provided in the supporting Technical Report.

2.3.1 Total Households

Estimated future household numbers are set out in Table 2.7[49]. In the Change the Path (high) projection, household numbers are projected to increase slowly from the current 16,414 households (June 2020) by only 1% in the short term, then 29% in the medium term, and nearly double (+99%) in the long term. The annual increase would be some 70 in the short term, then increasing to around 470 per year over the next

[49] See also the supporting Technical Report for a graph of these projections from 2020-2050.

decade, and 540 over the long term. This future would see 21,140 resident households in the district by 2030, and 32,730 by 2050.

Table 2.7 – Household Growth Outlook Medium (5 Yr Lag) and High (Change the Path) Futures

Future	2018	2020	2023	2028	2030	2033	2038	2043	2048	2050
5 Yr Lag	16,070	16,410	16,300	19,430	20,580	22,340	25,200	28,120	30,200	31,030
Change Path	16,070	16,410	16,620	19,520	21,140	23,670	26,590	29,170	31,700	32,730
Change 5 Yr Lag			- 110	3,020	4,170	5,930	8,790	11,710	13,790	14,620
Change Change Path			210	3,110	4,730	7,260	10,180	12,760	15,290	16,320
Change 5 Yr Lag %			-1%	18%	25%	36%	54%	71%	84%	89%
Change Change Path %			1%	19%	29%	44%	62%	78%	93%	99%
Change 5 Yr Lag %pa			-0.2%	2.1%	2.3%	2.4%	2.4%	2.4%	2.2%	2.1%
Change Change Path %pa			0.4%	2.2%	2.6%	2.9%	2.7%	2.5%	2.4%	2.3%

Source: ME Housing Demand Model 2021 Infometrics 2019 Totals rounded to nearest 10

2.3.2 Household Demography and Income

As well as growth in household numbers, considerable change is anticipated in the composition of households. The general trend in the overall average ageing of the population will result in increases in One-person households and Couple households, with relatively smaller but still significant net increases in family households with children (Table 2.8).

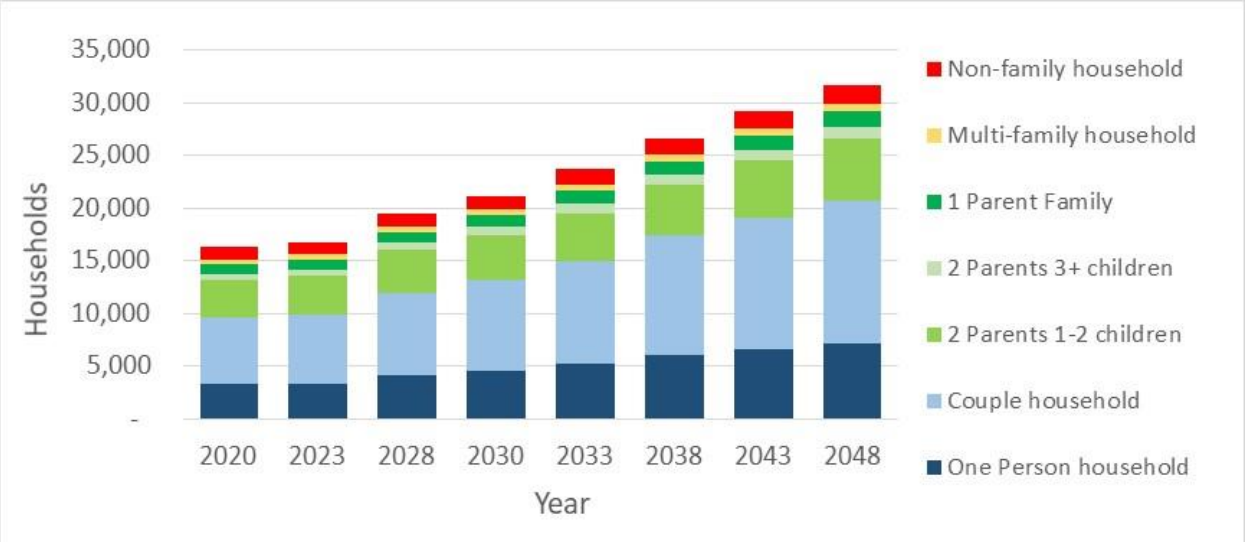
Table 2.8 – Household Growth Outlook by Type (Change the Path Future)

Household Type	Current	Short Term			Medium Term			Long Term		
	2020	2023	2020-23	2020-23 %	2030	2020-30	2020-30 %	2050	2020-50	2020-50 %
One Person household	3,260	3,340	80	2%	4,510	1,250	38%	7,410	4,150	127%
Couple household	6,270	6,520	250	4%	8,510	2,240	36%	14,000	7,730	123%
2 Parents 1-2 children	3,610	3,550	- 60	-2%	4,360	750	21%	6,050	2,440	68%
2 Parents 3+ children	660	660	-	0%	820	160	24%	1,070	410	62%
1 Parent Family	940	930	- 10	-1%	1,060	120	13%	1,560	620	66%
Multi-family household	480	470	- 10	-2%	560	80	17%	730	250	52%
Non-family household	1,190	1,150	- 40	-3%	1,320	130	11%	1,910	720	61%
Total	16,410	16,620	210	1%	21,140	4,730	29%	32,730	16,320	99%

Source: ME Housing Demand Model 2021 Totals rounded to nearest 10

This future would see one person and couple households accounting for around three-quarters of the total household growth in the medium term, and in the long term. Nevertheless, the socio-demographic structure of the household sector is expected to shift relatively slowly over time. This is shown in Figure 2.3.

Figure 2.3 – Projected Households QLD – Change the Path Future



In the survey of local residential development stakeholders, respondents were asked what their target household type was (when selling to the market), the significant majority of responses were family households, including those delivering duplex and terrace housing. Only one respondent most targeted single or couple households in the retirement market. Given the projected growth of One-person and Couple households, this suggests that the residential development market in QLD may need to shift its supply focus somewhat if the future demand by Couple and One-person households is also to be met (based on this sample of responses).

The changes in household demography are likely to be associated with shifts in household incomes. As a starting point, the current relationships between household demography and household income are expected to persist into the medium term. The projected patterns in the Change the Path future are shown in Table 2.9.

Table 2.9 – Household Growth Outlook by Income High Growth (Change the Path Future)

Household Income Band	Current	Short Term			Medium Term			Long Term		
	2020	2023	2020-23	2020-23 %	2030	2020-30	2020-30 %	2050	2020-50	2020-50 %
Under $30,000	1,500	1,570	70	5%	2,120	620	41%	3,860	2,360	157%
$30-50,000	1,760	1,820	60	3%	2,420	660	38%	4,230	2,470	140%
$50-70,000	2,070	2,110	40	2%	2,710	640	31%	4,400	2,330	113%
$70-100,000	2,920	2,940	20	1%	3,700	780	27%	5,540	2,620	90%
$100-120,000	2,400	2,410	10	0%	2,990	590	25%	4,280	1,880	78%
$120-150,000	1,540	1,550	10	1%	1,920	380	25%	2,740	1,200	78%
$150,000+	4,230	4,230	-	0%	5,280	1,050	25%	7,690	3,460	82%
Total	16,420	16,630	210	1%	21,140	4,700	29%	32,740	16,300	99%

Source: ME Housing Demand Model 2021 *Totals rounded to nearest 10*

2.4 Current Housing Demand 2020

2.4.1 Dwelling Pattern 2018

Table 2.10 provides a summary of the total QLD housing supply and occupancy as at Census 2018. It shows 19,845 private dwellings and 558 non-private dwellings (total dwellings 20,043).[50] The non-private dwellings are shown for completeness and include dwellings described as providing communal types of accommodation - these dwellings provide for a proportion of demand, particularly temporary or transitory demand from visitors - some of these dwellings however provide temporary accommodations for residents while they are in hospital or prison so are in addition to demand. Of the private dwellings 13,719 (69%) were recorded as occupied at the Census with another 12% indicated as residents being temporarily absent. That indicated up to 16% of private dwellings were not usually occupied. Including non-private dwellings, 16,401 were indicated as occupied, with 3,291(16%) not usually occupied. The estimate of occupied private dwellings (13,719 occupied + 2,313 owners away = 16,032) concords reasonably well with the number of usually resident households at 2018. Note that these numbers are drawn from Census, and the total of 19,845 private dwellings as at March 2018 is close to the QLD estimate of 19,848 as at June 2018.

Table 2.10 – Housing Supply Situation QLD at Census 2018

Census 2018	Private Dwellings	Private Dwellings %	*NZ Average*	Non-Private Dwellings	Non-Private Dwellings %	*NZ Average*	Total Dwellings	Total Dwellings %	*NZ Average*
Private Dwellings[1]	19,845	100%		558	100%		20,403	100%	
Occupied	13,719	69%	*89%*	342	61%	*66%*	14,061	69%	*89%*
Unoccupied	5,418	27%	*10%*	213	38%	*33%*	5,631	28%	*10%*
Owners Away	2,313	12%	*5%*	27	5%	*8%*	2,340	11%	*5%*
Empty Dwelling	3,105	16%	*5%*	186	33%	*25%*	3,291	16%	*5%*
Usually Occupied	16,032	81%	*94%*	369	66%	*74%*	16,401	80%	*94%*
Usually Unoccupied	3,105	16%	*6%*	186	33%	*26%*	3,291	16%	*6%*
Under Construction	705	4%	*1%*	3	1%	*1%*	711	3%	*1%*
Compare Resident Households (2018)							16,070		
Difference (n)							- 331		
Difference %							-2.0%		

Source: Census 2018; 1 includes under construction

It is noted that Census figures can over-state the numbers of usually unoccupied dwellings, especially because of the difficulty of identifying usual residents who are absent at Census time. Studies by SNZ in some main cities have shown that commonly between only 0.5% and 1.0% of dwellings are usually unoccupied, in most instances a smaller figure than the Census snapshot. The situation is complicated in towns such as Queenstown where tourism is an important part of the economy, and a higher share than the national average of the total estate is holiday dwellings[51], owned by usual residents of other areas. The QLDC estimates show 19,848 total dwellings in 2018, so there is close agreement between sources.

[50] We note that the Council's projections state total houses in 2018 as 19,848, so essentially reflecting private dwellings in Census terms.

[51] There is no formal count of holiday dwellings, however the Census shows that QLD had 16% of its dwellings recorded as 'Empty Dwelling' whereas for New Zealand as a whole the figure was substantially lower at 5.0%.

The QLD projections for 2018 indicate 16,064 resident houses, and 3,784 holiday houses, and the differences from the Census data for 2018 are small.

2.4.2 Housing Demand and Tenure 2020

Table 2.11 provides detail of the overall dwelling tenure patterns and dwelling types for 2020. These estimates are based on the patterns identified from Census 2018, factored up according to estimated growth in household numbers between 2018 and 2020 (based on the QLD projections). It is assumed that the relationships between dwelling tenure and dwelling type evident in 2018 have endured across the two years, and these have been applied ***pro rata*** according to numbers of resident households for 2020[52].

As at 2020, some 83% of dwellings occupied by resident households were separate houses, with a further 17% attached dwellings. The attached dwellings are predominantly 2-3 storey buildings (according to Census data), with around one-third of attached dwellings in buildings of 1 storey.

Table 2.11 – Estimated Dwelling Tenure and Dwelling Types 2020

Dwelling Tenure 2020	Detached	Attached					Total
	Separate House	Joined 1 Storey	Joined 2-3 Storey	Joined 4+ Storey	Total Attached	Other Dwelling	Total Dwellings
Owned with mortgage	3,160	179	339	4	522	-	3,682
Owned without mortgage	2,551	122	182	1	305	-	2,856
Owned by Trust	3,595	139	236	-	375	12	3,982
Total Owned or in Trust	9,306	440	757	5	1,202	12	10,520
Not Owned	4,241	493	1,106	11	1,610	40	5,891
Not elsewhere included	-	-	-	-	-	-	-
Total Housing	13,547	933	1,863	16	2,812	52	16,411
Owned with mortgage	19%	1%	2%	0%	3%	0%	22%
Owned without mortgage	16%	1%	1%	0%	2%	0%	17%
Owned by Trust	22%	1%	1%	0%	2%	0%	24%
Total Owned or in Trust	57%	3%	5%	0%	7%	0%	64%
Not Owned	26%	3%	7%	0%	10%	0%	36%
Not elsewhere included	0%	0%	0%	0%	0%	0%	0%
Total Housing	83%	6%	11%	0%	17%	0%	100%

Source: ME Housing Demand Model 2021

The table also shows the tenure pattern across QLD. Overall, some 64% of dwellings are owned or in a trust, with 36% rented. Of those owned, more than half are either owned without a mortgage (22%) or held in a trust (24%). The other owned dwellings (17% of the total) are owned with a mortgage.

The ownership rates are higher for separate houses than for attached dwellings. The estate includes some 9,306 owned separate houses (two thirds of all separate houses), and 1,202 owned attached dwellings, or 10,520 owned dwellings overall. In contrast, ownership rates are lower for attached dwellings with more than half of these currently rented.

[52] For longer term assessment, allowance is made for communities and markets to evolve over time. However, across a period of just two years, it is considered more robust to assume nil change.

This base pattern is important in relation to projected growth in household numbers and implied demand for additional dwellings, especially as to considerations of dwelling affordability and future ownership and rental rates.

2.4.3 Household Type and Tenure 2020

Table 2.12 provides detail of the overall dwelling tenure patterns among different types of households. Dwellings are differentiated by detached and attached only, and the 'Not Owned' category includes a small number of dwellings for which tenure is not specified. The overall pattern reflects the household structure in the QLD community.

However, there are important differences between household types in terms of the dwellings occupied, and dwelling tenure. To show this, the lower part of the table indicates the relative concentration or incidence within the community, with blue-shading showing higher than just *pro rata* incidence. The relative concentration ratios show that:

- Couple households have a high incidence of living in detached dwellings which they own.
- For One-person households there is a relatively high concentration into attached dwellings, both owned and rented.
- 2-parent families show higher concentration into detached dwellings, especially larger families with 3 or more children.
- 1-parent families have relatively low incidence of dwelling ownership and are especially concentrated into detached rental dwellings.
- Multi-family households and non-family households are relatively concentrated in rental detached dwellings.
- The reverse obviously applies where relative incidence is less than 1.0. .

Table 2.12 – Household Types and Dwelling Tenure 2020

Household Type 2020	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
One Person household	1,832	366	2,198	713	353	1,066	2,545	719	3,264
Couple household	3,885	474	4,359	1,231	673	1,904	5,116	1,147	6,263
2 Parents 1-2 children	2,305	235	2,540	873	200	1,073	3,178	435	3,613
2 Parents 3+ children	452	35	487	147	31	178	599	66	665
1 Parent Family	385	60	445	387	113	500	772	173	945
Multi-family household	176	40	216	195	67	262	371	107	478
Non-family household	272	4	276	694	214	908	966	218	1,184
Total Households	9,307	1,214	10,521	4,240	1,651	5,891	13,547	2,865	16,412
One Person household	11%	2%	13%	4%	2%	6%	16%	4%	20%
Couple household	24%	3%	27%	8%	4%	12%	31%	7%	38%
2 Parents 1-2 children	14%	1%	15%	5%	1%	7%	19%	3%	22%
2 Parents 3+ children	3%	0%	3%	1%	0%	1%	4%	0%	4%
1 Parent Family	2%	0%	3%	2%	1%	3%	5%	1%	6%
Multi-family household	1%	0%	1%	1%	0%	2%	2%	1%	3%
Non-family household	2%	0%	2%	4%	1%	6%	6%	1%	7%
Total Households	57%	7%	64%	26%	10%	36%	83%	17%	100%
Relative Concentration									
One Person household	**0.99**	**1.52**	**1.05**	0.85	**1.08**	0.91	0.94	**1.26**	
Couple household	**1.09**	**1.02**	**1.09**	0.76	**1.07**	0.85	**0.99**	**1.05**	
2 Parents 1-2 children	**1.13**	0.88	**1.10**	0.94	0.55	0.83	**1.07**	0.69	
2 Parents 3+ children	**1.20**	0.71	**1.14**	0.86	0.46	0.75	**1.09**	0.57	
1 Parent Family	0.72	0.86	0.73	**1.59**	**1.19**	**1.47**	**0.99**	**1.05**	
Multi-family household	0.65	**1.13**	0.70	**1.58**	**1.39**	**1.53**	0.94	**1.28**	
Non-family household	0.41	0.05	0.36	**2.27**	**1.80**	**2.14**	**0.99**	**1.05**	

[1] *Not Owned includes NEI*

Note - includes rounding

Source: ME Housing Demand Model 2021

These patterns offer simple but important guidance as to future housing needs and preferences, particularly because different segments within the community are expected to grow at different rates into the future. Future housing demand by type is discussed further in Section 2.5.

That said, the concentration ratios are guidance, and not absolute measures. There are substantial numbers of households across both detached and attached dwellings, and both ownership and rental (as shown in the simple number count in the upper part of Table 2.12).

2.4.4 Household Income and Tenure 2020

The relationships between household income and dwelling type and tenure also show clear patterns (Table 2.13). Middle and lower income households show relatively high incidence in rented dwellings, both detached and attached. When dwellings are owned, there is relatively strong concentration into attached dwellings.

The pattern is rather different for middle to higher income households. These show relatively high incidence of ownership, rather than rental, and ownership of detached rather than attached dwellings. Again, the caveat is that there are substantial numbers of households in each income band across both detached and attached dwellings, and both ownership and rental.

These patterns imply a strong correlation between household income and tenure, and household income and type. This implies that higher income people 'prefer' to purchase standalone houses than rent attached ones. It also highlights that lower income people 'prefer' (or have a higher incidence of) choosing to live in

rented and or attached housing. These patterns are not entirely surprising given the strong correlation between type, tenure and cost, with owning (particularly the saving of a deposit in addition to paying rent) being more expensive than renting, and attached dwellings generally being less expensive (at least on a weekly-outgoings basis) to buy (or rent) than detached dwellings.

Table 2.13 – Household Income and Dwelling Tenure 2020

Household Income	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Under $30,000	828	113	941	434	124	558	1,262	237	1,499
$30-50,000	990	145	1,135	412	215	627	1,402	360	1,762
$50-70,000	1,131	173	1,304	546	213	759	1,677	386	2,063
$70-100,000	1,568	220	1,788	810	321	1,131	2,378	541	2,919
$100-120,000	1,328	180	1,508	607	280	887	1,935	460	2,395
$120-150,000	856	117	973	387	180	567	1,243	297	1,540
$150,000+	2,604	267	2,871	1,046	318	1,364	3,650	585	4,235
Total Households	9,305	1,215	10,520	4,242	1,651	5,893	13,547	2,866	16,413
Under $30,000	5%	1%	6%	3%	1%	3%	8%	1%	9%
$30-50,000	6%	1%	7%	3%	1%	4%	9%	2%	11%
$50-70,000	7%	1%	8%	3%	1%	5%	10%	2%	13%
$70-100,000	10%	1%	11%	5%	2%	7%	14%	3%	18%
$100-120,000	8%	1%	9%	4%	2%	5%	12%	3%	15%
$120-150,000	5%	1%	6%	2%	1%	3%	8%	2%	9%
$150,000+	16%	2%	17%	6%	2%	8%	22%	4%	26%
Total Households	57%	7%	64%	26%	10%	36%	83%	17%	100%
Relative Concentration									
Under $30,000	0.97	**1.02**	0.98	**1.12**	0.82	**1.04**	**1.02**	0.91	
$30-50,000	**0.99**	**1.11**	**1.00**	0.90	**1.21**	**0.99**	0.96	**1.17**	
$50-70,000	0.97	**1.13**	**0.99**	**1.02**	**1.03**	**1.02**	**0.98**	**1.07**	
$70-100,000	0.95	**1.02**	0.96	**1.07**	**1.09**	**1.08**	**0.99**	**1.06**	
$100-120,000	0.98	**1.02**	**0.98**	**0.98**	**1.16**	**1.03**	0.98	**1.10**	
$120-150,000	**0.98**	**1.03**	**0.99**	0.97	**1.16**	**1.03**	0.98	**1.10**	
$150,000+	**1.08**	0.85	**1.06**	0.96	0.75	0.90	**1.04**	0.79	

1 Not Owned includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

2.4.5 Tenure and Dwelling Type by Ethnicity

The relationships between household ethnicity and dwelling type and tenure show equally clear patterns (Table 2.14). Households of European and other ethnicity show higher incidence of dwelling ownership, for both detached and attached dwellings. Households of Māori, Pacific and Asian ethnicities show higher incidence in rented dwellings, again for both detached and attached typologies.

Dwelling ownership rates are significantly higher for households of European ethnicity at around 67% compared with the overall QLD average of 63%. It is substantially higher than for households of Māori ethnicity (around half), Pacific ethnicity and Asian ethnicity (just under half). However, the occupation of detached dwellings is high across all ethnicities, at 87% overall.

Table 2.14 – Household Ethnicity and Dwelling Tenure Queenstown Lakes District 2020

Household Ethnicity	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
European	8,636	975	9,611	3,911	1,365	5,276	12,547	2,340	14,887
Māori	290	75	365	132	95	227	422	170	592
Pacific	36	19	55	-	-	-	36	19	55
Asian	344	145	489	198	190	388	542	335	877
Total	9,306	1,214	10,520	4,241	1,650	5,891	13,547	2,864	16,411
European	53%	6%	59%	24%	8%	32%	76%	14%	91%
Māori	2%	0%	2%	1%	1%	1%	3%	1%	4%
Pacific	0%	0%	0%	0%	0%	0%	0%	0%	0%
Asian	2%	1%	3%	1%	1%	2%	3%	2%	5%
Total	57%	7%	64%	26%	10%	36%	83%	17%	100%
Relative Concentration									
European	**1.02**	0.89	**1.01**	**1.02**	0.91	**0.99**	**1.02**	0.90	
Māori	0.86	**1.71**	0.96	0.86	**1.60**	**1.07**	0.86	**1.65**	
Pacific	**1.15**	**4.67**	**1.56**	-	-	-	0.79	**1.98**	
Asian	0.69	**2.24**	0.87	0.87	**2.15**	**1.23**	0.75	**2.19**	

1 Not Owned includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

2.5 Future Housing Demand

The descriptions of the 2020 household and housing situation provide important base material for assessing future housing demands in QLD. The current patterns have been established over many years of growth and change. While the demographic and ethnic structure of the population is expected to change, and directly affect the mix of households as well as numbers, the established socio-demographic parameters can be expected to change relatively slowly and incrementally over time.

This means that several important patterns within overall housing demand in QLD are clear in the 'big picture' which is described by household demography, income and ethnicity.

Further, for the housing assessment it is important to cover the total household and housing patterns in the short, medium and long term, and not focus on just the changes from 2020. This is because the resident population and the household sector change and evolve over time. Most of the households identified in the medium term projections are already in the 2020 household structure, albeit 10 years younger than they will be in 2030. The same applies in the long term to 2050. At the same time, new household formations, child-bearing and rearing, and ageing and passing on see the population structure steadily changing. Many households who are currently non-owners will become dwelling owners in the medium term and longer term. At the same time, many younger persons will leave their family home in their later teens or early twenties, often to form their own households, and often transitioning from non-family households in renting situations to become couples and parents with families.

In the same way, dwelling tenure patterns and the dwelling estate itself will continue to change and evolve. Dwellings age and depreciate, commonly with improvement values falling or being static in real terms, even as land values characteristically rise as urban economies grow. A significant proportion of dwelling construction in the district is also likely to involve replacement either on a like for like basis (one old dwelling replaced with one new dwelling) or from redevelopment - one old dwelling replaced with 2 or more new dwellings. This means that total dwelling consents would need to be greater than population driven growth

in order to keep up with housing demand. That said, the rapid growth in QLD means that much of the dwelling stock is of relatively young age, so that direct replacement rates are relatively low.

All of these factors mean that the future situation cannot be assessed simply by considering the net changes from the present, and assuming those net changes can accurately represent demand for additional housing. Accordingly, this analysis covers both the total situation and the net changes for assessing housing needs based on the Council's preferred growth.

2.5.1 Short Term 'Change the Path' Future (High Growth)

In the short term, the projected housing demand from residents is for an additional 205 households by 2023, an increase of around 1%.

Table 2.15 shows the projected change over the period by dwelling type and tenure. The base position is that the 2018 ownership patterns for detached and attached dwellings are assumed to continue into the future with changes reflecting only the changing mix of dwelling types. This allows for some continuation of the long term trend for dwelling ownership rates to slowly decline. However, beyond that, there is no further change assumed in dwelling ownership.

There are two reasons. First, shifts in ownership are driven by a number of factors, including demographic change, access to finance and dwelling affordability. Attempting to project or model ownership changes is a demanding technical assessment, beyond the scope of the HBA structure. The second reason is that much of the focus of the HBA analysis is housing affordability, and the possible effects on that of planning and infrastructure. Affordability is a key driver of ownership levels. The logical path for evaluation is to start from the current levels of ownership and use the assessment of affordability to offer comment on the likelihood of ownership level improving or declining in the future. This helps isolate the effects of planning and infrastructure from the range of other factors which affect affordability and ownership levels.

The situation is more straightforward for shifts in dwelling typology. The long term trends are generally more stable and obvious, are evident nationally and are clear within QLD itself. For the dwelling mix, allowance is made for both the changing mix of households and a long term trend away from detached dwellings toward attached dwellings[53].

[53] Dwelling consent statistics for QLD show that over the Dec 2016 to Dec 2020 period, 47% of all consents were for detached dwellings, with 43% for townhouses, apartments or flats, 4% for retirement units, and 6% for apartments. The current trend is for steady change in the total dwelling typology towards a 50/50 mix.

Table 2.15 – Dwelling Tenure and Dwelling Types 2020-2023 Change the Path Future

Dwelling Tenure : Change the Path Future	2020			2023			2020-23		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*0.9%pa*			
Owned with mortgage	3,160	522	3,682	3,178	572	3,750	18	50	68
Owned without mortgage	2,551	305	2,856	2,574	318	2,892	23	13	36
Owned by Trust	3,595	387	3,982	3,623	409	4,032	28	18	50
Total Owned or in Trust	9,306	1,214	10,520	9,375	1,299	10,674	69	81	154
Not Owned	4,241	1,650	5,891	4,209	1,736	5,945	- 32	73	54
Total Housing	13,547	2,864	16,411	13,584	3,035	16,619	37	154	208
Shares %									
Owned with mortgage	19%	3%	22%	19%	3%	23%	-0.1%	0.3%	0.1%
Owned without mortgage	16%	2%	17%	15%	2%	17%	-0.1%	0.1%	0.0%
Owned by Trust	22%	2%	24%	22%	2%	24%	-0.1%	0.1%	0.0%
Total Owned or in Trust	57%	7%	64%	56%	8%	64%	-0.3%	0.4%	0.1%
Not Owned	26%	10%	36%	25%	10%	36%	-0.5%	0.4%	-0.1%
Total Housing	83%	17%	100%	82%	18%	100%	-0.8%	0.8%	0.0%

Source: ME Housing Demand Model 2021 *Note - includes rounding*

In the short term to 2023, only small changes are indicated in the overall dwelling and ownership structure. The base case would see the bulk of housing growth as detached dwellings, and demand predominantly for owned dwellings.

Table 2.16 shows the projected growth in demand by household type over the short term period, again by dwelling type and tenure. The scale of change is small over the short term, so it is relevant to examine only the high-level shifts in relation to household type.

Table 2.16 – Dwelling Tenure and Type by Household Category 2023 Change the Path Future

Household Type 2023 Change the Path Future	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
One Person household	1,943	404	2,347	734	378	1,112	2,677	782	3,459
Couple household	4,182	529	4,711	1,289	733	2,022	5,471	1,262	6,733
2 Parents 1-2 children	2,024	221	2,245	815	202	1,017	2,839	423	3,262
2 Parents 3+ children	456	38	494	150	35	185	606	73	679
1 Parent Family	359	62	421	367	111	478	726	173	899
Multi-family household	180	44	224	201	69	270	381	113	494
Non-family household	231	-	231	653	208	861	884	208	1,092
Total Households	9,375	1,298	10,673	4,209	1,736	5,945	13,584	3,034	16,618
One Person household	12%	2%	14%	4%	2%	7%	16%	5%	21%
Couple household	25%	3%	28%	8%	4%	12%	33%	8%	41%
2 Parents 1-2 children	12%	1%	14%	5%	1%	6%	17%	3%	20%
2 Parents 3+ children	3%	0%	3%	1%	0%	1%	4%	0%	4%
1 Parent Family	2%	0%	3%	2%	1%	3%	4%	1%	5%
Multi-family household	1%	0%	1%	1%	0%	2%	2%	1%	3%
Non-family household	1%	0%	1%	4%	1%	5%	5%	1%	7%
Total Households	56%	8%	64%	25%	10%	36%	82%	18%	100%

1 Not Owned includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

2.5.2 Medium Term 'Change the Path' Future (High Growth)

The medium term would see a much greater level of change from the current, and it is useful to understand the nuances. In the medium term, the projected housing demand is for an additional 4,740 dwellings for the resident population[54], an increase of some 29%.

Table 2.17 shows the projected change over the period by dwelling type and tenure. Consistent with the short term, the base case assumes current ownership patterns for each household type will by and large persist into the future, reflecting only the changing mix of household types. Allowance is again made for a long term trend away from detached dwellings and toward attached dwellings.

Table 2.17 – Dwelling Tenure and Dwelling Types 2020-2030 Change the Path Future

Dwelling Tenure : Change the Path Future	2020			2030			2020-30		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*2.8%pa*			
Owned with mortgage	3,160	522	3,682	3,758	924	4,682	598	402	1,000
Owned without mortgage	2,551	305	2,856	3,251	556	3,807	700	251	951
Owned by Trust	3,595	387	3,982	4,570	683	5,253	975	290	1,271
Total Owned or in Trust	9,306	1,214	10,520	11,579	2,163	13,742	2,273	943	3,222
Not Owned	4,241	1,650	5,891	4,759	2,649	7,408	518	982	1,517
Total Housing	13,547	2,864	16,411	16,338	4,812	21,150	2,791	1,925	4,739
Shares %									
Owned with mortgage	19%	3%	22%	18%	4%	22%	-1.5%	1.2%	-0.3%
Owned without mortgage	16%	2%	17%	15%	3%	18%	-0.2%	0.8%	0.6%
Owned by Trust	22%	2%	24%	22%	3%	25%	-0.3%	0.9%	0.6%
Total Owned or in Trust	57%	7%	64%	55%	10%	65%	-2.0%	2.8%	0.9%
Not Owned	26%	10%	36%	23%	13%	35%	-3.3%	2.5%	-0.9%
Total Housing	83%	17%	100%	77%	23%	100%	-5.3%	5.3%	0.0%

Source: ME Housing Demand Model 2021 *Note - includes rounding*

In the medium term, changes are indicated in the overall dwelling and ownership structure. The base case would see some shift toward attached dwellings (41% of growth over the decade), but with demand still predominantly for owned dwellings (77% of the total estate). The potential for intentions to own becoming manifest as actual ownership is discussed in the section on housing affordability.

Table 2.18 shows the projected growth in demand by household type over the period, again by dwelling type and tenure. Nearly three-quarters of the demand for additional dwellings is from One-person and Couple households, with 2-parent and 1-parent families with children accounting for just under a quarter. The growth and shifting household typology indicates more rental of attached dwellings in the medium term, as supply of attached dwellings increases.

The survey of residential development stakeholders in QLD asked respondents to anticipate what changes they expected to deliver through their developments in the short-medium term. 45% of respondents 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. 27% of respondents indicated that they saw their dwelling size decreasing and nobody responded that they would deliver larger dwellings than currently, 3 respondents said they would keep dwelling sizes the same. A significant 73% of respondents anticipated

[54] The projected increase in 5,369 total dwellings, which indicates some shift toward resident-occupied dwellings, and a shift away from holiday dwellings.

delivering more duplex/terrace style housing and 18% anticipated delivering more apartment dwelling units over the medium term. Respondents recognised the changing demographics of the district as demanding more attached housing. Further detail is provided in the supporting Technical Report.

Table 2.18 – Household Types and Dwelling Tenure 2020-2030 Change the Path Future

Household Type 2030 Change the Path Future	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
One Person household	2,391	388	2,779	1,508	583	2,091	3,899	971	4,870
Couple household	5,153	649	5,802	1,891	1,087	2,978	7,044	1,736	8,780
2 Parents 1-2 children	2,596	460	3,056	876	364	1,240	3,472	824	4,296
2 Parents 3+ children	534	77	611	123	52	175	657	129	786
1 Parent Family	409	177	586	214	163	377	623	340	963
Multi-family household	196	91	287	143	97	240	339	188	527
Non-family household	298	320	618	4	303	307	302	623	925
Total Households	11,577	2,162	13,739	4,759	2,649	7,408	16,336	4,811	21,147
One Person household	11%	2%	13%	7%	3%	10%	18%	5%	23%
Couple household	24%	3%	27%	9%	5%	14%	33%	8%	42%
2 Parents 1-2 children	12%	2%	14%	4%	2%	6%	16%	4%	20%
2 Parents 3+ children	3%	0%	3%	1%	0%	1%	3%	1%	4%
1 Parent Family	2%	1%	3%	1%	1%	2%	3%	2%	5%
Multi-family household	1%	0%	1%	1%	0%	1%	2%	1%	2%
Non-family household	1%	2%	3%	0%	1%	1%	1%	3%	4%
Total Households	55%	10%	65%	23%	13%	35%	77%	23%	100%

1 Not Owned includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

Table 2.19 shows projected growth in demand by household income. It indicates demand would be spread quite broadly across household income bands. However, over time a higher share is anticipated to be lower income households ($30,000 or under). The shift is consistent with the ageing of the population, and higher shares of overall demand growth being from One-person and Couple households. Around three-quarters of the net increase is indicated for households with incomes of $50,000 or more, and over 25% would be from households earning $100,000 or more.

Table 2.19 – Household Income and Dwelling Tenure 2020-2030 Change the Path Future

Household Income 2030 Change the Path Future	Total Demand			Additional Demand 2020-30			Additional Demand 2020-30 %		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Owned or Trust									
Under $30,000	1,139	238	1,377	311	125	436	7%	3%	9%
$30-50,000	1,329	211	1,540	339	66	405	7%	1%	9%
$50-70,000	1,451	277	1,728	320	104	424	7%	2%	9%
$70-100,000	1,937	407	2,344	369	187	556	8%	4%	12%
$100-120,000	1,590	301	1,891	262	121	383	6%	3%	8%
$120-150,000	1,024	192	1,216	168	75	243	4%	2%	5%
$150,000+	3,109	537	3,646	505	270	775	11%	6%	16%
Total Owned or Trust	11,579	2,163	13,742	2,274	948	3,222	48%	20%	68%
Not Owned									
Under $30,000	528	213	741	94	89	183	2%	2%	4%
$30-50,000	619	343	962	207	128	335	4%	3%	7%
$50-70,000	665	337	1,002	119	124	243	3%	3%	5%
$70-100,000	834	497	1,331	24	176	200	1%	4%	4%
$100-120,000	680	435	1,115	73	155	228	2%	3%	5%
$120-150,000	438	279	717	51	99	150	1%	2%	3%
$150,000+	995	545	1,540	-51	227	176	-1%	5%	4%
Total Not Owned	4,759	2,649	7,408	517	998	1,515	11%	21%	32%
Total	16,338	4,812	21,150	2,791	1,946	4,737	59%	41%	100%

1 Attached includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

Table 2.20 showing projected growth in medium term demand by the major ethnic groups again highlights that demand would be dominated by households of European ethnicity (82%), consistent with the population projections applied. That is also apparent in the additional demand indicated for detached dwellings, and ownership. The structure of demand from households of other ethnicities is similar to the short term with a slightly larger shares for rented dwellings than owned dwellings, and higher propensity for attached dwellings still.

Table 2.20 – Household Ethnicity and Dwelling Tenure 2020-2030 Change the Path Future

Household Ethnicity 2030 Change the Path Future	Total Demand			Additional Demand 2020-30			Additional Demand 2020-30 %		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Owned or Trust									
European	10,667	1,992	12,659	2,008	1,012	3,020	42%	21%	64%
Māori	335	75	410	60	-1	59	1%	0%	1%
Pacific	42	-	42	13	-16	-3	0%	0%	0%
Asian	377	107	484	34	-35	-1	1%	-1%	0%
Total Owned or Trust	11,421	2,174	13,595	2,115	960	3,075	45%	20%	65%
Not Owned									
European	3,797	2,296	6,093	-90	925	835	-2%	20%	18%
Māori	312	156	468	170	60	230	4%	1%	5%
Pacific	78	-	78	78	-	78	2%	0%	2%
Asian	614	303	917	402	120	522	8%	3%	11%
Total Not Owned	4,801	2,755	7,556	560	1,105	1,665	12%	23%	35%
Total	16,222	4,929	21,151	2,675	2,065	4,740	56%	44%	100%

1 Attached includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

2.5.3 Long Term 'Change the Path' Future (High Growth)

In the long term, the projected housing demand is for another 16,316 dwellings to house the resident population, an increase of some 99%. The projected increase in total dwellings is 17,051, with holiday dwellings increasing by just 14% over the long term.

Table 2.21 shows the projected change over the period by dwelling type and tenure. Consistent with the medium term outlook, the Change the Path projection assumes that current ownership patterns for each household type will persist into the future, with changes in demand driven by the changing mix of household types. Allowance is made for a long term trend away from detached dwellings toward attached dwellings of around 2.3% pa.

In the long term, more material changes are indicated in the district's dwelling and ownership structure. The Change the Path future would still see just over half of net additional housing as detached dwellings (54%), with attached dwellings making up the other half. The trend in the last 5 years has seen attached dwellings now accounting for 42% of the additions to the QLD total estate, and that shift is expected to continue into the future. Expected demand is still predominantly (67%) for owned dwellings.

Table 2.21 – Dwelling Tenure and Dwelling Types 2020-2050 Change the Path Future

Dwelling Tenure : Change the Path Future	2020			2050			2020-50		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*2.3%pa*			
Owned with mortgage	3,160	522	3,682	4,575	1,944	6,519	1,415	1,422	2,837
Owned without mortgage	2,551	305	2,856	5,152	1,482	6,634	2,601	1,177	3,778
Owned by Trust	3,595	387	3,982	7,015	1,761	8,776	3,420	1,363	4,794
Total Owned or in Trust	9,306	1,214	10,520	16,742	5,187	21,929	7,436	3,962	11,409
Not Owned	4,241	1,650	5,891	5,606	5,182	10,788	1,365	3,519	4,897
Total Housing	13,547	2,864	16,411	22,348	10,369	32,717	8,801	7,481	16,306
Shares %									
Owned with mortgage	19%	3%	22%	14%	6%	20%	-5.3%	2.8%	-2.5%
Owned without mortgage	16%	2%	17%	16%	5%	20%	0.2%	2.7%	2.9%
Owned by Trust	22%	2%	24%	21%	5%	27%	-0.5%	3.0%	2.6%
Total Owned or in Trust	57%	7%	64%	51%	16%	67%	-5.5%	8.5%	2.9%
Not Owned	26%	10%	36%	17%	16%	33%	-8.7%	5.8%	-2.9%
Total Housing	83%	17%	100%	68%	32%	100%	-14.2%	14.2%	0.0%

Source: ME Housing Demand Model 2021 *Note - includes rounding*

Table 2.22 shows the projected growth in demand by household type, dwelling type and tenure, with the standard allowances as to ownership patterns of each household type, and the long term trend toward attached dwellings.

Table 2.22 – Household Types and Dwelling Tenure 2020-2050 Change the Path Future

Household Type 2050 Change the Path Future	Total Demand			Additional Demand 2020-50			Additional Demand 2020-50 %		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Owned or Trust									
One Person household	3,520	962	4,482	1,688	596	2,284	10%	4%	14%
Couple household	8,192	1,569	9,761	4,307	1,095	5,402	26%	7%	33%
2 Parents 1-2 children	3,212	1,085	4,297	907	850	1,757	6%	5%	11%
2 Parents 3+ children	638	186	824	186	151	337	1%	1%	2%
1 Parent Family	511	419	930	126	359	485	1%	2%	3%
Multi-family household	238	187	425	62	147	209	0%	1%	1%
Non-family household	433	779	1,212	161	775	936	1%	5%	6%
Total Owned or Trust	16,744	5,187	21,931	7,437	3,973	11,410	46%	24%	70%
Not Owned									
One Person household	1,872	1,129	3,001	1,159	776	1,935	7%	5%	12%
Couple household	2,237	2,039	4,276	1,006	1,366	2,372	6%	8%	15%
2 Parents 1-2 children	968	778	1,746	95	578	673	1%	4%	4%
2 Parents 3+ children	126	111	237	- 21	80	59	0%	0%	0%
1 Parent Family	236	364	600	- 151	251	100	-1%	2%	1%
Multi-family household	132	165	297	- 63	98	35	0%	1%	0%
Non-family household	35	595	630	- 659	381	- 278	-4%	2%	-2%
Total Not Owned	5,606	5,181	10,787	1,366	3,530	4,896	8%	22%	30%
Total	22,350	10,368	32,718	8,803	7,503	16,306	54%	46%	100%

[1] *Attached includes NEI*

Note - includes rounding

Source: ME Housing Demand Model 2021

In the long term to 2050, the changes would be more substantial. The net increase in demand for dwellings would be weighted toward from one-person households at 29% of the total. Couple households would account for a further 50%, meaning that nearly four-fifths of the net additional demand is from one- and two-person households. The share of the increase for 2-parent families with children would be substantially less at 12%. One-parent families, and multi- and non-family households would account for only around 9% of the growth. The focus on owned detached dwellings would be somewhat less, though still representing nearly half of the net change.

Table 2.23 showing projected growth by household income illustrates this. Additional demand is spread quite broadly across household income bands. Over time a slightly higher share (31% compared with 28% in the medium term) is anticipated to be lower (under $50k) income households. That is consistent with the population ageing and the increase in one-person and couple households. That said, around 70% of the net growth is households with incomes of $50,000 or more, and over one quarter would be households earning $100,000 or more.

That relatively high share of middle and higher income households is important for the future housing affordability assessment.

Table 2.23 – Household Income and Dwelling Tenure 2020-2050 Change the Path Future

Household Income 2050 Change the Path Future	Total Demand			Additional Demand 2020-50			Additional Demand 2020-50 %		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Owned or Trust									
Under $30,000	1,886	666	2,552	1,058	553	1,611	6%	3%	10%
$30-50,000	2,126	522	2,648	1,136	377	1,513	7%	2%	9%
$50-70,000	2,258	674	2,932	1,127	501	1,628	7%	3%	10%
$70-100,000	2,812	944	3,756	1,244	724	1,968	8%	4%	12%
$100-120,000	2,072	690	2,762	744	510	1,254	5%	3%	8%
$120-150,000	1,339	434	1,773	483	317	800	3%	2%	5%
$150,000+	4,248	1,257	5,505	1,644	990	2,634	10%	6%	16%
Total Owned or Trust	16,741	5,187	21,928	7,436	3,972	11,408	46%	24%	70%
Not Owned									
Under $30,000	819	500	1,319	385	376	761	2%	2%	5%
$30-50,000	858	730	1,588	446	515	961	3%	3%	6%
$50-70,000	777	694	1,471	231	481	712	1%	3%	4%
$70-100,000	895	881	1,776	85	560	645	1%	3%	4%
$100-120,000	714	792	1,506	107	512	619	1%	3%	4%
$120-150,000	459	512	971	72	332	404	0%	2%	2%
$150,000+	1,083	1,073	2,156	37	755	792	0%	5%	5%
Total Not Owned	5,605	5,182	10,787	1,363	3,531	4,894	8%	22%	30%
Total	22,346	10,369	32,715	8,799	7,503	16,302	54%	46%	100%

1 Attached includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

Table 2.24 shows projected growth in demand by the major ethnic groups, a pattern very similar to the outcomes for the short and medium terms. Demand would be dominated by households of European ethnicity (88%), with their high proportions of additional demand indicated for detached and owned dwellings. The structure of demand from households of other ethnicities is expected to be relatively steady throughout the planning horizon.

Table 2.24 – Household Ethnicity and Dwelling Tenure 2020-2050 Change the Path Future

Household Ethnicity 2050 Change the Path Future	Total Demand			Additional Demand 2020-50			Additional Demand 2020-50 %		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Owned or Trust									
European	14,970	4,881	19,851	6,311	3,901	10,212	39%	24%	63%
Māori	457	186	643	182	110	292	1%	1%	2%
Pacific	59	-	59	30	- 16	14	0%	0%	0%
Asian	527	251	778	184	109	293	1%	1%	2%
Total Owned or Trust	16,013	5,318	21,331	6,707	4,104	10,811	41%	25%	66%
Not Owned									
European	4,519	4,743	9,262	632	3,372	4,004	4%	21%	25%
Māori	370	336	706	228	240	468	1%	1%	3%
Pacific	83	-	83	83	-	83	1%	0%	1%
Asian	713	634	1,347	501	451	952	3%	3%	6%
Total Not Owned	5,685	5,713	11,398	1,444	4,063	5,507	9%	25%	34%
Total	21,698	11,031	32,729	8,151	8,167	16,318	50%	50%	100%

1 Attached includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

2.5.4 Implications

The gradual shift toward greater shares of demand being from medium and higher income households offers some encouragement to the challenge of housing affordability. The situation is more complex than just the income patterns, because over time households currently renting can be expected to seek to transition to dwelling ownership, just as new households forming from existing households over the next decade are likely to start out as tenants in rented dwellings. Similarly, many households in the lower income bands will be older households including those retiring, but who may already be dwelling owners. That shift in the balance may see apparent ownership rates among the lower income households increase over time, especially as those who are currently in the higher income bands transition to the lower bands, often around the time of retirement.

Those shares (above) relate to net growth, not total demand. Nevertheless, the shifts do indicate some change in overall market structure in the long term. One-person households are expected to represent 23% of total housing demand (20% currently). Couple households will represent 43%, a very high share compared with the national pattern, and substantially higher than the current 38% (also high). The 2-parent and 1-parent families will account for some 27% (currently 32%), while in future multi- and non-family households will be a lesser share at 8% compared with the current 10%.

While there will be important shifts in the structure of housing demand, the increase in the size of demand is probably the most important change. Every segment of the housing market will be larger in the medium and long terms than it is currently. There will be more households in every segment who will require housing. There is limited change expected in the overall structure of the market in terms of household incomes. In the long term, lower and lower-middle income households (under $50,000) are expected to account for 25% of the total, compared with 20% currently. Households earning more than $50,000 would still be in the majority (76%), compared with 80% in 2020. Households earning more than $100,000 would be around 45%, compared with nearly 50% now. These long term shifts are important, though not huge.

2.5.5 Caveat

It is important to recognise that assessment of future housing demand is based largely on a 'Business as Usual' ("BAU") base case, in which the current housing preferences and capabilities for each socio-demographic group are assumed to continue into the medium and long term. That means that current dwelling ownership levels for each household segment are assumed to be more or less the same in 10 and 30 years' time, for the segments which are around then. For example, 73% of 2-parent households in the 40-49 age band with incomes of over $120,000 resided in their own dwelling, another 10% lived in a dwelling owned by a trust. The BAU future assumes that households with those characteristics in 10 or 30 years' time will have the same ownership patterns. In a relatively stable economy and community like QLD, where current patterns have developed over a long period, the BAU assumption is generally the most appropriate starting point.

In particular, it provides a basis for assessing future affordability. However, the BAU demand future does not seek to model macro-economic matters, beyond the established trends in household income levels. This is considered further in relation to housing affordability.

2.5.6 NPS-UD Competitiveness Margin

Clause 3.22 of the NPS-UD requires that a competitiveness margin of 20% in the short and medium term and 15% in the long term be added to projected demand for assessing capacity requirements in Tier 1 and Tier 2 urban environments.

The purpose of the margin is to support choice and competitiveness in housing and business land markets by ensuring that Council enables at least 15-20% more capacity than would be required to meet expected demand.

It is important to recognise that the competitiveness margin is in effect additional provision for feasible housing capacity and the infrastructure to support it, but it is not anticipated additional dwelling supply as at 2023, 2030 or 2050. The core reason for the additional land capacity is to provide a land supply buffer in case housing demand is higher than anticipated, with a view also to place downward pressure on land prices.

The preceding household projections and demand analysis identifies the number of dwellings expected to be required to accommodate QLD's future population according to Council's growth projections. From that base, the Council is required to provide for sufficient plan-enabled and serviced land to accommodate that growth, and up to 20% more for the competitiveness margin in the short and medium terms. The short term margin applies as an additional 7 months' capacity over and above the 36 month growth outlook, so that at any point in time there should be 43 or so months of plan enabled and serviced land capacity, constantly moving forward.

Within that, it is important to differentiate between provision for housing capacity, which is done by ensuring sufficient plan-enabled and infrastructure-serviced land supply for anticipated needs - within the power of councils - and actual construction and final delivery of that housing capacity (or "take up"), which is for the most part by private sector developers and builders.

Construction of housing capacity is undertaken largely by private interests in the case of most land development and dwelling construction, apart from historically limited public sector involvement in social housing. Efforts by community housing providers and not for profit developments supported by local and central government are also expected to increase over time. Despite this, the supply of new dwellings has, and is expected to remain predominantly a private sector activity, where private developers and builders purchase and develop land and build dwellings in expectation of sale on the open market, often with the security of contractual arrangements with an intending purchaser (pre-sale), although also in anticipation of sale during or after the dwelling construction (spec-build).

Based on a survey of local stakeholders in the housing development sector, results shows that just over half of respondents were land developers that also delivered residential dwellings, dwelling construction makes up for a much smaller part of their overall activity. I.e., while they sell some house and land packages, the majority of sections created are sold as vacant sections. These developers operated at a range of scales from 20-30 sections per annum (bottom end of the scale) and 100 plus sections per annum in the district, while their delivery of dwellings ranged from 10 or less to 30-40 dwellings per annum. A smaller share of respondents were just land developers and they tended to operate at a larger scale with the smallest annual supply reported as 50-75 lots per annum. A small share of respondents were just involved in housing

construction, delivering between 30-40 dwellings per annum at one end of the scale and 75-100 dwellings per annum at the upper end.

Completion of new dwellings occurs predominantly in the last months and weeks of a development sequence which generally takes 2-4 years from land acquisition through structure planning, site development, provision of local infrastructure, to dwelling construction and sale. This means provision for land capacity by councils can generally be expected to manifest as built housing capacity approximately 2-4 years later, at the earliest.

The key point is that the provision for the competitiveness margin should not give rise to expectation that the new housing capacity itself would be completed and be ready for sale 43 months or so in advance of its expected uptake. In terms of meeting the NPS-UD requirements, then, the competitiveness margin applies to provision for sufficient land, and not to the final delivery of built housing capacity.

2.6 Housing Demand by Location

The above detailed analysis of resident housing demand has been for the district as a whole. In accordance with clause 3.24 of the NPS-UD, the HBA must also estimate demand for additional housing in the urban environment, and in different locations by dwelling type within that urban environment. This is required to assess the sufficiency of capacity against where households typically seek to locate within the district and urban environment.

The supporting Technical Report discusses the Council's total dwelling growth projections by geographic area (split according to resident and holiday home growth projections). Those areas have been aggregated to form the locations reported in this HBA ("reporting areas"). Refer Figure 1.9 of this report for the extents of each location.

Some of those geographic areas are 100% located in the rural environment and some are 100% located in the urban environment. Some contain areas of rural and urban environment. The Technical Report contains M.E's assumptions for splitting Council's projected dwelling growth (where applicable) to show the estimated demand for housing within the long term urban environment and rural environment parts of each area. This does not necessarily mean that demand attributed to the rural environment is for rural-type properties and dwellings as there are Special Housing Areas ("SHAs") and other consented developments in the rural-urban fringe that do not form part of the defined urban environment (due to having an underlying rural or rural lifestyle zone) and yet deliver urban density housing. These factors have been taken into consideration by M.E when making the necessary assumptions to isolate urban environment dwelling demand.

2.6.1 Total Housing Demand

Figure 2.4 summarises estimated total housing growth projections (including resident houses and holiday homes) by location over the 2020-2050 period (Change the Path future). Each location captures the same percentage share of short, medium, and long term growth in total dwellings in the Council's projections. For example, the Southern Corridor captures 21% of short, medium, and long term growth and Luggate captures 2% of short, medium and long term growth. The graph shows that while the Queenstown Town

Centre[55] has a large number of existing dwellings (2020), it accounts for only a modest share of total dwelling growth. The Southern Corridor has a similar number of current dwellings as Arrowtown but will grow significantly to have almost as many dwellings as Queenstown Town Centre in the long term. Wānaka Town Centre captures a large area (i.e., includes Albert Town), and therefore a large number of current dwellings but is also projected to have the largest quantum of growth too (at just under 5,000 additional dwellings).

Figure 2.4 – Total Dwellings by Location 2020-50 (Change the Path Future)

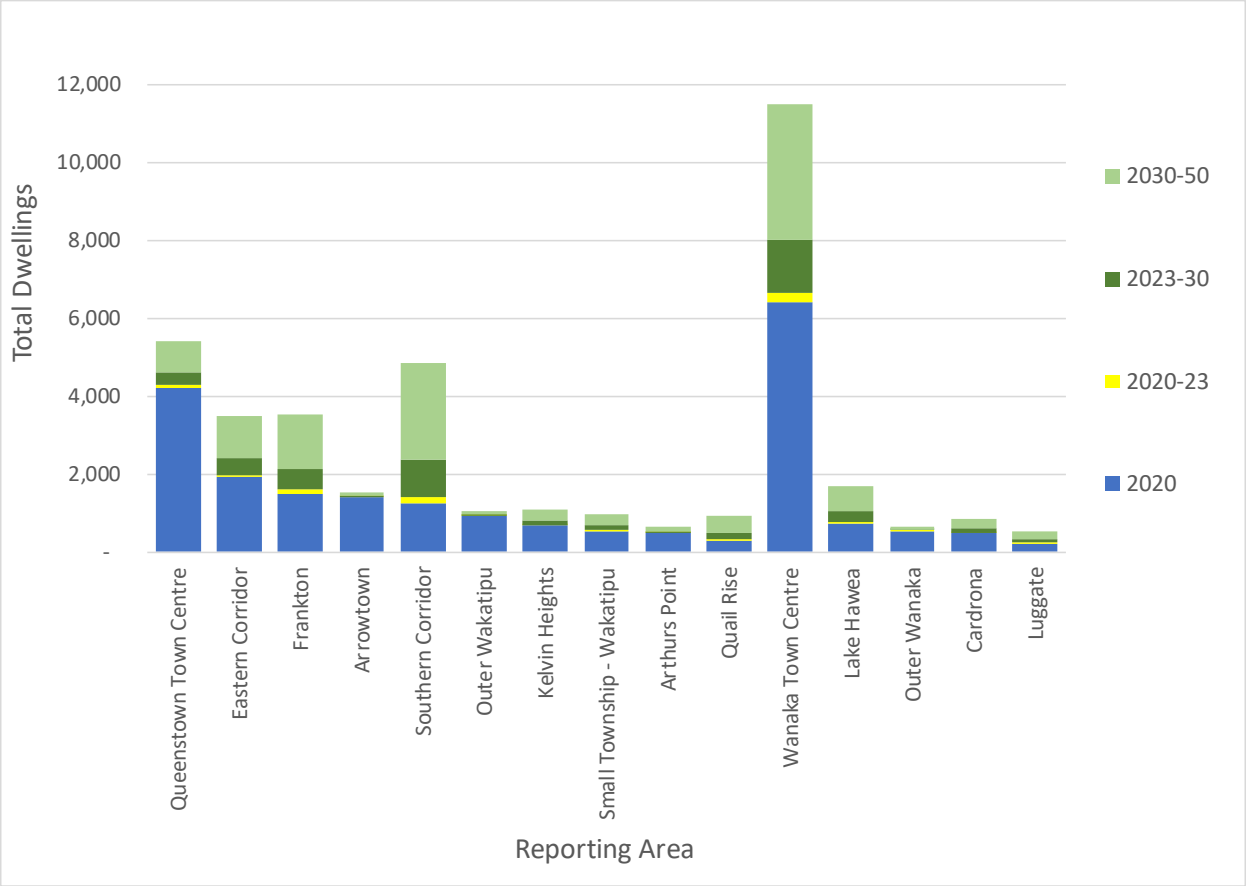


Table 2.25 and Table 2.26 provide an overall summary of total dwelling growth (Change the Path scenario) in the urban environment by location, with estimated dwelling growth attributed to the rural environment aggregated at the ward level.[56] The base case household and demography analysis, as discussed in Section 2, includes detail on the demographic make-up of households in each location, according to the 2018 Census data. In the first instance, those current demographic structures are carried through to the projections by location. The base case analysis is applied in the dwelling demand model to estimate the current dwelling typology (attached and detached) of resident demand by location according to SA2 level Census data.[57]

[55] The Queenstown Town Centre reporting area includes the CBD and fringe, Sunshine Bay, Warren Park (Gorge Road), Queenstown Hill and Frankton Arm

[56] Refer supporting Technical Report for more detail on the urban-rural split of growth at the location level.

[57] M.E has developed a spatial concordance between SA2s and the locations (reporting areas) used in the HBA. In many locations, there is a direct concordance with SA2s but in some, the spatial relationship is approximately aligned.

A number of key projected trends/outcomes can be observed:[58]

- Currently, 2020, an estimated 86% of total district dwellings fall within the defined urban environment and 14% fall within the rest of the district (rural environment).
- Over the long term, the urban environment is expected to account for 91% of total district dwellings as a result of growth being concentrated in the urban environment and limited in the rural environment.
- Across the whole urban environment, short term growth in total dwellings is projected at 4% above 2020 dwelling counts (an increase of 778 dwellings). Over the medium term, total urban environment growth is 28% (an increase of 5,187 dwellings 2020-2030). Over the long term, total urban environment growth is 88% (an increase of 16,472 dwellings 2020-2050). By comparison, the rural environment is projected to have just 19% growth in total dwellings (an increase of 579 dwellings 2020-2050).
- In keeping with the way in which the dwelling projections have been developed, the Wakatipu Ward contains 61% of total dwellings in 2020, and this is also the case in 2050. That is, each ward capture a share of growth pro-rata with the current distribution of dwellings. Because of the much lower base dwelling count in 2020, Wānaka Ward's total dwelling growth over the long term translates to an 80% increase in dwellings, while the Wakatipu Ward's percentage growth is 77% over the long term.
- Long term urban environment growth in the Southern Corridor is projected at 3,481 additional dwellings, to reach a total dwelling count of 4,381 in 2050. The Eastern Corridor is projected to have an additional 1,588 dwellings over the long term, to reach a total dwelling count of 3,624. Frankton is projected to have an additional 2,038 dwellings over the long term, to reach a total dwelling count of 3,550 and the Queenstown Town Centre is expected to increase by 1,163 total dwellings (reaching a total of 5,398 in 2050). It is noted that demand growth in the urban environment of Quail Rise includes housing demand along the northern side of the Five Mile corridor (opposite Frankton Flats). Kelvin Heights, Arthurs Point, Arrowtown and the small townships of Kingston and Glenorchy are all projected to have minor-modest growth in their respective urban environments.
- In the Wānaka Wards, Wānaka Town Centre's long term dwelling count is projected at 11,224 (growth of 4,985 between 2020 and 2050). Lake Hawea dwelling demand growth is projected at 936 additional dwellings (to reach 1,682 total dwellings in 2050). Growth in Cardrona and Luggate urban environments is modest.
- A key feature of the Change the Path projection (and based on M.E estimates) is the steady shift in demand toward attached dwellings and away from detached (standalone) dwellings. The current situation shows around 84% of total urban dwellings are attached, and 16% detached in 2020. The shares would change progressively over time reaching 69% and 31% respectively by 2050 in the urban environment.

[58] The equivalent table for the 5 Year Lag (medium) growth future is included in the supporting Technical Report.

Table 2.25 – Total Dwellings by Location and Type 2020-2050 (Change the Path 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	1,150	297	1,447	1,087	442	1,529
Arthurs Point	348	96	444	357	95	452	353	141	494	367	235	602
Eastern Corridor	1,443	233	1,676	1,523	229	1,751	1,733	443	2,176	2,268	996	3,264
Frankton	1,233	279	1,512	1,291	317	1,608	1,630	523	2,153	2,337	1,213	3,550
Kelvin Heights	603	78	681	619	82	701	672	142	814	809	296	1,105
Outer Wakatipu	-	-	-	-	-	-	-	-	-	-	-	-
Quail Rise	215	15	230	233	25	258	346	70	416	603	218	821
Queenstown Town Centre	3,370	865	4,235	3,411	878	4,290	3,360	1,241	4,601	3,405	1,992	5,398
Small Township - Wakatipu	378	50	428	383	63	445	422	122	544	514	284	798
Southern Corridor	788	112	900	905	159	1,064	1,779	217	1,996	3,163	1,218	4,381
Wakatipu Ward Urban Env.	9,585	1,929	11,515	9,933	2,051	11,984	11,445	3,198	14,643	14,554	6,895	21,449
Wakatipu Ward Rural Env.			1,811			1,827			1,917			2,149
Wakatipu Ward Total			13,325			13,810			16,560			23,599
Cardrona	50	5	55	63	8	71	134	30	165	291	111	403
Lake Hawea	651	94	746	677	113	790	819	221	1,041	1,165	517	1,682
Luggate	194	9	202	202	13	215	243	44	287	339	131	470
Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka Town Centre	5,348	891	6,239	5,503	971	6,474	6,272	1,537	7,809	7,951	3,274	11,224
Wanaka Ward Urban Env.	6,243	999	7,242	6,445	1,106	7,551	7,468	1,833	9,300	9,746	4,033	13,779
Wanaka Ward Rural Env.			1,181			1,192			1,256			1,421
Wanaka Ward Total			8,423			8,743			10,557			15,200
District Urban Env.	15,828	2,929	18,757	16,378	3,157	19,534	18,913	5,031	23,943	24,301	10,928	35,229
District Rural Env.			2,991			3,019			3,174			3,570
District Total			21,748			22,553			27,117			38,799
	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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. *Change the Path Future*

- At the ward level, urban Wānaka Ward dwellings are currently estimated at 86% detached (2020), decreasing to 71% detached in 2050. Total urban detached housing is projected to increase by 3,503 dwellings over the long term, while attached urban dwellings in Wānaka ward are projected to increase by 3,034 2020-2050.
- Urban Wakatipu Ward dwellings are currently estimated at 83% detached (2020), decreasing to 68% detached in 2050. Total urban detached housing is projected to increase by 4,969 dwellings over the long term, while attached urban dwellings in Wakatipu ward are projected to increase by essentially that same amount (4,966 2020-2050).

Table 2.26 – Change in Total Dwellings by Location and Type 2020-2050 (Change the Path 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	58	120	2	96	240	6	38	120
Arthurs Point	9	5	19	-1	45	140	7	50	158
Eastern Corridor	79	290	825	-4	210	763	75	500	1,588
Frankton	58	398	1,104	38	244	933	96	642	2,038
Kelvin Heights	16	69	206	4	64	218	20	134	425
Outer Wakatipu	-	-	-	-	-	-	-	-	-
Quail Rise	18	131	388	10	55	203	28	186	591
Queenstown Town Centre	41	10	35	14	377	1,128	55	366	1,163
Small Township - Wakatipu	5	44	136	13	72	234	17	117	370
Southern Corridor	118	991	2,375	47	105	1,106	164	1,096	3,481
Wakatipu Ward Urban Env.	348	1,860	4,969	121	1,268	4,966	469	3,128	9,935
Wakatipu Ward Rural Env.							16	107	339
Wakatipu Ward Total			4,969			4,966	485	3,235	10,273
Cardrona	13	84	241	3	26	107	16	110	348
Lake Hawea	25	168	514	19	127	423	44	295	936
Luggate	8	49	146	5	35	122	13	84	268
Outer Wanaka	-	-	-	-	-	-	-	-	-
Wanaka Town Centre	155	924	2,603	80	646	2,382	235	1,570	4,985
Wanaka Ward Urban Env.	202	1,225	3,503	107	834	3,034	309	2,058	6,537
Wanaka Ward Rural Env.							11	76	240
Wanaka Ward Total			3,503			3,034	320	2,134	6,778
District Urban Env.	550	3,085	8,473	228	2,102	7,999	778	5,187	16,472
District Rural Env.							27	182	579
District Total			8,473			7,999	805	5,369	17,051

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

- Locations projected to have an above average share of attached dwellings in the long term as a result of projected demand (and M.E's dwelling demand model) are Arthurs Point, Frankton, Queenstown Town Centre, and Small Townships in Wakatipu (Kingston and Glenorchy). None of the reporting areas in the Wānaka Ward are expected to have above average shares of long term attached housing demand. Conversely, those locations projected to have an above average share of detached dwellings in the long term are Arrowtown, Kelvin Heights, Quail Rise, the Southern Corridor, Cardona, Luggate and Wānaka Town Centre.

3 Housing Supply

This section examines the QLD residential property estate, to identify the current dwelling mix and property values. This includes analysis of the additions to housing supply in the recent past from consents and estimated land values. Finally, it examines the likely future dwelling estate, taking account of the current estate, and potential additions to that estate, in the context of different trends in land values and improvements values, and how these affect dwelling values and prices. A high level summary of the approach to modelling housing supply is contained in the supporting Technical Report.

3.1 Current Dwelling Estate

Table 3.1 provides a summary of the QLD residential property estate as at 2020 (June). The Corelogic dataset does not match directly with the Census descriptions of dwelling types. However, it offers very useful detail for understanding affordability issues.

Table 3.1 – Residential Property Estate QLD 2020

Property Category	Count	Land Value ($m)	Improved Value ($m)	Capital Value ($m)	Mean LV ($000)	Mean IV ($000)	Mean CV ($000)	LV as % CV
Residential Dwelling	15,400	$ 8,889	$ 8,138	$ 17,026	$ 577	$ 528	$ 1,106	52%
Residential Home & Income	1,040	$ 595	$ 699	$ 1,294	$ 572	$ 673	$ 1,244	46%
Residential Apartments	3,640	$ 1,438	$ 1,590	$ 3,028	$ 395	$ 437	$ 832	47%
Residential Rental flats	100	$ 79	$ 50	$ 129	$ 787	$ 501	$ 1,288	61%
Residential Convert Flats	-	$ 1	$ 3	$ 4	$ -	$ -	$ -	0%
Sub-total Residential	20,180	$ 11,001	$ 10,480	$ 21,481	$ 545	$ 519	$ 1,064	51%
Lifestyle Improvement	1,410	$ 1,429	$ 1,249	$ 2,678	$ 1,013	$ 886	$ 1,899	53%
Total	21,590	$ 12,430	$ 11,729	$ 24,159	$ 576	$ 543	$ 1,119	51%

Source: ME 2020; Corelogic 2020

The table shows some 21,590 residential properties in total. This count is substantially higher than the Census-based 2018 estimate of 19,845 private dwellings (including 16,030 usually occupied). However, dwelling consent statistics indicate another 2,446 consents were issued in the district in 2018 and 2019. Allowing for an average 9-month lag from consenting to completion and a conversion rate of around 85% (potentially lower than average during 2020 because of the Pandemic) that indicates another 2,050 private dwellings in the district by mid-2020, for a total of 21,900. This is close to QLDC's own estimate of 21,748 in 2020.

The Corelogic data identifies a total property value of $24,159m, including $12,430m of land value, and $11,729m of improvement value. Across the estate, land values account for just over half the total capital value.

The main residential types are shown as a group, and these generally represent urban residential properties, with the 'Residential Dwelling' and 'Residential Apartments' the dominant categories.

Table 3.2 shows how the mean values in QLD compare with the New Zealand pattern. QLD values (and prices) for the residential types are significantly higher than the New Zealand average for land value ("LV"), improvement values ("IV", predominantly the built dwelling) and consequentially overall capital value ("CV", which is LV + IV). For the main residential types, QLD CV values are 40% to 85% above the national figure, as at mid-2020. For Lifestyle properties, the QLD estate is also far above the New Zealand average values.

Table 3.2 – Residential Property Parameters – QLD and New Zealand 2020

Property Category	Count	Mean LV ($000)	Mean IV ($000)	Mean CV ($000)	LV as % CV	Mean LV as % NZ	Mean IV as % NZ	Mean CV as % NZ
Residential Dwelling	15,400	$ 577	$ 528	$ 1,106	52%	142%	185%	160%
Residential Home & Income	1,040	$ 572	$ 673	$ 1,244	46%	87%	162%	116%
Residential Apartments	3,640	$ 395	$ 437	$ 832	47%	133%	161%	146%
Residential Rental flats	100	$ 787	$ 501	$ 1,288	61%	159%	121%	142%
Residential Convert Flats	-	$ -	$ -	$ -	0%	0%	0%	0%
Sub-total Residential	20,180	$ 545	$ 519	$ 1,064	51%	138%	181%	156%
Lifestyle Improvement	1,410	$ 1,013	$ 886	$ 1,899	53%	223%	203%	213%
Total	21,590	$ 576	$ 543	$ 1,119	51%	144%	181%	160%

Source: ME 2020; Corelogic 2020

Table 3.3 provides further indication, comparing median value and the 20th to 80th percentiles. The lower percentile values are important in relation to housing affordability and can provide a more accurate indication of affordability than the blunter median values and median incomes comparators, since new owners entering the housing market often purchase dwellings in the lower value bands because that is the entry point which is affordable.

Table 3.3 – Residential Property Percentiles – QLD and New Zealand 2020

Property Value Indicator ($000)	Queenstown Lakes District	New Zealand	Queenstown Lakes District as % NZ
Median Value	$ 925	$ 575	161%
20th percentile	$ 675	$ 350	193%
40th percentile	$ 850	$ 500	170%
60th percentile	$ 1,050	$ 675	156%
80th percentile	$ 1,475	$ 950	155%

Source: ME 2020; Corelogic 2020

Figure 3.1 shows the current distribution of residential property values in QLD. There is relatively low incidence of dwellings in the lower value bands, and significant groupings in the middle and upper bands, including of $2m and higher. This contrasts with the New Zealand distribution (Figure 3.2), which shows much lower incidence in the lower value bands, and a broader spread across middle value bands especially over $800,000.

Figure 3.1 – Distribution of QLD Residential Property Values 2020

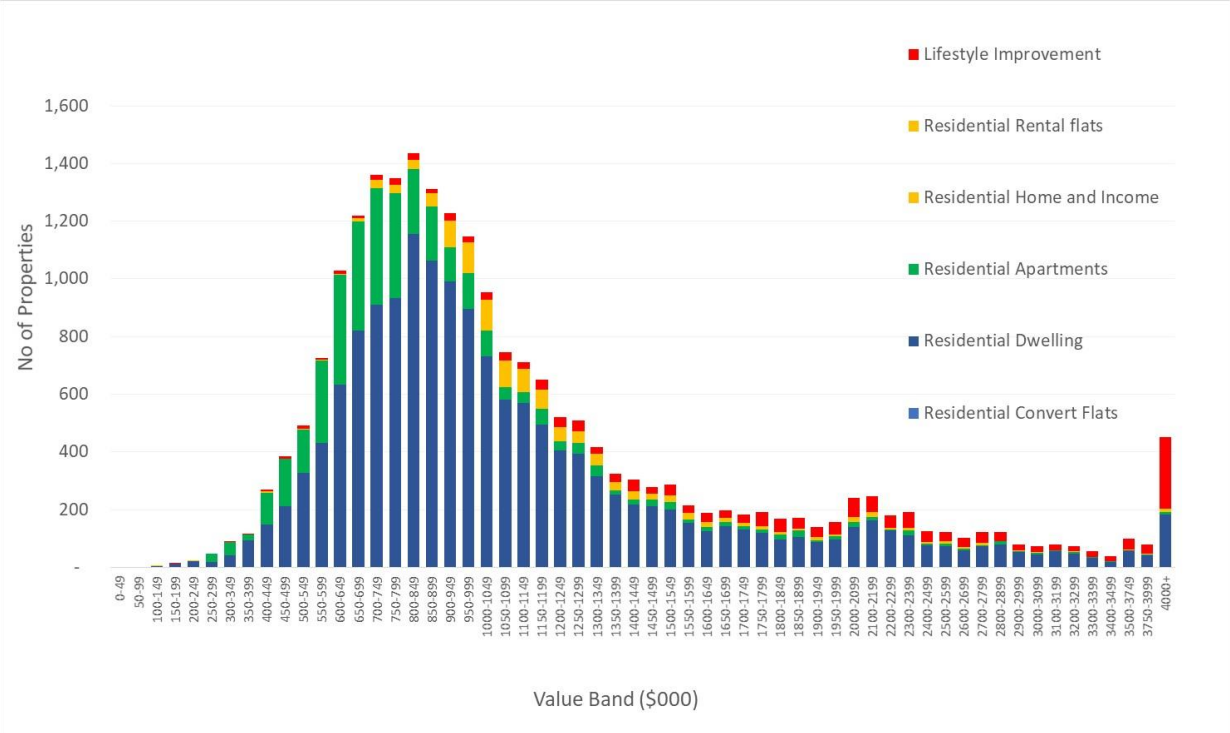
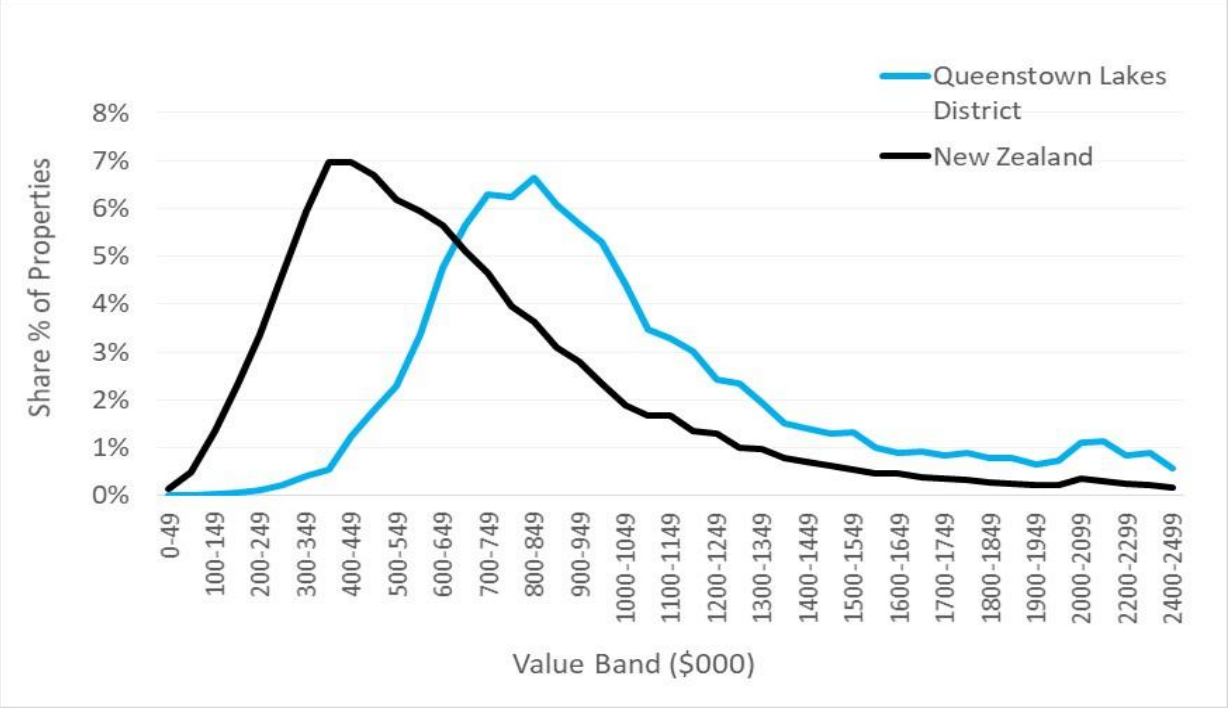
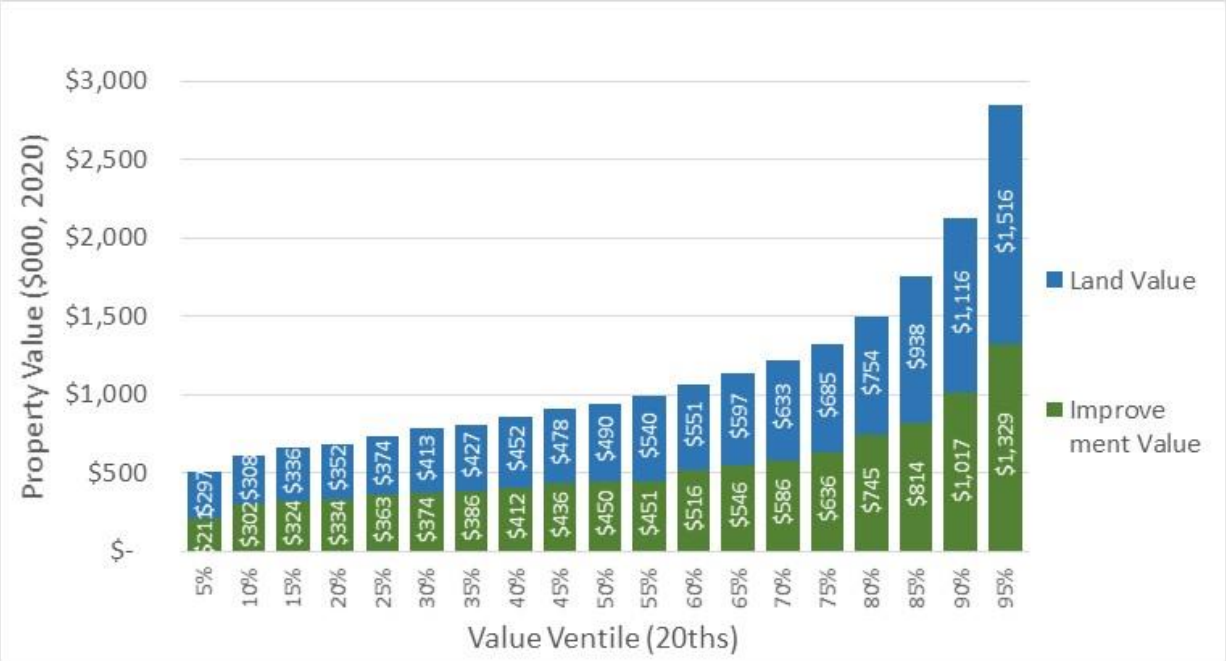


Figure 3.2 – Distribution of QLD Residential Property Values 2020



The ventile values in QLD as at 2020 are shown in Figure 3.3. The strong peaking in the higher value bands is clear.

Figure 3.3 – Residential Property Land and Improvement Values 2020 (QLD)



3.2 Dwelling Value Trends

Housing prices are commonly the focus of market assessments. Since 2000, residential property values have increased significantly throughout New Zealand. This has been driven by a number of factors, including the ease of accessing finance, high consumer confidence (especially in the lead-up to the GFC), constraints on construction capacity, supply shortfalls, strong inward migration, overseas investment in New Zealand's housing market (until 2018), interest rates (currently very low) and the taxation environment. While the increase has been evident across all cities and districts, the incidence of value and price growth has varied by region and at different times.

Mean housing values in QLD have been identified from the Corelogic residential property index, which offers monthly data across 125 locations. The key changes over the two decades to 2020 are summarised in Table 3.4 for selected years, which shows mean values in both nominal (dollars of the day) and real terms (CPI-adjusted showing values in $2020). QLD patterns are shown alongside New Zealand, and two comparator cities (Dunedin and Christchurch). Notable features since 2000 for QLD are:

- In nominal terms, QLD prices increased by 493% over the past 20 years, an average annual rate of 8.3%. This was 20% faster than the New Zealand average (410%, 7.3%pa).
- In real terms, QLD's 326% increase equated to an average annual increase of 6.1% pa.
- Over the same period, average household incomes in Otago Region increased by 1.8% per annum in real terms, less than one-third the rate of the increase in housing values.
- Following the significant growth in housing prices nationwide in the lead-up to the GFC in 2008, QLD values decreased by around 12% to 2012, and by 2015 were slightly below the GFC peak in real terms.

- However, since 2015 QLD values have increased by around 55% in real terms, to peak in 2018, and since then decreasing slightly, while national prices continued to rise.
- The QLD remains and is likely to remain an attractive place to live. Stats NZ (March 2021) predict that it will continue to be one of the fastest growing places in New Zealand over the next 30 years.

Table 3.4 – Residential Property Mean Value Trends – QLD and New Zealand 2000-2020

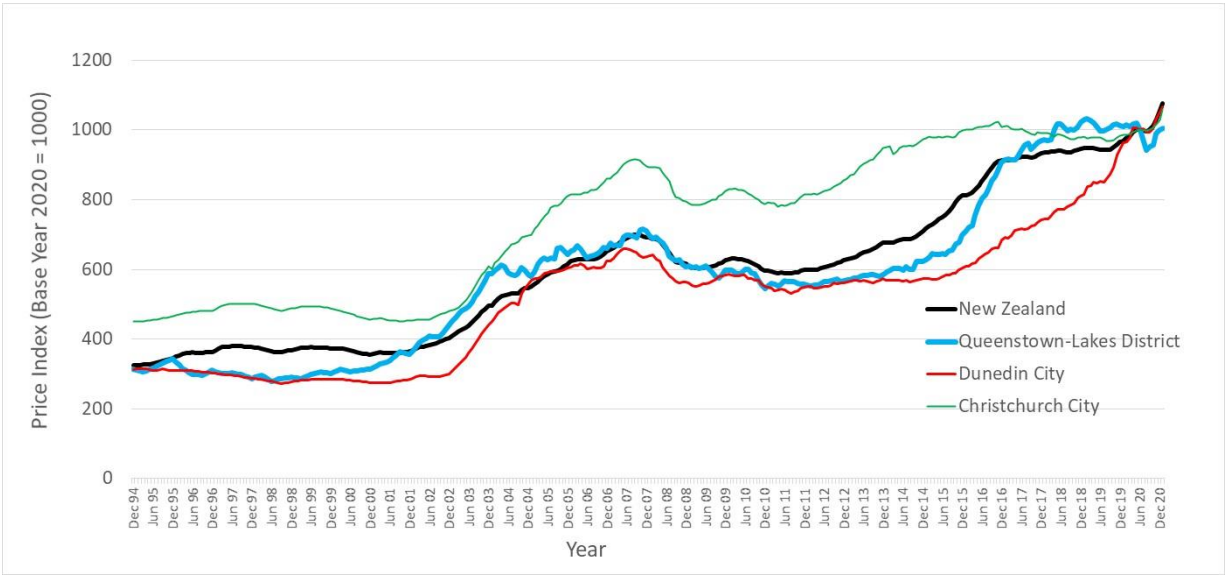
		Mean Property Value ($000)							Value Change since:				
Location	Indicator	June 2000	June 2008	June 2012	June 2015	June 2018	June 2019	June 2020	2000 (%)	2000 (%pa)	Last 5 Yrs (%)	Last 2 Yrs (%)	Last Year (%)
Queenstown-Lakes	Nominal Value	$ 242	$ 650	$ 612	$ 720	$ 1,175	$ 1,174	$ 1,193	493%	8.3%	66%	2%	1.6%
District	Real (CPI adj)	$ 366	$ 787	$ 673	$ 770	$ 1,212	$ 1,191	$ 1,193	326%	6.1%	55%	-2%	0.2%
New Zealand	Nominal	$ 180	$ 402	$ 408	$ 518	$ 674	$ 687	$ 738	410%	7.3%	42%	9%	7.4%
	Real (CPI adj)	$ 272	$ 487	$ 448	$ 554	$ 695	$ 697	$ 738	271%	5.1%	33%	6%	5.9%
Dunedin City	Nominal	$ 102	$ 269	$ 274	$ 296	$ 410	$ 460	$ 548	537%	8.8%	85%	34%	19.1%
	Real (CPI adj)	$ 155	$ 325	$ 302	$ 317	$ 423	$ 467	$ 548	354%	6.5%	73%	30%	17.3%
Christchurch City	Nominal	$ 162	$ 371	$ 389	$ 474	$ 495	$ 500	$ 518	320%	6.0%	9%	5%	3.6%
	Real (CPI adj)	$ 245	$ 449	$ 427	$ 507	$ 511	$ 507	$ 518	211%	3.8%	2%	1%	2.2%

Source: Corelogic all Residential Index 2021; Values in $000

The longer term pattern (starting in 1994) and showing all years is shown in Figure 3.4. Over the period since the mid-1990s, housing prices in QLD have tracked reasonably closely to the New Zealand pattern. In the period since 2001 (June), housing prices in QLD increased by 5.9% per annum in real terms, somewhat faster than New Zealand as a whole (5.5%pa).

This is very important. It indicates that housing prices in QLD have been influenced most strongly by the underlying national-level influences (including migration), with local influences having a limited effect.

Figure 3.4 : Housing Price Trends in QLD, New Zealand and South Island Main Cities 1994-2020



Nevertheless, there have been periods when QLD tracked faster than the country as a whole, and other periods when the district prices tracked more slowly. In the period 2001 to 2008 – the years leading up to

the GFC[59] - housing prices in QLD increased by 95% in real terms, a rate ahead of the New Zealand average 84%. This pattern was evident throughout New Zealand in those leadup years, with housing prices in all regions more or less doubling over that time. Within the range of causes, high consumer confidence and relatively easy access to finance were identified as key drivers of that growth. An important consequence was that as the regular 3-yearly revaluations of property were undertaken by councils for rating purposes, most of the increase was attributed to rises in land values, with minor shares (usually less than 20%) attributed to increases in dwelling values. The increase in these years accounted some 49% of the total increase in QLD housing prices over the whole 2001-2020 period.

In the period following the GFC, prices fell across New Zealand, and in QLD. In the district, prices remained lower than the 2008 peak until 2014 in nominal terms, and until 2015 in real (inflation-adjusted) terms. At the national level, prices were back to 2008 levels by 2012 (nominal terms) and 2013 (real terms). That indicates that QLD was slightly slower to recover from the GFC effects. That said, average price levels in the district stayed well above the national average throughout the pre-GFC upturn, and the post-GFC downturn.

Nationally, housing prices began to increase from mid-2012. However, over the next 3 years the increase in QLD remained well below the national trend, at 4.6% per annum (real) to 2015, compared with 7.3% per annum (real) nationally.

From 2015 until 2018, housing prices in QLD increased quite sharply. There was very substantial growth (+24% real) in the year to 2016, markedly ahead of the national shift (+13.5%), and the increase continued through to 2018 (16.3% for QLD, 7.9% per annum nationally). This period accounted for the other half of the price growth recorded in 2001-20,

However, 2018 marked a peak for the district. From 2018 to 2020, QLD prices fell by -0.8% per annum in real terms. While the rate of increase slowed nationally (driven at least in part by the very low price growth in Auckland once the Unitary Plan became operational in 2016) across the country prices increased by 3.0% per annum over the 2018-20 period.

There were multiple drivers of the increase in prices nationally over the 2012-2016 period, including strong net in-migration, the slow recovery of the Auckland construction sector after 2008 (compounded by the demands of the Christchurch rebuild), uncertainties in the Auckland market in the hiatus between local authority amalgamation and adoption of a unitary plan, and strong interest in the New Zealand housing market by overseas investors (anecdotally, including in QLD). Although there were no statistics collected to show the level of purchasing by overseas investors over that period, there is information now to show the levels of ownership, taking the SNZ definition which identifies owners with resident visa but no citizenship, and owners with neither resident visa nor citizenship. This is shown in Table 3.5.

[59] Global Financial Crisis.

Table 3.5 – QLD Dwelling Ownership by Citizenship and Residency Status 2017-2020.

Type of Seller	Sep 2017	Dec 2017	Mar 2018	Jun 2018	Jun 2019	Dec 2019	Jun 2020
Home involved							
At least one NZ citizen	48.1%	67.3%	70.0%	72.2%	70.3%	72.2%	74.1%
1 or more resident, no citizen	3.4%	4.5%	4.5%	4.4%	4.8%	4.6%	4.0%
No NZ citizens or resident visas	3.4%	5.0%	5.0%	4.9%	3.3%	3.9%	4.5%
Corporate only	13.8%	18.6%	19.3%	18.5%	21.5%	19.1%	17.4%
Total where affiliation known	68.8%	95.5%	99.0%	99.7%	99.8%	100.0%	100.0%
Affiliation unknown	31.2%	4.5%	1.0%	0.0%	0.0%	0.0%	0.0%
Total all affiliations	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SNZ Property Transfer Statistics June 2021

The level of ownership by persons who are not citizens (8.5% combined in June 2020) is substantially higher than the New Zealand average (5.4%). It indicates that around 1,850 dwellings are overseas owned.

In the period ending June 2020, some 9.4% of dwelling purchases were by persons who are not citizens, somewhat higher than the New Zealand average (8.8%). Assuming corporate ownership (mostly trusts) has the same pattern, then the share would be 10.2% for QLD.

3.3 "New" Dwellings – Additions to the Estate

It is important to understand current trends in additions to the QLD dwelling estate. Construction activity provides several important indicators for the housing market. Dwelling consents issued is a key indicator of the scale, value and typologies of those additions, as the majority of consents issued do manifest as new dwellings, with completion estimated to occur within 12-24 months following consent issue.[60]

The survey of local residential developers gives an indication of who has been buying new dwellings in QLD in recent times (including new residential sections that lead to dwelling consents). Respondents were asked 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'. This is followed by demand from 'households permanently moving into the district from elsewhere in NZ'. The next most common group of purchasers (including targeted buyers) is 'investors wanting long term rentals'. One respondent ranked this group first (and had delivered only terrace housing in the last two years), 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

[60] The residential consent data does not provide any visibility (detail) on the end use of the dwelling unit. It may be owned and occupied by a resident household, built for long term rental, built as a holiday home, or used for short term residential visitor accommodation. Anecdotally, many of the apartments consented recently in the district have been for residential visitor accommodation. There is however lots of flexibility to switch from one use to another.

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).

The number and value of consents indicates the built improvements. It is also critical to consider the land component since the total (capital) value of properties includes both dwelling and land. For this, the land component of new dwellings has been estimated, drawing on analysis of the observed relationships between improvement value and land value for some 23,000 new residential properties in regional cities and districts constructed over the 2013 to 2017 period[61].

The analysis can draw on direct comparison of the value of consents, which account for most of the improvement value of new residential properties, and final property total capital values taking into account land values.

The consent and land value information is used here to understand recent trends in consents, as well as expected future trends, to indicate the future supply of new dwellings ("new" defined as being 2020 and later) over the short, medium, and long terms. The initial high-level approach bases projected numbers on current trends and dwelling mix, applied to the total indicated land supply including greenfield and infill estimates. Note that this provides a first approximation of new dwelling supply, because it does not include detailed analysis of feasibility of new dwellings on greenfield and infill land. The recent trends in consenting are taken as a general indicator of feasibility, recognising that in most council areas a very high proportion of consented builds do progress to completions, and that indicates general feasibility especially when considered over the short and medium term.

3.3.1 Dwelling Consents 2000-2020

The scale and nature of new dwelling consents in QLD since 1996 is shown in Figure 3.5. Following substantial consenting and building activity in the 2000-08 period averaging 615 consents annually, the number of consents declined to a low of just 314 in 2011, in the generally depressed economic conditions following the GFC. The 2012-16 period saw a steady increase to 945 consents, and over the last 4 years the number of consents has exceeded 1,000 per annum, , including 1,130 in 2020. Allowing for around 90% of consents to become dwellings, that indicates that just over 20% of the total 2020 dwelling estate was added in the last 4 years.

The 2016-20 period has seen 1,165 consents issued annually on average (a total count of 5,821). In that period, the data shows a variety of typology, with 61% of the total detached dwellings, 25% townhouses, flats and units, 10% apartments and 3% retirement village units. The QLD pattern differs somewhat from the national structure over that same period, with a smaller share as detached dwellings (61% vs 63%), a larger share as townhouses flats and units (25% vs 21%), a similar share as apartments (10%) and fewer as retirement units (3% vs 6%). The QLD market has shown significant diversity of typology over the last 5 years.

[61] This analysis of Corelogic datasets covered Hamilton City, Tauranga City, and New Plymouth, Whangarei, Western Bay of Plenty, Waikato, Waipa, Queenstown Lakes, Waimakariri and Selwyn districts.

Figure 3.5 – QLD Dwelling Consents by Type 1996-2020

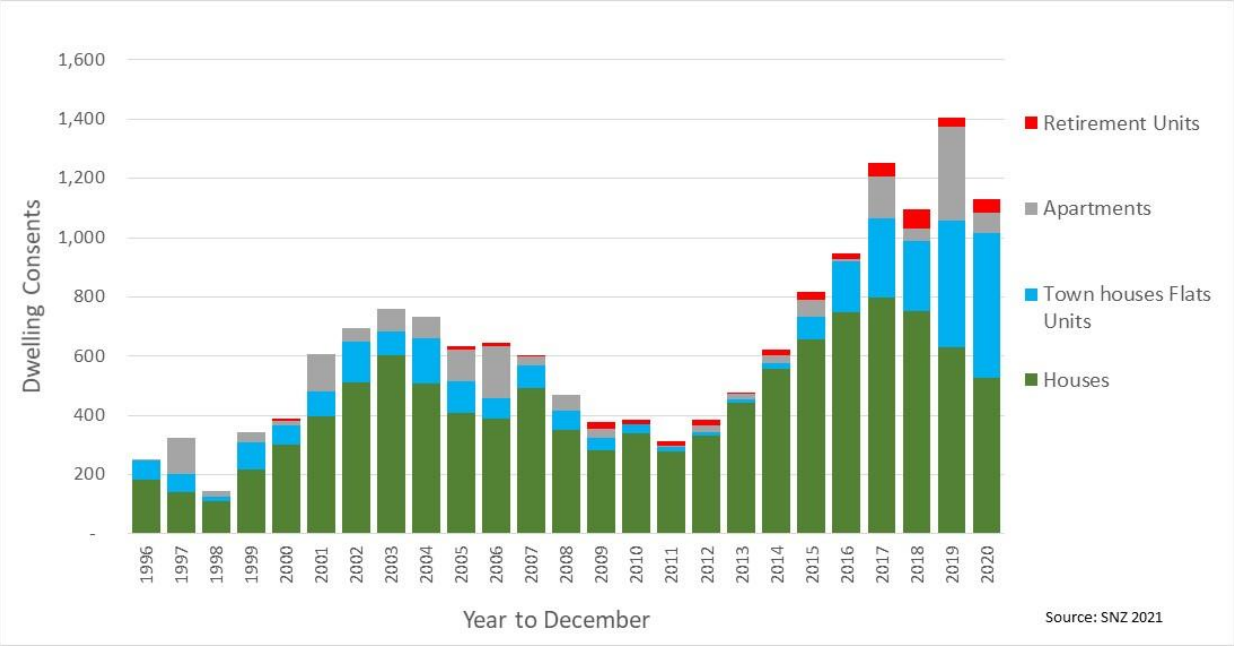


Table 3.6 – Dwelling Consent Summary QLD – Total 2016-2020

Parameter	Houses	Town houses Flats Units	Apartments	Retirement Units	Total Dwellings
2016-2020 Period (June YE)					
Number of Consents	3,563	1,472	587	199	5,821
Share of Consents (%)	61.2%	25.3%	10.1%	3.4%	100.0%
Total Value of Consents ($m)	$ 1,995	$ 421	$ 180	$ 85	$ 2,681
Total Value (Real $m) 2020	$ 2,056	$ 431	$ 183	$ 87	$ 2,757
Floor Area of Consents (sqm)	761,554	176,833	59,899	35,578	1,033,864
Mean Value of Consents ($000)	$ 565	$ 291	$ 333	$ 414	$ 460
Mean Real Value of Consents ($000)	$ 581	$ 301	$ 344	$ 426	$ 475
Mean Floor Area of Consents (sqm)	214	124	130	176	180
Mean Value $ per Sqm	$ 2,633	$ 2,348	$ 2,728	$ 2,351	$ 2,578
Mean Real Value $2020 per Sqm	$ 2,710	$ 2,421	$ 2,800	$ 2,424	$ 2,654

Source: Statistics NZ 2021 *Note - all consents, including with incomplete data*

Dwelling consents issued between 2016-2020 had a total value of $2,757m in $2020 terms (Table 3.6). Mean new dwelling size is currently 180m^2, with houses at 214m^2, and apartments, retirement units and townhouses substantially smaller. Mean value per m^2 is just over $2,650 in real $2020 terms (inflation adjusted). A comparison of the 2016 and 2020 situations (December years) is shown in Table 3.7 for basic parameters, including annual value of consents (up 55%), mean consent value (down slightly in real terms), mean floor area (down by -20%), and mean value per m^2 (up by 23% in real terms).

Table 3.7 – Dwelling Consent Parameters – Key Changes in QLD 2016 to 2020

Time Period	Houses	Town houses Flats Units	Apartments	Retirement Units	Total Dwellings
Number of Consents					
2016	725	118	17	27	887
2020	578	571	198	51	1,398
2016-2020	*- 147*	*453*	*181*	*24*	*511*
Change 2016-2020 %	-20%	384%	1065%	89%	58%
Change 2016-2020 %pa	-5.5%	48.3%	84.7%	17.2%	12.0%
Total Value of Consents ($m)					
2016	$ 338	$ 35	$ 5	$ 8	$ 387
2020	$ 391	$ 157	$ 66	$ 25	$ 639
2016-2020	*$ 53*	*$ 121*	*$ 61*	*$ 17*	*$ 252*
Change 2016-2020 %	16%	343%	1235%	204%	65%
Change 2016-2020 %pa	3.7%	45.1%	91.2%	32.1%	13.4%
Total Value (Real $m) 2020					
2016	$ 360	$ 38	$ 5	$ 9	$ 412
2020	$ 391	$ 157	$ 66	$ 25	$ 639
2016-2020	*$ 31*	*$ 119*	*$ 61*	*$ 16*	*$ 227*
Change 2016-2020 %	9%	316%	1154%	186%	55%
Change 2016-2020 %pa	2.1%	42.8%	88.2%	30.0%	11.6%
Mean Value of Consents ($000)					
2016	$ 466	$ 299	$ 290	$ 306	$ 436
2020	$ 677	$ 274	$ 333	$ 493	$ 457
2016-2020	*$ 211*	*-$ 25*	*$ 43*	*$ 187*	*$ 21*
Change 2016-2020 %	45%	-8%	15%	61%	5%
Change 2016-2020 %pa	9.8%	-2.2%	3.5%	12.7%	1.2%
Mean Real Value of Consents ($000)					
2016	$ 497	$ 319	$ 309	$ 326	$ 464
2020	$ 677	$ 274	$ 333	$ 493	$ 457
2016-2020	*$ 180*	*-$ 45*	*$ 24*	*$ 167*	*-$ 7*
Change 2016-2020 %	36%	-14%	8%	51%	-2%
Change 2016-2020 %pa	8.0%	-3.7%	1.9%	10.9%	-0.4%
Mean Floor Area of Consents (sqm)					
2016	210	129	151	142	196
2020	225	107	86	211	157
2016-2020	*15*	*- 21*	*- 64*	*70*	*- 39*
Change 2016-2020 %	7%	-17%	-43%	49%	-20%
Change 2016-2020 %pa	1.8%	-4.4%	-13.0%	10.5%	-5.4%
Mean Real Value $2020 per Sqm					
2016	$ 2,368	$ 2,477	$ 2,053	$ 2,302	$ 2,371
2020	$ 3,007	$ 2,556	$ 3,851	$ 2,333	$ 2,914
2016-2020	*$ 640*	*$ 79*	*$ 1,798*	*$ 30*	*$ 543*
Change 2016-2020 %	27%	3%	88%	1%	23%
Change 2016-2020 %pa	6.2%	0.8%	17.0%	0.3%	5.3%

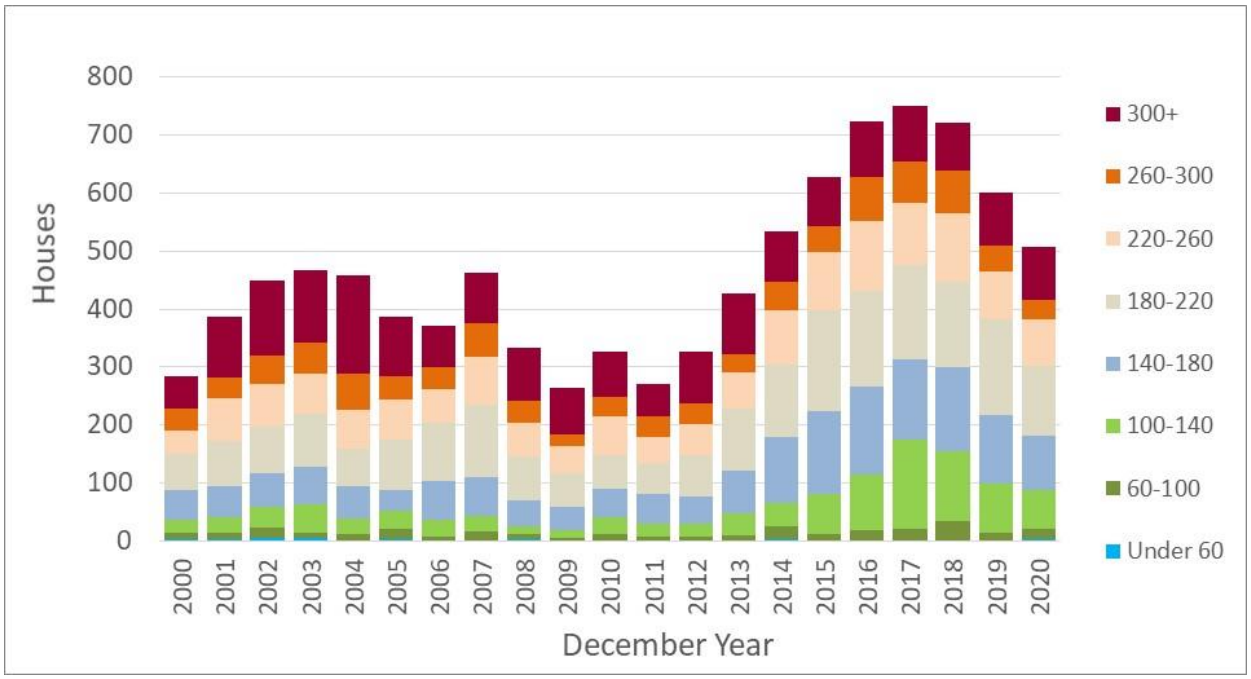
Source: Statistics NZ 2021 *Note - all consents, including with incomplete data*

3.3.2 Consent Size Trends 2000-2020

The distribution of sizes (sqm) of consents is shown in Figure 3.6 for houses, and for all dwellings in Figure 3.7. The increases in housing prices have seen some effort to make new dwellings more affordable by construction of medium-sized and smaller dwellings. However, since 2016 there has been a decrease in the numbers of houses in the smaller size ranges, but some shift toward apartments and town and terrace houses. This has seen more dwellings in the middle and smaller dwelling sizes, notably the 60-100sqm, 100-

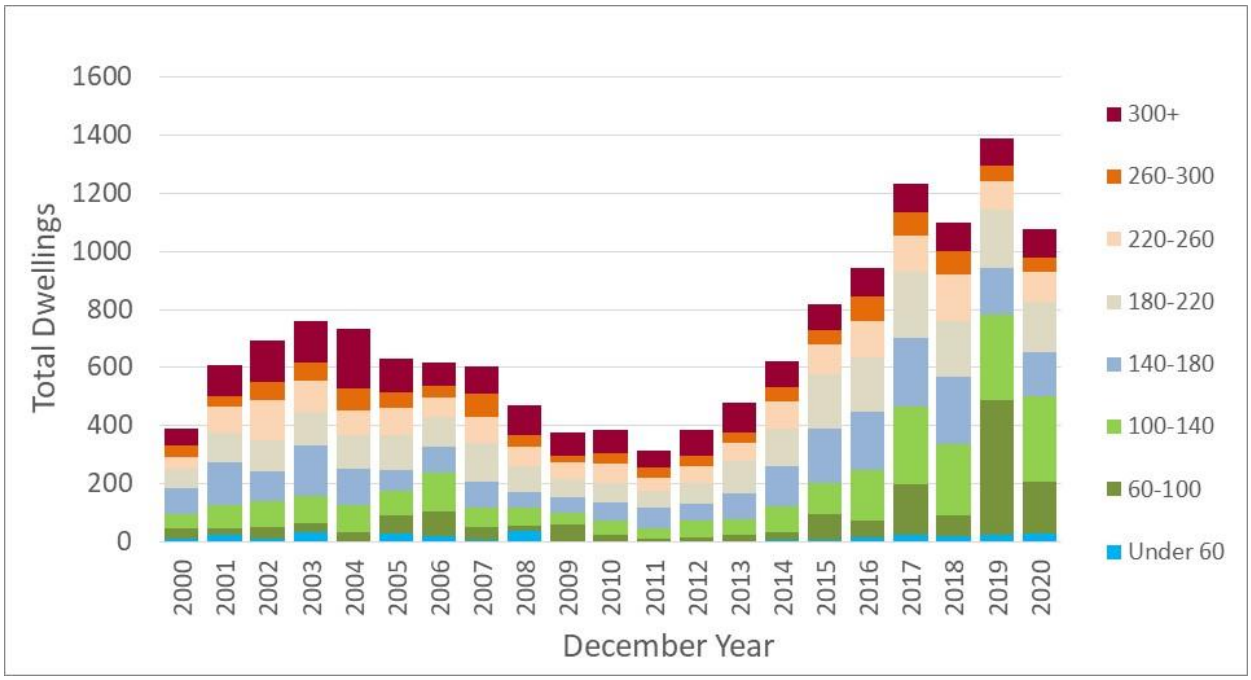
140sqm and 140-180sqm bands, with the average consent size as a result, some -17% smaller by 2020 (-35m^2) compared with 2016.

Figure 3.6 – QLD House Consents by Size 2000-2020



The shift toward more smaller dwellings has been in attached dwellings. Detached houses showed no discernible change in size over the last 5 years. However, their share has dropped substantially from 79% of consents in 2016 to 47% by 2020.

Figure 3.7 – QLD Total Dwelling Consents by Size 2000-2020



Based on a survey of local stakeholders in the residential development sector, those that were only involved in dwelling construction delivered only standalone dwellings in the district over the last two years. Respondents that were both land and dwelling developers were more likely to have delivered a range of dwelling types over that period, although the majority still delivered only standalone dwellings. One delivered only terrace housing. One delivered a mix of standalone, duplex and terraced housing. None of the companies surveyed delivered any apartments in the last two years.

3.3.3 Consent Value of Works Trends 2000-2020

Data in this section reflects 'value of works' from building consent applications to QLDC. This includes the applicants pre-start estimated cost of works shown in the consent documentation (including professional building related fees, constructions costs including material and labour) and does not include land, lawyer's fees, consent fees, finance, or profit margins for developers. However, the construction cost of building houses is a major determinant of the final cost profile and is relevant to consideration of the potential feasibility of future development and final sale prices.

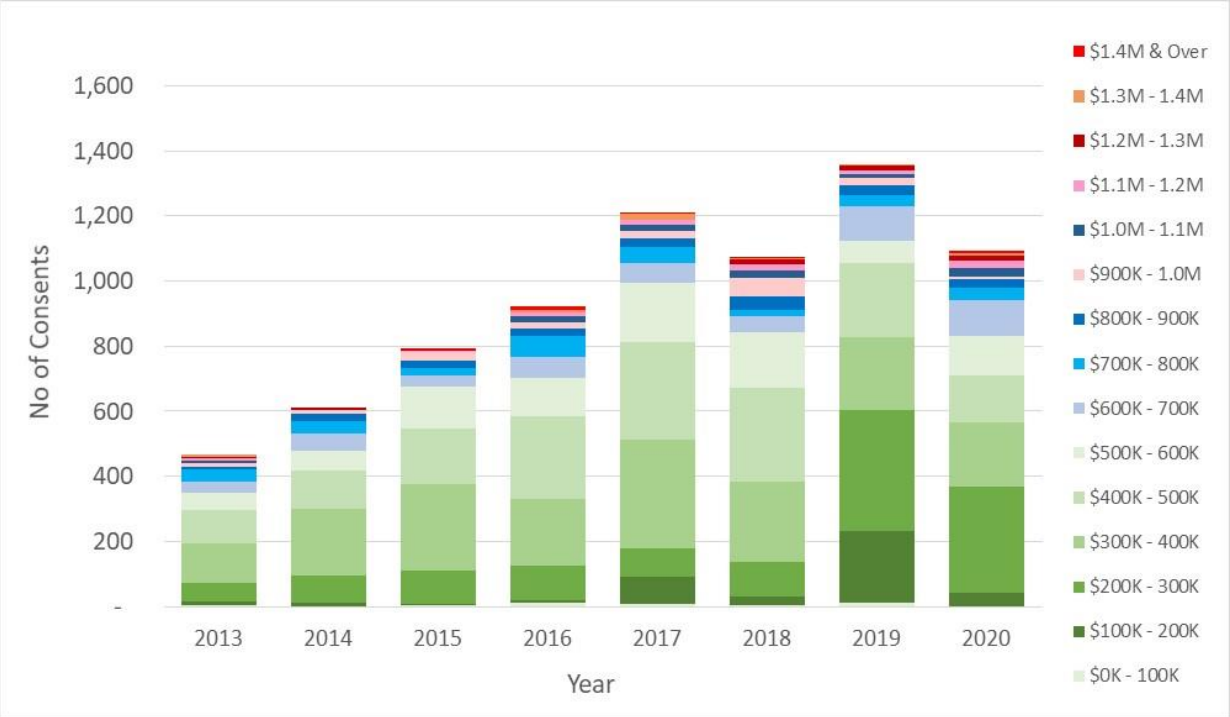
There has been some minor shift toward a larger share of medium to lower value dwellings, as shown in Table 3.8 and Figure 3.8. In 2020, some 34% of consents were valued at $300,000 or less, considerably more than the 13% of 2016 and 12% of 2017. The latest year shows 76% of consents were at values of less than $600,000, a similar share to what has been seen since around 2016.

Table 3.8 – Share of Dwelling Consents by Value of Works ($2020) – QLD 2013 to 2020

Value Band	2013	2014	2015	2016	2017	2018	2019	2020
$0K - 100K	1%	0%	0%	1%	1%	0%	1%	0%
$100K - 200K	3%	2%	1%	1%	7%	2%	16%	4%
$200K - 300K	12%	14%	13%	11%	7%	10%	28%	30%
$300K - 400K	27%	33%	33%	22%	27%	23%	16%	18%
$400K - 500K	22%	20%	22%	28%	25%	27%	17%	13%
$500K - 600K	12%	10%	16%	13%	15%	16%	5%	11%
$600K - 700K	7%	9%	4%	7%	5%	4%	8%	10%
$700K - 800K	8%	6%	3%	7%	4%	2%	3%	3%
$800K - 900K	1%	4%	3%	2%	2%	4%	2%	2%
$900K - 1.0M	3%	2%	3%	2%	2%	5%	2%	1%
$1.0M - 1.1M	2%	0%	0%	2%	1%	2%	1%	3%
$1.1M - 1.2M	2%	0%	1%	1%	1%	2%	1%	2%
$1.2M - 1.3M	1%	1%	0%	0%	0%	1%	1%	1%
$1.3M - 1.4M	1%	0%	0%	1%	1%	0%	0%	1%
$1.4M & Over	0%	0%	0%	1%	0%	0%	0%	1%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%

Source: StatisticsNZ 2021

Figure 3.8 – QLD Dwelling Consents by Value of Works Band 2013-2020



The distribution of total consents by dwelling type in each value band for the 2016-20 period in total is shown in Table 3.9. Figure 3.8 Detached houses account for around 58% of the total, and 51% in the last three years. Only 4% of all consents since 2016 were below $250,000, while another 25% lie in the $250,000 to $499,000 bands (all values in constant $2020 terms). Some 31% of consents are in the $500-749,000 bands, and another 21% in the $750-999,000 bands, with over 80% at less than $1,000,000. Townhouses units and flats and other smaller dwelling typologies show a relatively greater concentration in the lower value bands, and three-fifths of the consents in these types are valued at less than $500,000. This highlights the potential for attached dwellings to provide more affordable final dwelling price points, particularly as land prices are expected to increase.

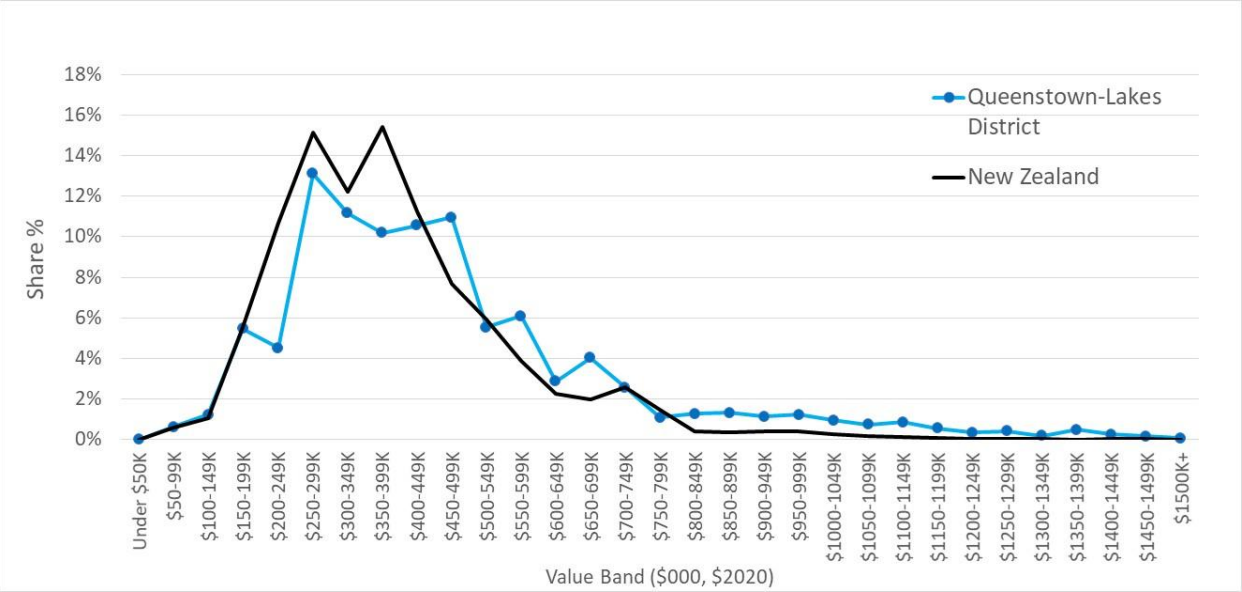
Figure 3.9 provides a comparison on new consent values in QLD with New Zealand for the 2016-2020 period. It shows a relatively similar profile for new construction activity.

Table 3.9 – Dwelling Consents by Typology and Value of Works ($2020) – QLD 2016 to 2020

Consent Value Band ($000) 2016-2020	Houses	Apartments	Retirement Units	Townhouse Unit Flat	Total Dwellings Consented	Houses	Apartments	Retirement Units	Townhouse Unit Flat	Total Dwellings Consented
Under $50K	-	-	-	-	-	0%	0%	0%	0%	0%
$50-99K	-	4	-	31	35	0%	0%	0%	1%	1%
$100-149K	6	-	-	63	69	0%	0%	0%	1%	1%
$150-199K	15	232	-	62	309	0%	4%	0%	1%	5%
$200-249K	32	-	2	221	255	1%	0%	0%	4%	5%
$250-299K	105	132	4	501	742	2%	2%	0%	9%	13%
$300-349K	378	49	12	192	631	7%	1%	0%	3%	11%
$350-399K	309	35	53	180	577	5%	1%	1%	3%	10%
$400-449K	453	11	23	110	597	8%	0%	0%	2%	11%
$450-499K	537	4	15	64	620	9%	0%	0%	1%	11%
$500-549K	206	22	42	43	313	4%	0%	1%	1%	6%
$550-599K	299	-	13	32	344	5%	0%	0%	1%	6%
$600-649K	115	21	16	10	162	2%	0%	0%	0%	3%
$650-699K	193	-	14	21	228	3%	0%	0%	0%	4%
$700-749K	96	32	7	10	145	2%	1%	0%	0%	3%
$750-799K	48	-	3	11	62	1%	0%	0%	0%	1%
$800-849K	64	-	1	7	72	1%	0%	0%	0%	1%
$850-899K	67	4	1	3	75	1%	0%	0%	0%	1%
$900-949K	42	13	1	8	64	1%	0%	0%	0%	1%
$950-999K	67	-	-	2	69	1%	0%	0%	0%	1%
$1000-1049K	45	1	-	8	54	1%	0%	0%	0%	1%
$1050-1099K	42	-	-	-	42	1%	0%	0%	0%	1%
$1100-1149K	47	-	-	2	49	1%	0%	0%	0%	1%
$1150-1199K	32	-	-	-	32	1%	0%	0%	0%	1%
$1200-1249K	19	-	-	-	19	0%	0%	0%	0%	0%
$1250-1299K	24	-	-	-	24	0%	0%	0%	0%	0%
$1300-1349K	11	-	-	-	11	0%	0%	0%	0%	0%
$1350-1399K	24	-	-	3	27	0%	0%	0%	0%	0%
$1400-1449K	15	-	-	-	15	0%	0%	0%	0%	0%
$1450-1499K	9	-	-	-	9	0%	0%	0%	0%	0%
$1500K+	4	-	-	-	4	0%	0%	0%	0%	0%
TOTAL	3,304	560	207	1,584	5,655	58%	10%	4%	28%	100%

Source: ME Housing Demand Model 2021; Statistics NZ 2021

Figure 3.9 – Distribution of Values for New Dwelling Consents QLD and NZ 2016-2020



3.3.4 Total New Dwelling Value

However, the consent data shows only the estimated value of the dwellings to be built. It does not show the value of other built improvements to the land, nor does it show the value of the land itself. The distribution of the total values of new dwellings including land is shown in Table 3.10 and it shows a wide range of values for new dwellings entering the QLD property estate[62]. The estimates draw from an analysis of detailed data on some 39,800 new dwellings across Tier 1 and Tier 2 urban environments, to identify land value as a share of total capital value for dwellings in each (capital) value band, and for each dwelling type. For QLD, the land value to capital value relationship evident in regional cities and districts has been applied. The use of that assumption is justified as that relationship is also evident in the data on 1,836 properties specific to QLD itself. In contrast, in Auckland and Christchurch (large metropolitan markets), the land value component is a generally higher share of capital value than is the case in the other cities.

[62] Note that the estimates in Table 3.10 show the same number of dwellings built as consents issued. Not all of the new dwelling consents which are issued end up as new dwellings constructed (there is some attrition). However, it is useful for the purposes of this analysis to assume that all are 'built' so that the comparison of consent values and final dwelling values is as clear as possible, and not further complicated by making allowances for that attrition.

Table 3.10 – New Dwellings by Estimated Total Value Band – Queenstown Lakes 2016 to 2020

Dwelling Value Band ($000) 2020	Houses	Apartments	Retirement Units	Townhouse Unit Flat	Total Dwellings Consented	Houses	Apartments	Retirement Units	Townhouse Unit Flat	Total Dwellings Consented
Under $50K	-	-	-	-	-	0%	0%	0%	0%	0%
$50-99K	-	-	-	-	-	0%	0%	0%	0%	0%
$100-149K	-	4	-	31	35	0%	0%	0%	1%	1%
$150-199K	2	58	-	31	91	0%	1%	0%	1%	2%
$200-249K	1	46	-	76	123	0%	1%	0%	1%	2%
$250-299K	4	45	-	70	119	0%	1%	0%	1%	2%
$300-349K	11	72	1	158	242	0%	1%	0%	3%	4%
$350-399K	33	81	4	196	314	1%	1%	0%	3%	6%
$400-449K	108	42	14	221	385	2%	1%	0%	4%	7%
$450-499K	108	42	14	176	340	2%	1%	0%	3%	6%
$500-549K	169	44	18	199	430	3%	1%	0%	4%	8%
$550-599K	161	20	21	110	312	3%	0%	0%	2%	6%
$600-649K	233	10	18	72	333	4%	0%	0%	1%	6%
$650-699K	266	7	19	50	342	5%	0%	0%	1%	6%
$700-749K	266	7	19	50	342	5%	0%	0%	1%	6%
$750-799K	244	9	17	30	300	4%	0%	0%	1%	5%
$800-849K	244	9	17	21	291	4%	0%	0%	0%	5%
$850-899K	213	15	18	23	269	4%	0%	0%	0%	5%
$900-949K	127	11	7	8	153	2%	0%	0%	0%	3%
$950-999K	127	11	8	10	156	2%	0%	0%	0%	3%
$1000-1049K	124	6	5	10	145	2%	0%	0%	0%	3%
$1050-1099K	124	6	2	6	138	2%	0%	0%	0%	2%
$1100-1149K	83	1	1	4	89	1%	0%	0%	0%	2%
$1150-1199K	59	3	1	6	69	1%	0%	0%	0%	1%
$1200-1249K	68	3	1	4	76	1%	0%	0%	0%	1%
$1250-1299K	30	3	-	3	36	1%	0%	0%	0%	1%
$1300-1349K	43	4	-	4	51	1%	0%	0%	0%	1%
$1350-1399K	37	3	-	4	44	1%	0%	0%	0%	1%
$1400-1449K	114	-	-	3	117	2%	0%	0%	0%	2%
$1450-1499K	131	-	-	3	134	2%	0%	0%	0%	2%
$1500K+	175	-	-	4	179	3%	0%	0%	0%	3%
TOTAL	3,305	562	205	1,583	5,655	58%	10%	4%	28%	100%

Source: ME Housing Demand Model 2021 *Note: includes rounding*

The distribution of consent values and total residential property values is shown in Figure 3.10 for all dwellings, and in Figure 3.11 for houses only. For new houses in most value bands, land accounts for 38-42% of total capital value. For apartments and townhouses, the Corelogic data shows that the land value component is smaller, in the range of 28-33% reflecting the greater dwelling to land ratios efficiencies possible - however making use of this ratio efficiency is only justified by relatively higher land values.

In the graphs, the difference between the lines showing value of consents and total property value reflects the land component of new dwellings. It is noted that the land value share for new dwellings is in most instances substantially less than for the established dwelling estate. This reflects the fact that new builds are generally to a greater level of intensity (i.e., less land area per dwelling) than the urban average[63].

[63] This is one key reason why the Price Cost Ratio ("PCR") methodology is not well suited for assessing urban economies and housing land markets (see section 10.6.1).

Figure 3.10 – All New Dwellings Consent Value and Final Property Value : QLD 2016 – 2020

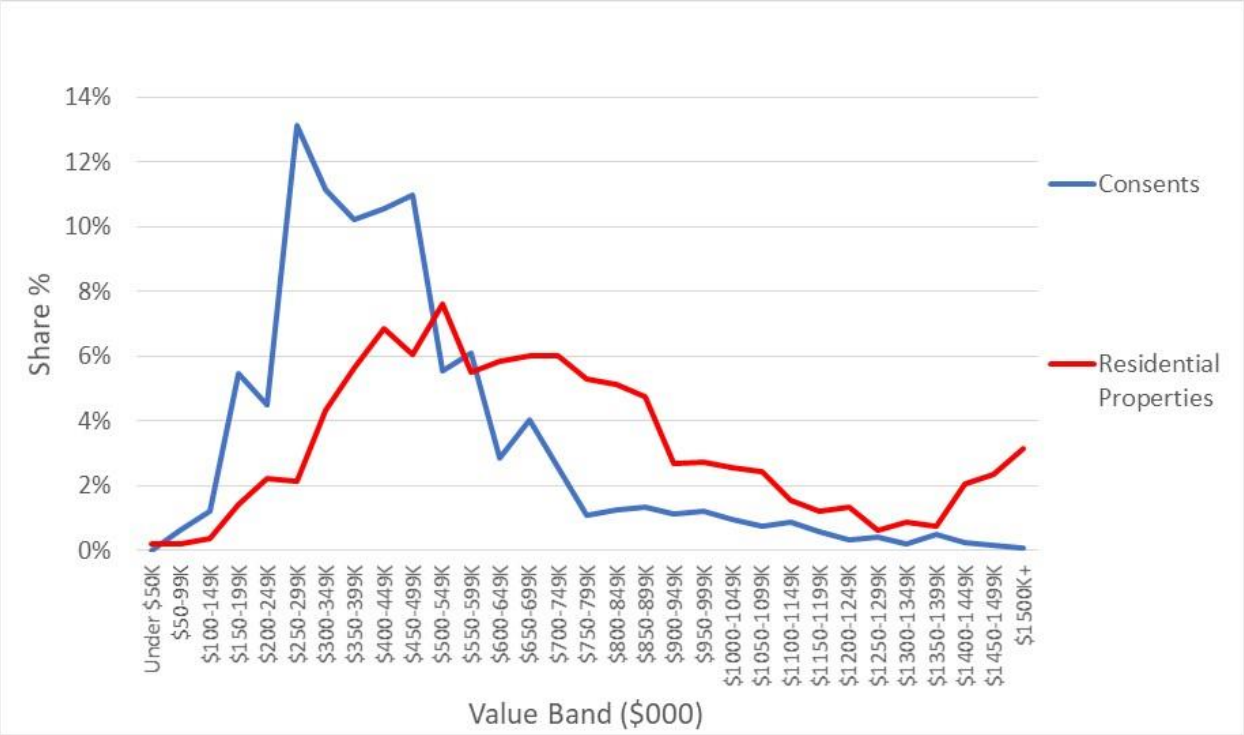
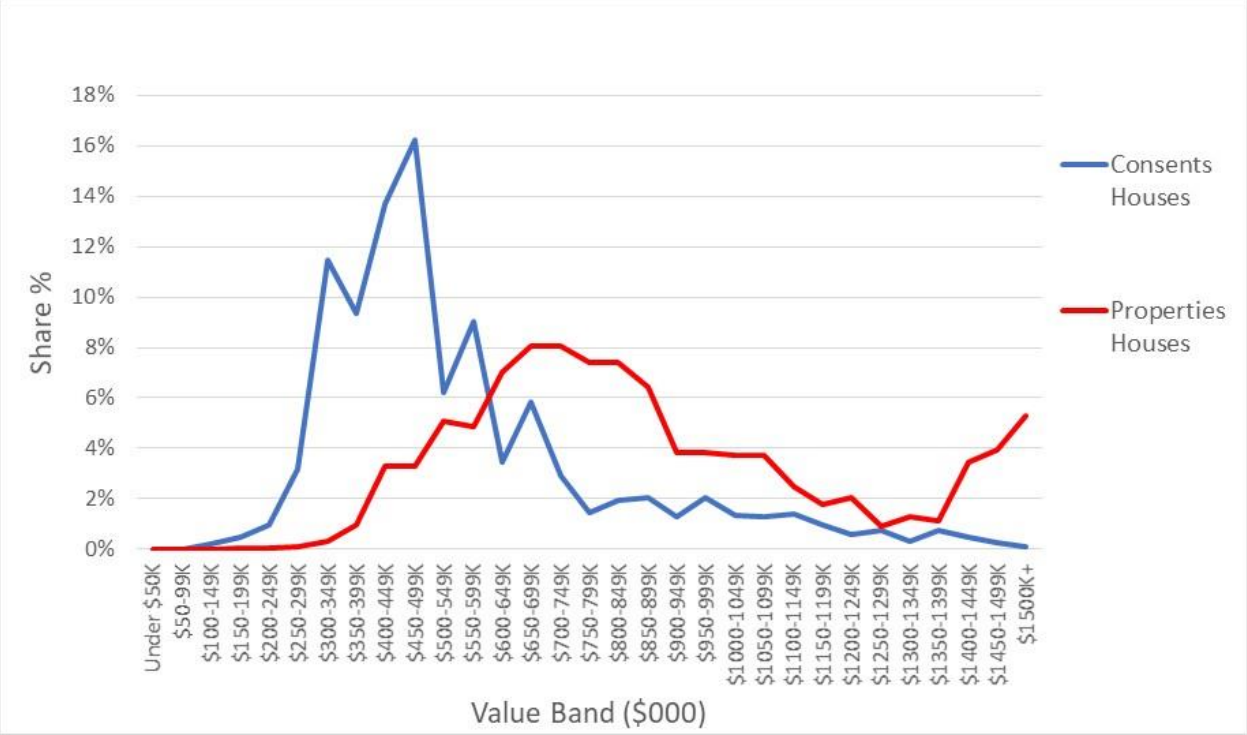


Figure 3.11 – New House Consent Value and Final Property Value : QLD 2016 – 2020



In the survey of local residential developers, several respondents commented on the significant effect the cost of land has on commercial feasibility and the final housing product. One respondent stated that the cost of land in the district was "just extraordinary and driven by multiple factors". With most local

stakeholders also developing in the rest of the country, this suggest that they are well placed to consider the relative costs of residential development in QLD. One respondent considered that the "cost of construction is reasonably consistent across the board", although another respondent reported that the cost of materials was continuing to escalate (with availability of building materials becoming an issue). This reinforces that the cost of land and land development is a key determinant of where it is feasible to develop and where is it not.

3.4 Future Dwelling Estate

QLD's expected future dwelling estate is estimated using the M.E *Housing Supply Model 2021*, which utilises our understanding of the current estate, and likely changes in that estate over time as the estimated additional dwellings required to accommodate ongoing replacement and improvement, and the net increase in households in the district to provide estimates of the future estate by dwelling types and value bands. This is important for assessing future housing affordability.

In accordance with the NPS-UD provisions, when calculating total net demand increase, allowance is made for one additional dwelling for every additional household.

3.4.1 Property Value Trends

A key requirement is to understand likely changes in the total property values of both the existing and new estates, over the NPS-UD time periods. The long run evidence in New Zealand, covering periods of economic boom and bust, population growth and decline, and periods of relative housing under and over supply, points to land value (the value of the land) generally increasing at a faster rate than the improvement value (the value of everything else permanently built on or attached to the land) of individual sites.

Land value increase is generally driven by growth in market size as cities expand, a key reason why mean land values in larger cities are substantially higher than that in smaller cities and towns. Other influences include the rate of growth, with faster economic growth generally correlating with more rapid increase in land values than slower economic growth, and the available land and housing supply relative to demand. Final consumer demand is predominantly for residential properties including land and improvements (dwellings), which means that constraints on supply of housing that have the result of generating a mismatch between supply and demand in an area may be expected to affect the value of the land component as well as the improvements. As well as localised influences, several exogenous influences are important, including home loan interest rates, loan to value ratios ("LVRs") and the availability of finance for house purchases, which commonly have effect at the national and local level, including by setting expectations about future prices.

To reflect actual changes, the analysis draws on observed trends in property values over the last two decades in Tier 1 urban environments across New Zealand.[64] Corelogic datasets have been analysed to

[64] Auckland, Hamilton, Tauranga, Wellington and Christchurch.

show the relative shifts in land values and improvement values over time[65]. This analysis has identified that LV in Tier 1 economies changes at a different rate from IV, in almost every city. LV typically grows faster because the value of land is generally driven by growth in the size of an urban economy, though can also drop faster than IV in periods of economic downturn.

The value of improvements on the land – mainly a dwelling – typically shows a different pattern of change, increasing at a slower rate than land value, and often remaining static or decreasing in real terms, as built improvements depreciate. This slower growth reflects that built structures age and depreciate, with their technology becoming increasingly outdated over time. This ongoing depreciation is also offset by additions and alterations, renovation and maintenance, and the inherent use value of existing structures.

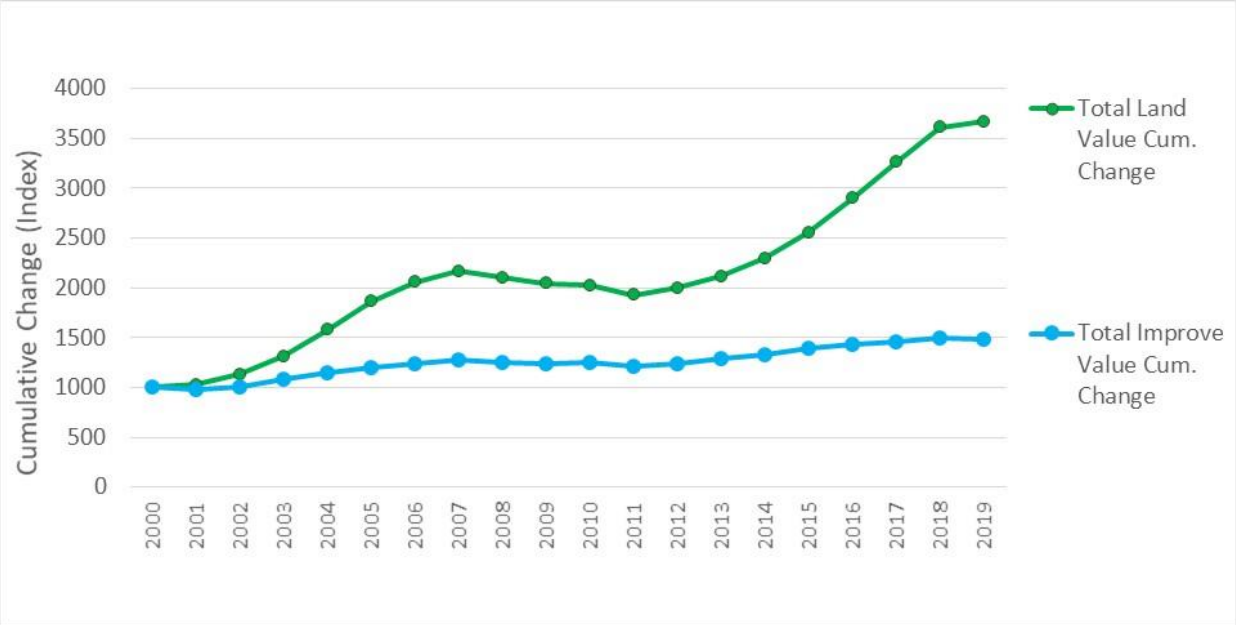
This means that in urban economies, while LV has generally shown positive growth, the IV component of property value has also shown positive growth but grows more slowly and may decline in real (inflation-adjusted) terms. Whether the rate of increase is fast or slow or negative is less important than the overall differential whereby the rate of change in LV is greater than IV, leading to incentives for eventual redevelopment to a 'higher and better use', typically more intensive (higher total value, not necessarily more expensive per dwelling) reflecting the current economy (as opposed to the economy at the time of the original development).

The overall pattern of annual change rates for Tier 1 cities is shown in Figure 3.12, where land values rose substantially ahead of improvement values in the 2001-2007 period, then declined 2008-2011 (affected by the GFC-related downturn in economic conditions), then remained ahead of improvement values through the 2012-2018 period. The cumulative trend for Tier 1 cities is shown in (Figure 3.13) across the last two decades.

Figure 3.12 – Tier 1 Urban Environment Residential Property LV and IV Changes (Real) 2000-2019

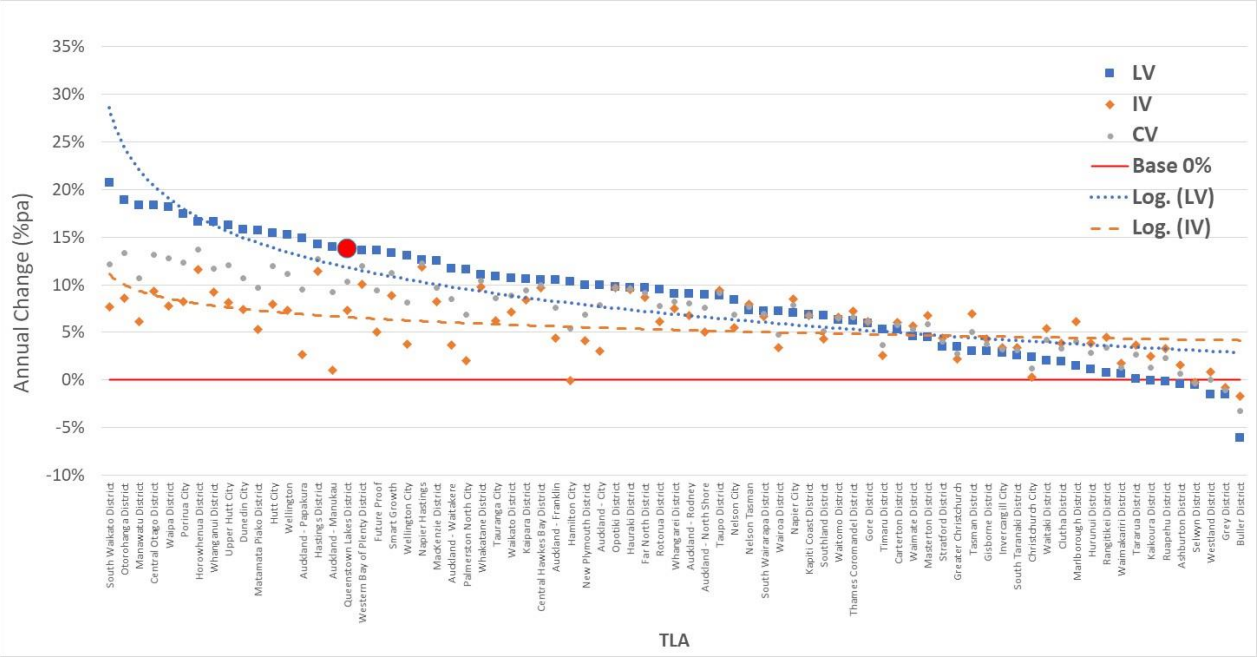
[65] A consistent, no-change dataset of 5,000 urban properties has been used to examine the effects of land value and improvement value change where there has not been any significant change to the dwelling (including replacement). That vis to remove the effect on improvement values of replacement dwellings or major upgrades which could distort the pattern.

Figure 3.13 – Tier 1 Urban Environment Residential LV and IV Trends (Real) 2000-2019



These patterns are evident throughout New Zealand. Figure 3.14 shows the recent pattern across all TLAs[66], over the 2016-2020 period. The key feature of the graph is that for most TLAs, the annual change in average LV per residential property has stayed ahead of the shifts in IV per property. In this instance, while detail for all TLAs is available, the relatively short (4-year) time period and the fact that the 2020 includes properties added since 2016 means that the big picture pattern – LV generally increases faster than IV - is the key indicator. QLD's position is shown by the red circle.

Figure 3.14 – Residential LV and IV Value Trends (Real) by TLA 2016-2020



[66] Territorial Local Authorities.

This evidence base has been drawn on for the assessment of property values in QLD (a Tier 2 urban environment), over the 2020-2050 period for the NPS-UD.

3.4.2 Current Estate : Values 2020-2050

The distribution of property values in the existing estate has been identified for the 2020 base year from the Corelogic property counts. It has then been estimated for future years on a scenario basis, allowing for expected trends in LV and IV and the relativities between them.

The Base Case scenario takes account of expected changes in land and improvement values over time, which is expressed as annual % changes in LV and IV, assuming an average rate over time. This is driven the Treasury's Half-Year Economic and Fiscal Update ("HYEFU" May 2021) estimates to 2025 (prepared for Budget 2021), thereafter a base rate, though gradually slowing over time. This indicates strong price growth nationally of 17.3% to June 2021, then a much more subdued outlook with prices increasing by just 0.9% to 2022, and 1.89% per annum on average over the 4 years to June 2025.

Building on that short term HYEFU outlook, the Base Case allows for land values to increase at 6.5% per annum (4.4% real) from 2026 onward, the improvement values on existing built properties to increase by 3.25% (1.3% real) and household incomes to increase at a rate of 1.1% per annum in real terms.

While QLD has had a history of relatively high dwelling prices and strong price growth in the past – driven by a number of factors including the high level of ownership by those living outside the district, including overseas – a more conservative future is seen as being likely in the short term, at least. An obvious question is why conservative growth rates might be expected for QLD given its history of strong price rises and high property values. Queenstown's tourism-based economy has been heavily impacted by the effects of the Covid pandemic since early 2020. One consequence has been the decrease in employment opportunities, as well as expectations of the future growth in the local economy.

In the last 24 months, the housing price index has fallen by -2.6% in real terms. Rental levels have fallen by -20% over the last 12 months, even though the number of tenancies has continued to increase. This may suggest some shift in the structure of the rental market with longer term tenancies. The Base Case future outlook for QLD is summarised in Table 3.11 alongside three alternative outlooks.

Table 3.11 – Projected Real Changes in Property Market Conditions (%pa) 2020-2050

Indicator	Base Case	National Outlook	High	Low
LV Trend	2.6%	3.1%	2.9%	2.4%
IV Trend	0.5%	0.8%	0.5%	0.4%
Construction Cost Trend	1.1%	0.9%	1.2%	1.0%
Household Income Trend	1.2%	1.1%	1.4%	1.1%

Source: ME Housing Demand Model 2021

The indicated shifts in property values in the existing dwelling estate are summarised in Table 3.12.[67] This shows the estimated number of dwellings in each value band (in real $2020 terms) currently, and in the short, medium, and long terms. The ongoing increases in LV, together with the more modest changes in

[67] Refer to the supporting Technical Report for equivalent tables for the 5 Year Lag future.

IVs for the current dwelling estate, would see important shifts into the medium and long terms. That is to be expected, given the outlook for residential land values to continue to grow.

Currently (2020) only around 7% of dwellings are in the under $600,000 market, and a quarter of the dwelling estate is in value bands of less than $800,000. Another quarter (26%) in the $800-999,000 band, and 28% in the $1.0m to $1.5m band. The mean value of new dwelling consents has changed slowly since 2017, with values in 2020 just +1.6% higher than 2017 in real terms.

Assuming they persist through to 2023, the relatively slow projected growth rates in land and built value would see little change in prices. The share of dwellings under $600,000 would stay at 7% of the estate, with no discernible change in the other value bands.

More substantial change is likely in the medium term. By 2030 at the projected rates of change, only 5% of dwellings would be in the under $600,000 band. The share in the $600-799,000 value band would fall to 14%, with only one dwelling in five being priced under $800,000. The $800-999,000 band would drop to 22%, the share in the $1.0m to $1.5m band would increase to 36%.

The table shows changes in the value patterns of only the existing dwelling estate, at the assumed rates of property price escalation. Importantly, the projections allow for some continued increase in the value of the already built dwellings, when longer term the built estate is subject to depreciation and a growing 'technology gap'.

When applied over the medium and long term, the compounding rates of change would generate substantial price increases in real terms (though without allowance at this point for parallel increases in household incomes). Importantly, they are a representation of the recent past projected into the future, to indicate the potential extent of change in housing prices. They are not a forecast of price changes. They are intended to represent the effects of long term changes in the property market as LVs continued to increase, and IVs increased but much more slowly.

A faster rate of change in market conditions for both LVs values and IVs would see greater shifts in the medium term, though it is again only in the long term that the existing dwelling estate would show substantially different value patterns from the current. A slower rate of change, including a future where IVs showed a drop in real terms, would see quite limited changes in the value patterns for the existing estate.

Table 3.12 – Total Current Estate Dwellings by Value Band ($000) – QLD 2020 to 2050

Queenstown-Lakes District	Change the Path Growth Future				Includes Lifestyle		
	LV Trend	2.5%	IV Trend	0.4%			(all %pa)
Value Band ($2020)	2020	2023	2030	2050	2020-23	2020-30	2020-50
$0-99	-	-	-	-	-	-	-
$100-199	20	20	10	-	-	- 10	- 20
$200-299	60	60	50	10	-	- 10	- 50
$300-399	160	170	90	30	10	- 70	- 130
$400-499	460	470	280	70	10	- 180	- 390
$500-599	890	920	510	50	30	- 380	- 840
$600-699	1,680	1,700	1,070	170	20	- 610	- 1,510
$700-799	2,500	2,510	1,900	270	10	- 600	- 2,230
$800-899	2,920	2,920	2,050	530	-	- 870	- 2,390
$900-999	2,630	2,660	2,830	840	30	200	- 1,790
$1000-1099	2,040	2,070	2,130	910	30	90	- 1,130
$1100-1199	1,490	1,510	2,150	1,510	20	660	20
$1200-1299	1,140	1,160	1,620	1,490	20	480	350
$1300-1399	820	690	1,030	1,580	- 130	210	760
$1400-1499	600	630	970	2,120	30	370	1,520
$1500-1599	470	510	570	1,540	40	100	1,070
$1600-1699	360	390	560	1,720	30	200	1,360
$1700-1799	340	350	440	970	10	100	630
$1800-1899	320	330	300	1,110	10	- 20	790
$1900-1999	360	330	320	730	- 30	- 40	370
$2000-2199	130	250	250	620	120	120	490
$2200-2399	260	290	370	810	30	110	550
$2400+	2,100	1,810	2,250	4,670	- 290	150	2,570
Total	**21,750**	**21,750**	**21,750**	**21,750**	-	-	-
Under $400K	1%	1%	1%	0%			
$400-599K	6%	6%	4%	1%			
$600-799K	19%	19%	14%	2%			
$800-999K	26%	26%	22%	6%			
$1000-1499K	28%	28%	36%	35%			
Over $1500K	20%	20%	23%	56%			

Source: ME Housing Demand Model 2021

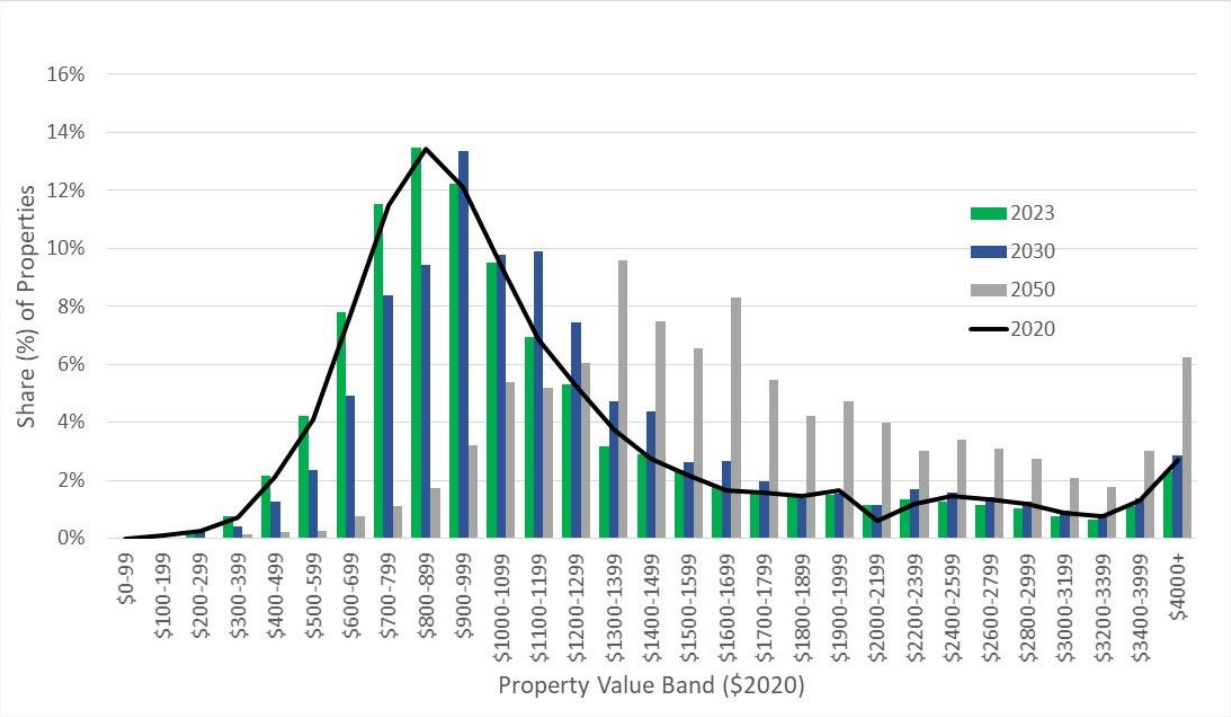
The Base Case outlook is shown in Figure 3.15 with the current distribution indicated by the black line, and then the bars for the short, medium and long terms showing the relatively gradual shift in property values over time.

The pattern is important in regard to housing affordability. In the Change the Path growth future[68], the existing estate will account for around 96% of total dwellings in 2023, and 80% in 2030 (assuming limited replacement of existing dwellings). Even in the long term, the 22,750 or so dwellings which are currently present will still represent 56% of the total housing stock. Moreover, the young age of the QLD dwelling

[68] In the 5 Year Lag medium growth future, the existing estate will account for the majority of dwellings of resident households – some 98% in 2023, and 81% in 2030 and around 58% in the long term. New dwellings yet to be built would account for under half of the future total.

estate with well over 90% of dwellings being 40 years old or less, means that the rate of replacement will be relatively low – in the order of 5% or less of annual consents.

Figure 3.15 – Properties by Value QLD 2020-2050 – Existing Estate (Change the Path)



3.4.3 "New" Estate Values Over Time

The balance of the QLD residential estate will be dwellings which are yet to be built and would be constructed in response to growth in demand for housing increases in the resident population, and demand from outside the district for holiday dwellings. Understanding that new estate is again important in relation to future affordability, as construction cost trends, land value trends, and improvement value trends will influence both the prices of dwellings in the future and the quantity, rate, and location of builds.

As noted above, the mix of dwelling values and types for the new estate is based on the observed patterns in QLD new dwelling consents over the past 6 years, with allowance for the land component according to Corelogic datasets[69].

It is noted that a common approach for the previous NPS-UDC and other studies has been to examine new dwelling price trends for land and construction costs, and project those forward across the total new estate to estimate future values in the short, medium, and long term futures. Some studies have indicated substantial increases in future new dwelling prices. That approach has tended to over-state the future

[69] The value patterns according to feasibility analysis show a range, though generally push toward the middle to higher value dwellings. However, the analysis shows substantial numbers of dwellings in the lower and middle value bands are feasible, which largely confirms the current pattern of consents by value. Accordingly, the current pattern of new dwelling consents by value has been applied here.

values of housing, and accordingly over-state the negative impacts on housing affordability - in some instances quite substantially.

It is important to recognise that QLD's new estate will be built progressively over time, as it is in any market. The "new" estate in the medium term future (2030) will not be dwellings all constructed in 2030 at 2030 prices[70]. Rather it will be some dwellings which were new in 2021 and were built at 2021 prices (and by 2030 some 9 years old), plus some new in 2022 and built at 2022 prices (and 8 years old) and so on. Hence, the M.E model allows for the future additions to be progressively built over the period, and with their values in 2030 and 2050 reflecting the initial cost when built and the age of the dwelling itself, together with the underlying growth in land values expected over the period.

Table 3.13 – New Estate by Value Band – QLD 2020 to 2050 Change the Path Future

Queenstown-Lakes District	Change the Path Growth Future		
Value Band ($000)($2020)	LV Trend	3.5%	1.0%
	2020-23	2020-30	2020-50
$0-99	-	13	10
$100-199	13	26	80
$200-299	25	145	240
$300-399	64	247	270
$400-499	83	464	400
$500-599	81	497	800
$600-699	93	512	1,150
$700-799	97	486	1,030
$800-899	76	615	1,170
$900-999	85	488	1,440
$1000-1099	52	453	1,080
$1100-1199	36	335	1,500
$1200-1299	24	244	1,140
$1300-1399	25	172	690
$1400-1499	19	129	1,350
$1500-1599	31	112	1,190
$1600-1699	11	97	310
$1700-1799	-	184	630
$1800-1899	-	85	340
$1900-1999	-	8	390
$2000-2199	-	6	260
$2200-2399	-	1	370
$2400+	-	22	1,180
Total	**820**	**5,340**	**17,020**
Under $400K	12%	8%	4%
$400-599K	20%	18%	7%
$600-799K	23%	19%	13%
$800-999K	20%	21%	15%
$1000-1499K	19%	25%	34%
Over $1500K	5%	10%	27%

Source: ME Housing Demand Model 2021

[70] We note that one approach for the NPS-UDC and other studies has been to apply new dwelling price trends for land and construction costs, and simply compound those forward across the total new estate to estimate future values in the short, medium and long term futures. Some studies have indicated substantial increases in future new dwelling prices because they in effect assume that all new dwellings are built in the final year of the planning horizon, at final year prices.

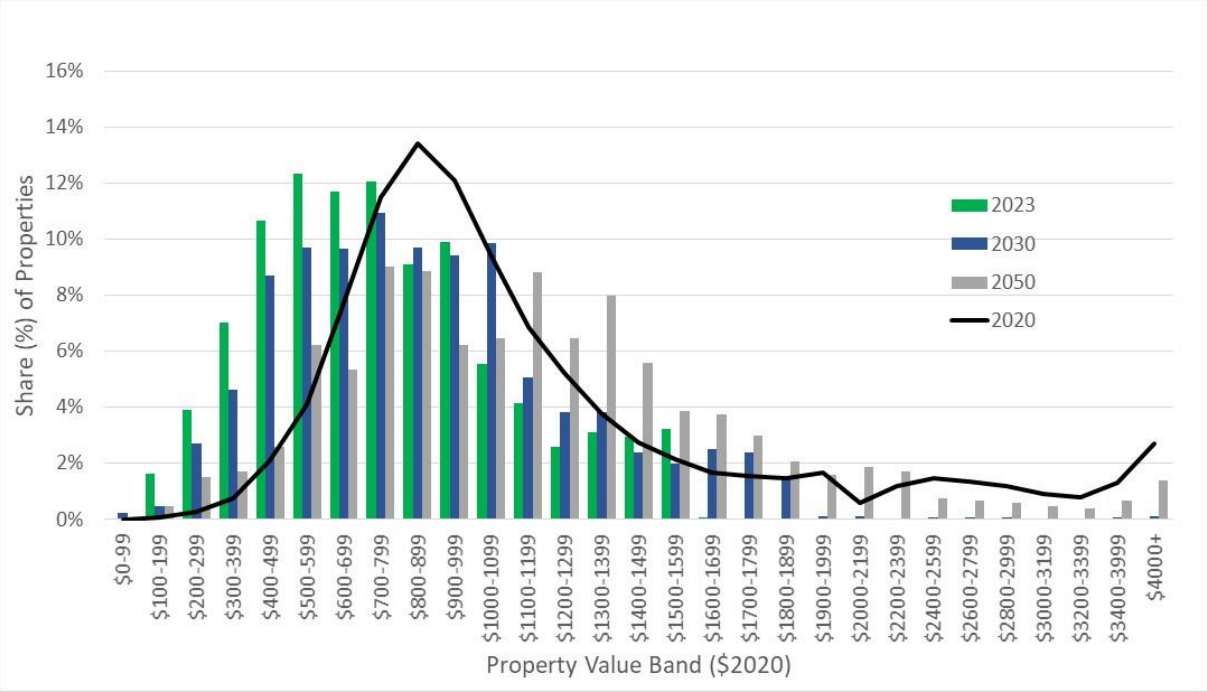
The estimated values of the new dwelling estate are shown in Table 3.13.[71] In the short term, the expected additional 800 dwellings would be spread across the value bands[72].

In the medium term, there would be an additional 5,400 dwellings, with their value distribution reflecting the combined effects of new dwellings being built at prevailing prices in the year of construction, plus the ageing of new dwellings once built and the value of those improvements changing in line with the overall trend (around 0.4%pa), while the LV component of the new estate would change also at the district average (2.5%pa). In the medium term, around 26% of dwellings would be under the $600,000 mark, some 19% in the $600-999,000 band, and about 37% would be over the $1m mark.

In the long term, the additional 17,040 dwellings would be weighted toward the middle and higher value bands, with only around 10% in the under $600,000 bands, and more than half in the $1.0m plus bands. Note that these estimates are based on continuation of the current mix of new dwellings with indicative price inflation. The estimates of feasible capacity will see some modification of the estimated value distribution.

The Change the Path outlook is shown in Figure 3.16.[73] The contrast with the current dwelling estate is clear, with new properties showing a broader distribution over time, and higher proportions in the higher value bands.

Figure 3.16 – Properties by Value 2020-2050 – New Estate in the Change the Path Growth Future



[71] Refer to the supporting Technical Report for the equivalent table for the 5 Year Lag future.

[72] The QLD projections indicate much faster growth in dwellings than in resident households in the short term.

[73] The outlook for the 5 Year Lag future can be found in the supporting Technical Report.

3.4.4 Total Future Dwelling Estate

The total future dwelling estate will be the existing estate, less those parts redeveloped, plus the new estate. The overall pattern for the Change the Path growth future is shown in Table 3.14[74]. The value structure is dominated in the short and medium term by the existing estate, and the assumed moderate rate of value change among those properties.

Table 3.14 – Total Estate by Value Band – QLD 2020 to 2050 Change the Path Future

Queenstown-Lakes District	Change the Path 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**	**- 10**	**10**	**- 10**
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

In the Change the Path future there would be limited change to 2023, by which time around 28% of the total future estate would be in value bands of $800,000 or less, with 25% in the $800-999,000 band, and around 47% in bands of $1.0m or higher.

There would be more substantial change in the medium term. By 2030 at the projected rates of change together with ageing of the estate and additions from new dwellings would see just 10% of dwellings in the

[74] The outlook for the 5 Year Lag future can be found in the supporting Technical Report.

$600,000 or lower value band, another 14% in the $600-800,000 band, and 22% in the $800-999,000 band. Around 54% would be in the $1.0m or more bands.

In the long term the number of dwellings in the lower to middle value bands would account for a small share of the total estate, based on past trends and the current situation, with around three-quarters in the over $1.0m mark.

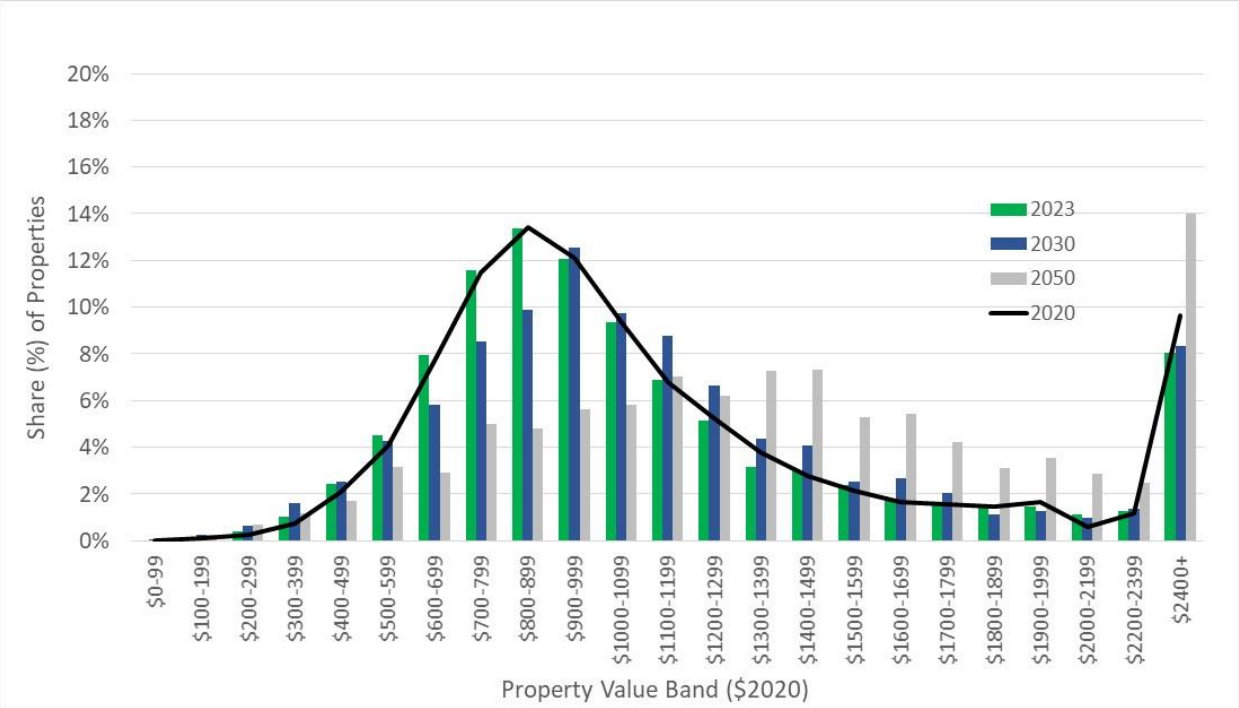
While the long term numbers show substantial change, it is important to recognise that the changes would occur progressively over 30 years. The largest effect would be the expected long term increase in land values, which is driven mainly by growth in the economy and economic conditions, and applies to all sites, irrespective of the age and size of the dwelling and other built improvements, though the amount of uplift for any given site will be a function of demand, and the amenities (e.g. slope, views, proximity to desirable facilities and features, etc). Over the long term, allowance is made for LV to more than double in real terms, accounting for over four-fifths of the total value increase across the QLD property estate.

It is also important to recognise that household incomes will also rise into the long term, with future affordability mainly relating to both prices and incomes. The pattern in the past 20 years has been for incomes to rise more slowly than dwelling prices. This matter is addressed further in Section 10.

A faster rate of change in market conditions for both land values and improvement values would see greater shifts in the medium term, though again it is in the long term that the existing dwelling estate would show substantially different value patterns from the current. A slower rate of change, including a future where IVs showed a drop in real terms, would see more limited changes in the value patterns for the existing estate.

The Base Case outlook for the total estate for the Change the Path growth future is shown in Figure 3.17. The structure shows the strong influence of the existing estate into the medium term, with the real growth in values most evident over the long term.

Figure 3.17 – Properties by Value 2020-2050 – Total Future Estate Change the Path (Base Case)



4 Current Housing Affordability

This section examines current housing affordability in the district, taking account of overall demand for housing from key segments in the community. The assessment also considers the affordability of rental housing. The estimates of future affordability are set out in Part 3, as they need to draw on the assessment of feasible capacity and sufficiency of capacity and take into account possible trends in conditions in the wider economy, all of which will influence households' ability to be dwelling owners.

For a brief discussion on understanding housing affordability generally and in the context of this HBA, refer to the supporting Technical Report.

4.1 Housing Affordability 2020

The focus of the housing affordability assessment is on QLD's 5,780 non-owner households, on the basis that the other 10,350 households which already own a dwelling are currently able to afford ownership and may have potential to purchase a higher value dwelling in the future (Table 4.1).

Table 4.1 – Dwelling Tenure by Household Income QLD 2020

Income Band	Owner House holds	Non-Owner House holds	Total	Owner House holds %	Non-Owner House holds %
<$20,000	310	220	530	58%	42%
$20-30,000	480	230	710	68%	32%
$30-40,000	510	300	810	63%	37%
$40-50,000	510	300	810	63%	37%
$50-70,000	1,250	750	2,000	63%	38%
$70-100,00(	1,820	1,170	2,990	61%	39%
$100-120,0(	1,620	940	2,560	63%	37%
$120-150,0(	1,040	600	1,640	63%	37%
$150,000+	2,950	1,410	4,360	68%	32%
Total	10,490	5,920	16,410	64%	36%

Source: ME Housing Demand Model 2021

4.1.1 Ownership Affordability 2020

For this assessment, affordability has been estimated in terms of ownership affordability, for first home purchasers. Affordability is calculated for a first home purchaser with a 20% deposit, who will seek to finance a dwelling over a 30-year term, at a mortgage interest rate of 5% per annum. This assumed rate is higher than current mortgage rates, however affordability is assessed over the whole mortgage term, and it is likely that interest rates will be higher in the future.

It is important to recognise that the first home buyer perspective does not represent the whole housing market. Households which already own a dwelling are generally much better placed than a first home buyer

to purchase a second or subsequent dwelling, as they typically have reasonable equity in their existing dwelling, and the initial step into ownership is typically substantially greater than subsequent steps through the market to purchase a more valuable dwelling(s).

To illustrate this, the 15th percentile dwelling value in Queenstown Lakes is around $625,000, which means a first home buyer would need a mortgage of around $500,000 to purchase such a dwelling, assuming a 20% deposit. The 25th percentile dwelling is around $725,000. This means an existing owner seeking to move up from the 15th to the 25th percentile value band could do so with an increase in an existing mortgage of around $100,000. That lift in indebtedness for the existing owner is much less than that required for the step from non-owner to owner. Moreover, the recent lifts in housing prices have accrued as increases in equity to existing owners, placing them in a generally better position for an upward move in the housing market.

This is an important consideration, because around 64% of Queenstown Lakes households own a dwelling. For the most part, their equity position will have declined slightly over the last 24 months – according to Corelogic data, the median value fell by -2.6% between 2018 and 2020. This is material mainly to those who purchased between 2018 and 2020, others who purchased before that would face only a small potential decrease in their sale value and are likely to have had a net gain on paper. For example, the median value increased by some $420,000 between 2015 and 2020, so that dwelling owners over that period will have had a substantial improvement in their equity.

In the future, the value of increases in housing prices will also accrue predominantly to existing owners. With housing loans usually structured to see 3-4% of principal repaid annually, their combined effects will enhance affordability for existing owners in the future, making movement to higher value dwellings more feasible. Although the value of existing built improvements may increase relatively slowly or decline in real terms, the key driver of property value increase remains the relatively steady real increase in land values.

Accordingly, the appropriate focus of current affordability in the Queenstown Lakes market is based on what first home buyers in each income band would be able to afford, based on the loan parameters above, applied to the distribution of dwelling values in the district. Both are assessed here in current $2020 terms. This approach allows for closer examination of the market and offers a more nuanced view of affordability than do the gross indicators such as median income level compared with median dwelling price (the median multiple approach). Since median incomes include all households whether owners or non-owners, and median dwelling price represents only the mid-point of the market, the median-multiple approach can disguise the affordability of lower value dwellings to non-owner households in the middle and lower income bands. Moreover, that approach is of little use in understanding affordability for owner households who have substantial equity in their dwellings, for whom the relationship between dwelling price and income is of little relevance. The median multiple is potentially useful for some comparison at the urban area level, or for tracking over time, but assists little in understanding finer-grained household level affordability. The key home ownership affordability indicator – for both owner and non-owner households – is the *debt* to income ratio, [75] not the dwelling price to income ratio.

[75] Which itself is a proxy for the even more accurate mortgage repayment to income ratio, which are understandably very difficult to obtain across populations - the modelling utilised uses the assumed debt to calculate an assessed repayment for the dwelling in each band to determine affordability at the household level.

Key parameters of the current affordability situation in the Queenstown Lakes market are set out in Table 4.2. Table 4.6 This table shows:

i. The household income band in $2020 terms, and the number of households in each band (detail on the household types is in the table;

ii. The dwelling value percentile which would be affordable for a household on this income band. For example, at the current price structure for housing, households earning $70,000 would be able to afford a dwelling up to the 1st percentile (the lowest 1% of dwellings by value) or in the order of $400,000;

iii. The fourth column ('*No. of Dwellings Can Afford*') shows the number of dwellings which households in this income band could potentially afford. This includes the dwellings in this percentile band plus all those in lower value bands. For the household earning $70,000 there are around 240 dwellings in value bands which are potentially affordable;

iv. The final column (*'Share % of Dwgs Required'*) shows the share of dwellings in this value band which would be required to enable all households in that income band to become owners. This is a very simple calculation, where Non-owner households are shown as a percentage of the dwellings they could afford. For example, there are 1,110 households in the $70-100,000 income band, and there are an estimated 1,120 dwellings which they could afford. In other words, if all 1,120 dwellings in that band came on to the market, that would be just enough dwellings to enable all 1,110 households to become owners (assuming they wanted to);

v. For households in the higher income bands, there are more options. The non-owner households in the $100-120,000 income band would be able to afford dwellings up to the 20rd percentile (around $750,000) and there are some 4,540 such dwellings in or below that value band. In broad terms, if all of those non-owner households opted to become owners, then their demand would represent some 20% of total dwelling supply up to that value band. This shows how the ownership options are wider for households in the higher income bands.

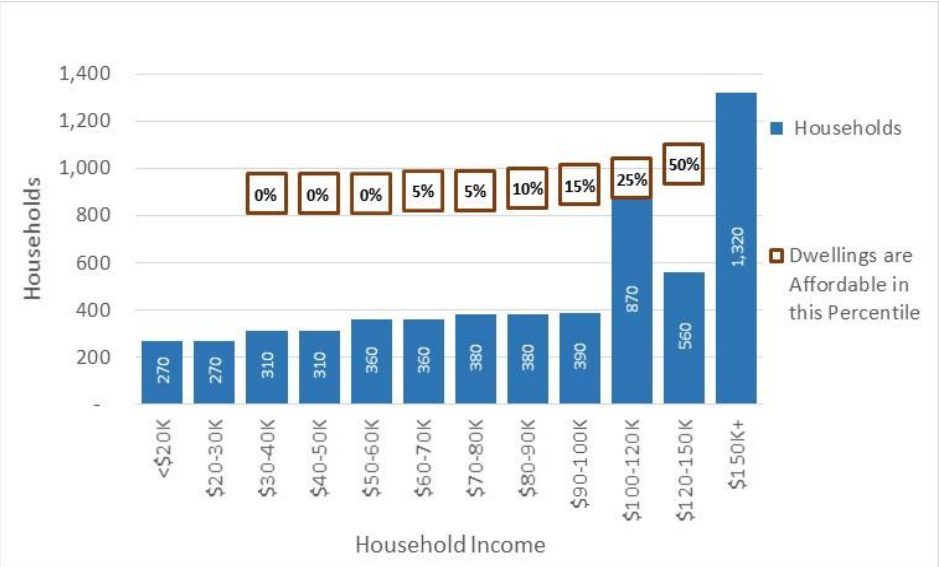
Table 4.2 – Dwelling Affordability Parameters QLD 2020

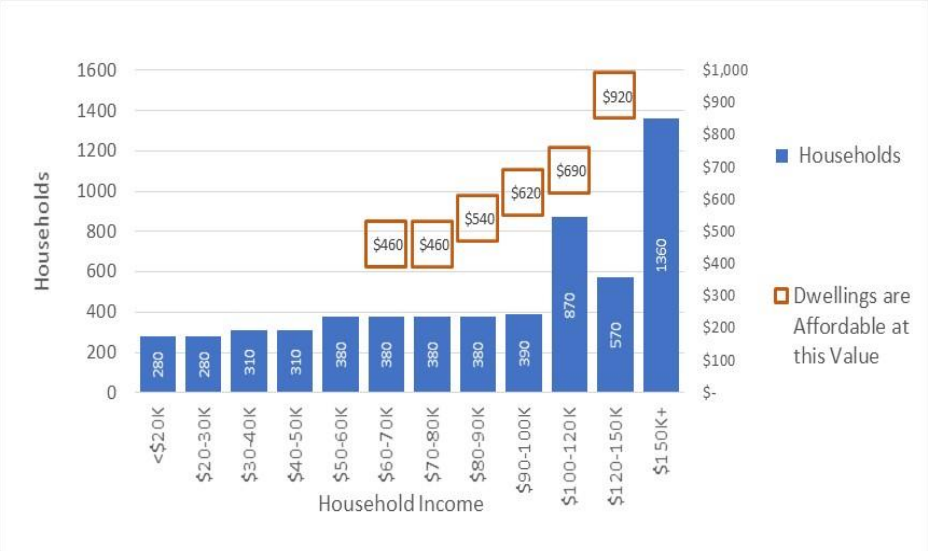
Household Income	2020				
	Non-Owner Households	Dwelling Percentile Value Affordable (%)	Dwelling Value Affordable ($000)	No. of Dwellings Can Afford	Share % of Dwellings Required
<$20,000(1)	270	0%	$ 150	10	100+%
$20-30,000	290	0%	$ 200	20	100+%
$30-40,000	320	0%	$ 250	40	100+%
$40-50,000	310	0%	$ 300	80	100+%
$50-70,000	770	1%	$ 400	240	100+%
$70-100,000	1,140	5%	$ 550	1,080	100+%
$100-120,000	930	20%	$ 750	4,400	21%
$120-150,000	590	40%	$ 900	8,700	7%
$150,000+	1,370	65%	$ 1,150	14,150	10%

Source: ME Housing Demand Model 2021

The situation for 2020 is set out graphically in Figure 4.1. The top graph shows the number of households in each income band (bars) and the dwelling value percentile which those households can afford. The bottom graph shows the numbers of households, and the dwelling value band ($000).

Figure 4.1 – Housing Affordability by Percentile and Value Band QLD 2020





4.1.2 Rental Affordability 2020

The NPS-UD requires detail on rental patterns and rental affordability. This assessment draws on information from MBIE (2021) on rental levels by council area. It is noted that the MBIE data is based on tenancy numbers and bond information, and shorter term rentals (less than 90 days) are not covered. The total numb er of rental tenancies will therefore be greater than the MBIE totals. Nevertheless, the MBIE data provides reasonably robust information on long term tenancies, relevant to the usually resident population of QLD.

Table 4.3 shows the mean dwelling rental levels for QLD across the last two decades. Over the long term, rental prices increased steadily, the average annual growth more or less keeping pace with the increases in dwelling values. Average rentals peaked in 2019, at $700 per week for houses and $665 per week across all dwelling types.

However, since 2019 average rental levels have fallen substantially, by -20% per annum for all rentals, and by -18% for houses (which account for around three-quarters of total rental properties). Most of the downturn is likely attributable to the effects of the Covid-19 pandemic, which has seen a massive drop in visitor numbers to QLD, and consequent drop in tourism-related jobs, which accounted for a significant share of demand for rental accommodation.

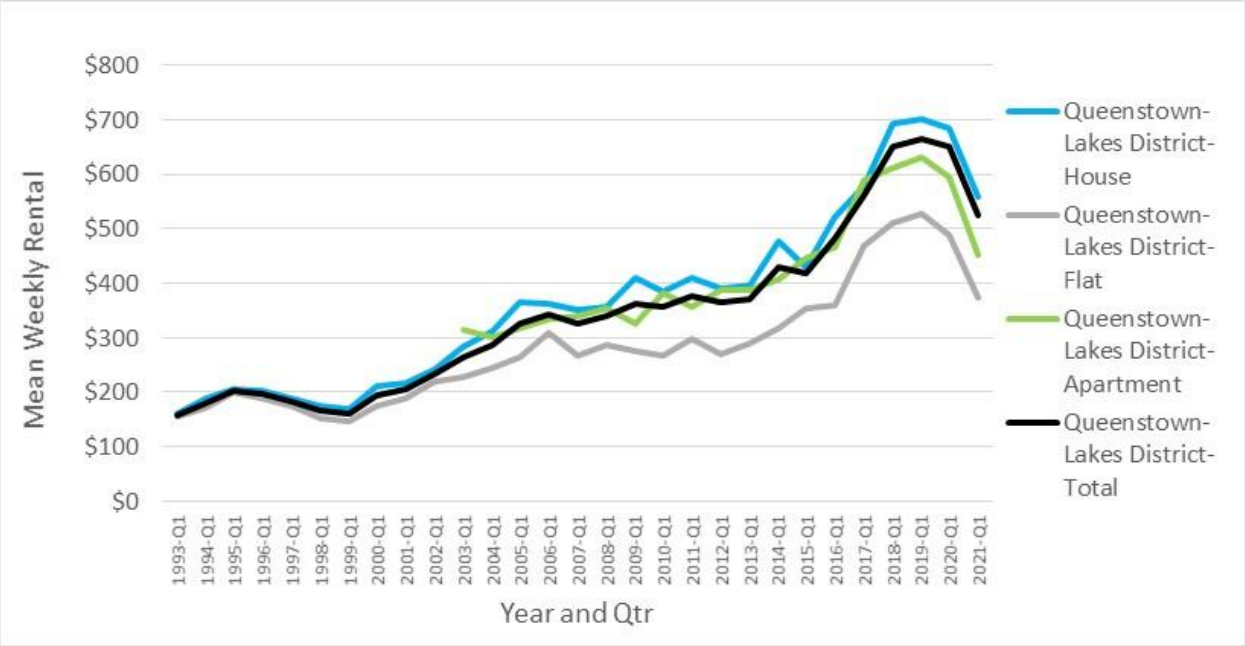
The trends in property mean rentals by category are shown in Figure 4.2.

Table 4.3 – Mean Rentals by Dwelling Type Queenstown Lakes District 2000-2021

Year	House	Flat	Apartment	Total
2000	$ 210	$ 174	na	$ 195
2005	$ 364	$ 265	$ 318	$ 327
2010	$ 384	$ 266	$ 381	$ 357
2015	$ 429	$ 355	$ 445	$ 418
2016	$ 522	$ 360	$ 466	$ 483
2017	$ 578	$ 468	$ 590	$ 562
2018	$ 692	$ 510	$ 612	$ 650
2019	$ 700	$ 528	$ 632	$ 665
2020	$ 684	$ 489	$ 595	$ 651
2021	$ 559	$ 375	$ 452	$ 523
2000-21	5%	4%		5%
2010-21	3%	3%	2%	4%
2015-21	5%	1%	0%	4%
2010-19	7%	8%	6%	7%
2019-21	-7%	-10%	-10%	-7%
2020-21	-18%	-23%	-24%	-20%

Source: ME Housing Demand Model 2021; MBIE 2021

Figure 4.2 – Rental Trends by Dwelling Type QLD 1993-2021



That drop in weekly rentals appears to have applied across rental properties generally, as the number of rental tenancies has continued to increase, albeit slowly, since 2019. Table 4.4Table 4.4 – Rental Tenancies by Dwelling Type Queenstown Lakes District 2000-2021

shows the numbers of recorded tenancies in QLD since 2000. While the number of tenancies has increased in the last 6 years since 2015, that growth has not been as fast as the increase in total dwellings, with rental tenancies per 100 private dwellings lower in 2021 than the peak in 2015[76]. In total, the MBIE data shows 3,780 tenancies in the district as at March 2021, up slightly from the 2020 figure. The share of tenancies identified as "houses" has increased from 58% in 2020 to 74% currently, with "flats" as 10% and "apartments" as 16%[77].

[76] The number of tenancies does not necessarily represent the number of properties which are rented, as there may be several tenancies in one built dwelling. Accordingly, tenancies per 100 private dwellings is an appropriate indicator.

[77] The MBIE property categories do not necessarily concord with Census or Corelogic property definitions, however there is believed to be quite close concordance.

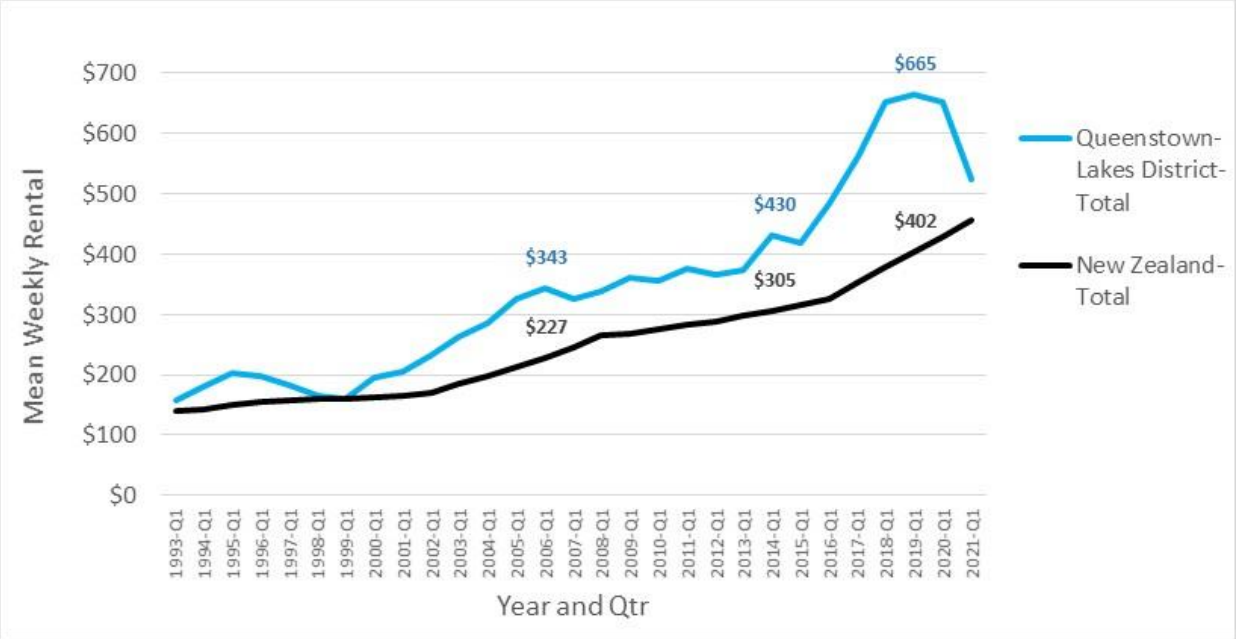
Table 4.4 – Rental Tenancies by Dwelling Type Queenstown Lakes District 2000-2021

Year	House	Flat	Apartment	Total	Rentals per 100 Private Dwellings
2000	780	606	-	1,386	14.3
2005	1,143	666	183	1,992	16.3
2010	1,557	612	516	2,685	18.8
2015	2,118	630	609	3,357	19.9
2016	2,229	618	591	3,438	19.5
2017	2,346	549	522	3,417	18.6
2018	2,427	579	516	3,522	18.4
2019	2,616	525	537	3,678	18.0
2020	2,799	393	543	3,735	17.2
2021	2,790	372	618	3,780	17.4

Source: ME Housing Demand Model 2021; MBIE 2021

Rental levels in the district are substantially higher than the New Zealand average. Figure 4.3 shows the trend since 1993, for average rentals in the March quarter of each year. The MBIE figures are dollars of the day, and not inflation adjusted.

Figure 4.3 – Rental Trends Compared to New Zealand : QLD 1993-2021



The district rental levels relative to New Zealand as a whole are shown in Table 4.5. The differential was very high in the 2016-2019 period, with the district average more than 1.5 times the New Zealand level. Although rental levels have dropped substantially since 2019, the district average is still significantly higher than the New Zealand average.

Table 4.5 – QLD Weekly Rentals as % New Zealand Average 2000-2021

Year	House	Flat	Apartment	Total
2000	122%	120%		120%
2005	164%	144%	108%	153%
2010	134%	121%	111%	130%
2015	134%	135%	111%	133%
2016	157%	132%	116%	148%
2017	161%	153%	140%	159%
2018	180%	158%	137%	172%
2019	171%	153%	138%	165%
2020	157%	132%	126%	152%
2021	121%	94%	91%	115%

Source: ME Housing Demand Model 2021; MBIE 2021

4.2 Dwelling Tenure and Affordability Patterns 2020

It is important to set the assessment of housing affordability in context. The NPS-UD requires detail on housing tenure and affordability for the community overall, and for important segments within the community, especially in terms of incomes, ethnicity, and age group.

Maintaining the focus on non-owner households and ownership affordability, the following sections provide important detail on ownership and affordability for key segments within Queenstown Lakes District as at 2020.

4.2.1 Ownership by Household Type and Income

In QLD there are an estimated 5,780 non-owner households, who are predominantly renting in the private market. Kainga Ora and Kāi Tahu have a growing housing presence in the district, and in central Queenstown through a Ngāi Tahu Properties development, Te Pā Tāhuna, there is a new housing development which will offer medium density development and approximately 119 Kiwibuild properties, in addition to a variety of other housing types.

In addition to Kainga Ora and Kāi Tahu, there is also the Queenstown Lakes Community Housing Trust ("QLCHT"). The QLCHT has developed the Secure Home Programme, a unique leasehold ownership model, developed collaboratively with the Council and the QLCHT.

Since January 2017 QLCHT has assisted 83 households into either permanent affordable rentals or assisted ownership predominantly through the Secure Home Programme, with five completed housing projects in various locations (Wanaka, Albert Town, Shotover Country and Frankton). And In progress, QLCHT is building 13 new homes in Lake Hayes Estate and have a resource consent lodged for a 68-Lot development in Arrowtown (Jopp Street). In total QLCHT has 222 households established, however, there are 740 more on its waiting list (20% Wanaka and 80% Queenstown).

The underlying pattern of dwelling ownership by household type and income band is set out in Table 4.6. First, dwelling ownership varies according to household type and household income. The estimated numbers of non-owner households of each type and in each income-band are shown in the table. Households in the lower and lower-middle income bands ($70,000 and below) are usually less likely to be

owners, more likely to be renters. Of the 5,940 non-owner households, some 15% have incomes of $40,000 or less. Another 18% have incomes of $40,000 to $70,000. However, 50% of non-owner households have incomes of $100,000 or higher. This distribution is different from the national pattern, and QLD has a relatively high share of its renter households in the higher income bands, with data indicating that couple households in the $100k plus incomes dominate the high-income non-owner group (20% of the 50%), followed by another 10% of 2 parent families with 1-2 children.

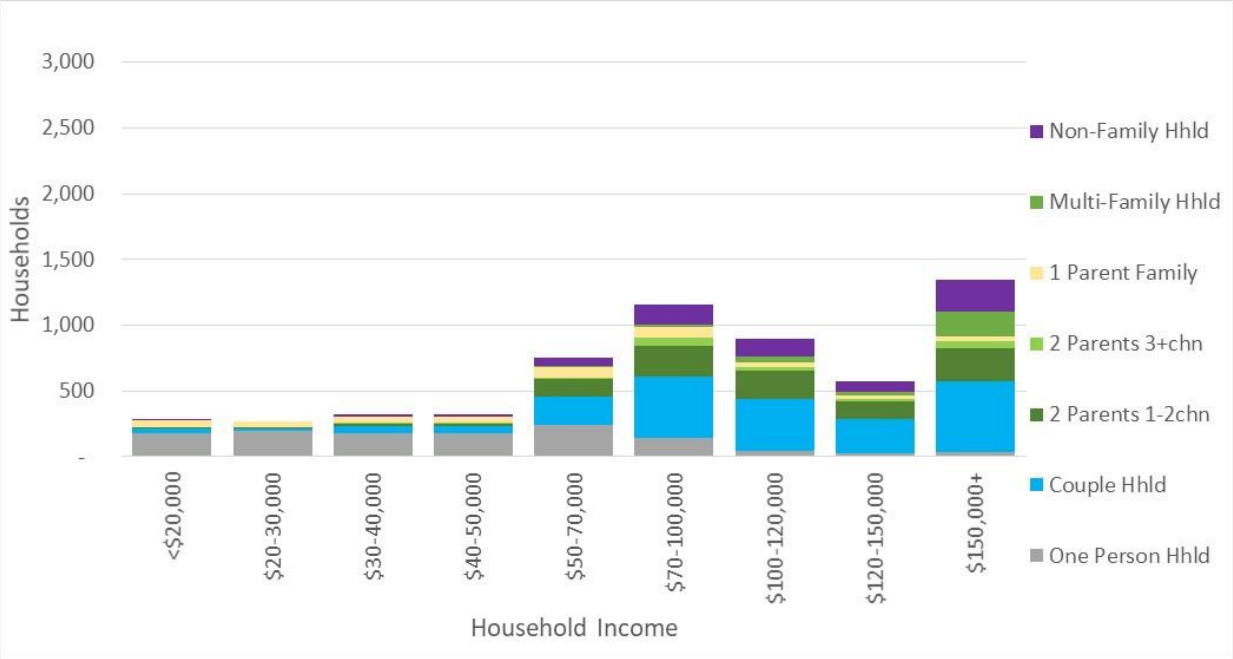
Table 4.6 – Non-Owner Households by Type and Income QLD 2020

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	183	196	182	182	243	140	46	26	32	1,230
Couple Hhld	32	20	53	53	213	469	396	262	542	2,040
2 Parents 1-2chn	10	10	20	20	135	236	210	138	247	1,030
2 Parents 3+chn	1	-	2	2	14	58	30	17	60	180
1 Parent Family	51	40	47	47	76	82	40	22	30	440
Multi-Family Hhld	-	-	-	-	8	24	38	26	192	290
Non-Family Hhld	9	-	19	19	64	150	140	87	245	730
Total	290	270	320	320	750	1,160	900	580	1,350	5,940
One Person Hhld	3%	3%	3%	3%	**4%**	2%	1%	0%	1%	21%
Couple Hhld	1%	0%	1%	1%	4%	**8%**	**7%**	**4%**	**9%**	34%
2 Parents 1-2chn	0%	0%	0%	0%	2%	4%	4%	2%	**4%**	17%
2 Parents 3+chn	0%	0%	0%	0%	0%	1%	1%	0%	1%	3%
1 Parent Family	1%	1%	1%	1%	1%	1%	1%	0%	1%	7%
Multi-Family Hhld	0%	0%	0%	0%	0%	0%	1%	0%	3%	5%
Non-Family Hhld	0%	0%	0%	0%	1%	3%	2%	1%	**4%**	12%
Total	5%	5%	5%	5%	13%	20%	15%	10%	23%	100%

Source: ME Housing Demand Model 2021

Some 21% of non-owner households are single persons, and most (four-fifths) of these households are in the middle and lower income bands. The largest group is couple households, 34% of the total, but the great majority being in the middle to higher income bands. Just over one quarter are family households, 2-parent (20%) mostly in the middle and higher income bands, and 1-parent (7%) mostly in the middle and lower income bands. The pattern is shown in Figure 4.4.

Figure 4.4: Non-owner Households by Type and Income QLD 2020



The general characteristics of owner households are only slightly different, as shown in Table 4.7. Of the 10,480 owner households, 14% have incomes of $40,000 or less (compared with 15% of non-owners). Another 17% have incomes of $40,000 to $70,000 (18% for non-owners). Some 51% of owner households have incomes of $100,000 or higher, only slightly more than non-owners.

Single person households are an important segment, accounting for 21% of owner households. Importantly, many of these households are in the lower income bands.[78] Couple households are the largest segment of dwelling owners, at 41% of the total, and the majority are in the middle to higher income bands. There is a somewhat higher incidence of 2-parent family households who are owners, a 29% share and mostly in the middle to higher income bands compared with 20% of non-owners. However, there is a lower incidence of 1-parent families, generally in the middle income bands. The pattern is shown in Figure 4.5.

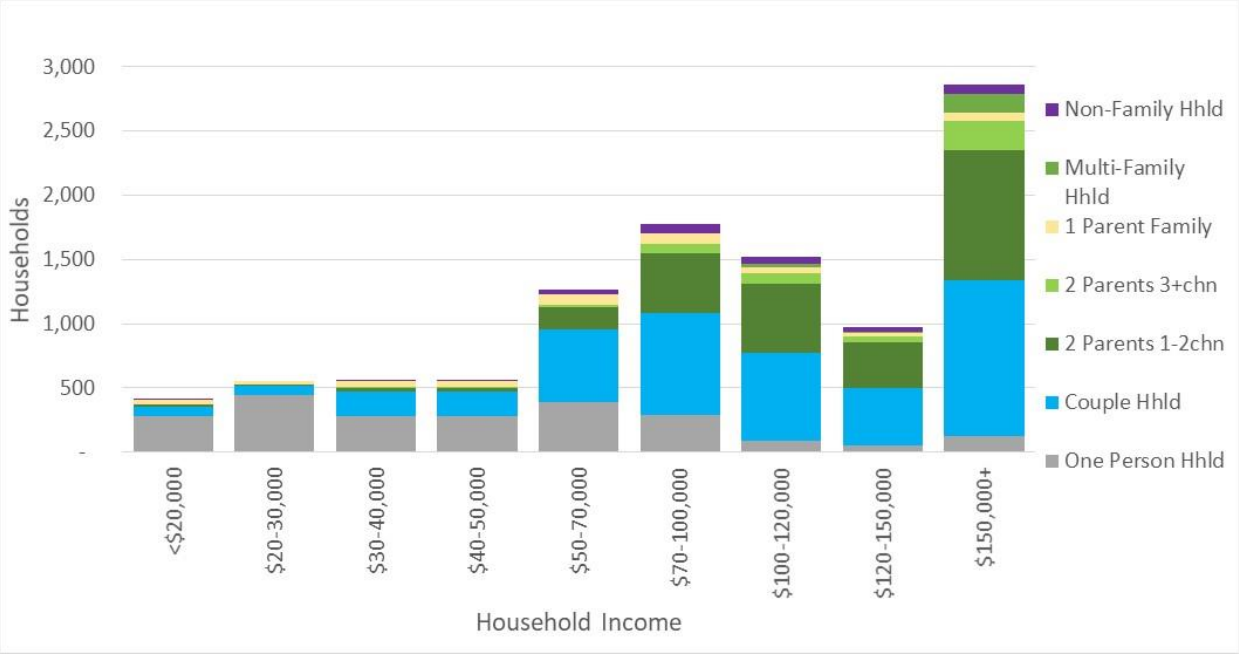
[78] Recall that single person households include retired persons who own a home but are no longer working.

Table 4.7 – Owner Households by Type and Income QLD 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	275	444	282	282	386	284	90	50	127	2,220
Couple Hhld	80	72	189	189	572	799	684	452	1,212	4,250
2 Parents 1-2chn	14	14	28	28	166	462	536	349	1,012	2,610
2 Parents 3+chn	4	-	6	6	18	80	78	46	226	460
1 Parent Family	33	27	45	45	84	74	53	28	63	450
Multi-Family Hhld	-	-	-	-	3	7	24	15	146	200
Non-Family Hhld	3	-	8	8	33	67	59	37	76	290
Total	410	560	560	560	1,260	1,770	1,520	980	2,860	10,480
One Person Hhld	3%	4%	3%	3%	4%	3%	1%	0%	1%	21%
Couple Hhld	1%	1%	2%	2%	5%	8%	7%	4%	12%	41%
2 Parents 1-2chn	0%	0%	0%	0%	2%	4%	5%	3%	10%	25%
2 Parents 3+chn	0%	0%	0%	0%	0%	1%	1%	0%	2%	4%
1 Parent Family	0%	0%	0%	0%	1%	1%	1%	0%	1%	4%
Multi-Family Hhld	0%	0%	0%	0%	0%	0%	0%	0%	1%	2%
Non-Family Hhld	0%	0%	0%	0%	0%	1%	1%	0%	1%	3%
Total	4%	5%	5%	5%	12%	17%	15%	9%	27%	100%

Source: ME Housing Demand Model 2021

Figure 4.5 – Owner Households by Type and Income QLD 2020



The overall levels of dwelling ownership by household type and income are shown in Table 4.8.

Table 4.8 – Dwelling Ownership by Household Type and Income - All Ethnicities 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	**67%**	**67%**	**66%**	**66%**	63%	**69%**	60%	**64%**	**89%**	**67%**
Couple Hhld	**75%**	**74%**	**78%**	**78%**	**77%**	**66%**	63%	63%	**71%**	**69%**
2 Parents 1-2chn	41%	38%	45%	47%	53%	**64%**	**71%**	**71%**	**79%**	**70%**
2 Parents 3+chn	**67%**	0%	63%	57%	33%	**68%**	**68%**	**68%**	**81%**	**72%**
1 Parent Family	28%	28%	46%	44%	50%	49%	57%	59%	58%	47%
Multi-Family Hhld	0%	0%	0%	0%	33%	10%	36%	36%	48%	43%
Non-Family Hhld	**65%**	0%	19%	17%	17%	28%	26%	26%	16%	23%
Total	62%	63%	**64%**	**64%**	63%	61%	61%	62%	**68%**	**63%**

Source: ME Housing Demand Model 2021

The relative incidence of dwelling ownership is shown in Table 4.9, the shaded cells highlighting the much higher incidence among higher income households, and single person and 2-parent family households in particular.

Table 4.9 – Relative Incidence of Dwelling Ownership by Household Type and Income 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	0.94	**1.09**	0.95	0.95	0.96	**1.05**	**1.04**	**1.03**	**1.25**	**1.01**
Couple Hhld	**1.12**	**1.23**	**1.22**	**1.22**	**1.14**	0.99	0.99	0.99	**1.08**	**1.06**
2 Parents 1-2chn	0.91	0.91	0.91	0.91	0.86	**1.04**	**1.13**	**1.12**	**1.26**	**1.12**
2 Parents 3+chn	**1.25**	-	**1.18**	**1.18**	0.88	0.91	**1.13**	**1.14**	**1.24**	**1.13**
1 Parent Family	0.62	0.63	0.77	0.77	0.82	0.74	0.89	0.88	**1.06**	0.79
Multi-Family Hhld	-	-	-	-	0.43	0.35	0.61	0.57	0.68	0.64
Non-Family Hhld	0.39	-	0.46	0.46	0.53	0.48	0.46	0.47	0.37	0.45
Total	0.92	**1.06**	1.00	1.00	0.98	0.95	0.98	0.98	**1.06**	1.00

Source: ME Housing Demand Model 2021

These patterns are not surprising, given the close link between household income and dwelling affordability, and the generally lower household costs for couples compared with families with children. Nonetheless, it is important to understand the dimensions and characteristics of non-owner households.

4.2.2 Ownership by Household Income and Ethnicity

Dwelling ownership also varies according to household ethnicity. The distribution of non-owner households by ethnicity, household type, and income is shown in Table 4.10. While the numbers of non-owner households show a broad spread across the community, there is relatively higher incidence among households of Māori ethnicity (4% of all households, 6% of non-owner households) and Pacifica ethnicity (0.6% of all households, 1.0% of non-owner households) when compared with the overall pattern. There is also relatively higher incidence among households of Asian ethnicity[79] (6% of all households, 11.8% of non-owner households).

[79] The definition of 'Asian' used in New Zealand is based on the categories used in the census, developed by Statistics New Zealand in 1996 (SNZ) (4). This group is made up of people with origins in the Asian continent from Afghanistan in the west to Japan in the east and from China in the north to Indonesia in the south.

Table 4.10 – Non-owner Households by Ethnicity, Type and Income QLD 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
European and Other										
One Person Hhld	147	173	148	148	218	121	39	22	30	1,050
Couple Hhld	25	18	44	44	169	378	346	229	475	1,730
2 Parents 1-2chn	8	7	15	15	97	165	156	102	196	760
2 Parents 3+chn	1	-	2	2	9	40	25	15	43	140
1 Parent Family	40	34	29	29	62	70	32	18	24	340
Multi-Family Hhld	-	-	-	-	7	12	25	17	142	200
Non-Family Hhld	9	-	17	17	50	124	112	70	205	600
Total	**230**	**230**	**260**	**260**	**610**	**910**	**740**	**470**	**1,120**	**4,820**
Share %	*4%*	*4%*	*4%*	*4%*	*10%*	*15%*	*12%*	*8%*	*19%*	*81%*
Maori										
One Person Hhld	12	12	8	8	15	14	2	1	1	70
Couple Hhld	2	1	4	4	10	19	20	13	27	100
2 Parents 1-2chn	1	1	1	1	10	14	12	8	11	60
2 Parents 3+chn	-	-	-	-	3	3	4	2	9	20
1 Parent Family	7	3	7	7	12	7	6	3	6	60
Multi-Family Hhld	-	-	-	-	-	1	3	2	12	20
Non-Family Hhld	-	-	-	-	-	1	4	2	19	30
Total	**20**	**20**	**20**	**20**	**50**	**60**	**50**	**30**	**90**	**360**
Share %	*0%*	*0%*	*0%*	*0%*	*1%*	*1%*	*1%*	*1%*	*2%*	*6%*
Pacific										
One Person Hhld	-	-	-	-	-	-	-	-	-	-
Couple Hhld	-	-	-	-	-	-	-	-	-	-
2 Parents 1-2chn	-	-	-	-	-	-	15	10	25	50
2 Parents 3+chn	-	-	-	-	-	12	-	-	-	10
1 Parent Family	-	-	-	-	-	-	-	-	-	-
Multi-Family Hhld	-	-	-	-	-	-	-	-	-	-
Non-Family Hhld	-	-	-	-	-	-	-	-	-	-
Total	**-**	**-**	**-**	**-**	**-**	**10**	**20**	**10**	**30**	**60**
Share %	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*1%*	*1.0%*
Asian										
One Person Hhld	24	11	26	26	10	5	5	3	1	110
Couple Hhld	5	1	5	5	34	72	30	20	40	210
2 Parents 1-2chn	1	2	4	4	28	57	27	18	15	160
2 Parents 3+chn	-	-	-	-	2	3	1	-	8	10
1 Parent Family	4	3	11	11	2	5	2	1	-	40
Multi-Family Hhld	-	-	-	-	1	11	10	7	38	70
Non-Family Hhld	-	-	2	2	14	25	24	15	21	100
Total	**30**	**20**	**50**	**50**	**90**	**180**	**100**	**60**	**120**	**700**
Share %	*1%*	*0%*	*1%*	*1%*	*2%*	*3%*	*2%*	*1%*	*2%*	*11.8%*
Total All Ethnicities	**280**	**270**	**330**	**330**	**750**	**1,160**	**910**	**570**	**1,360**	**5,940**
One Person Hhld	*5%*	*5%*	*6%*	*6%*	*13%*	*20%*	*15%*	*10%*	*23%*	*100%*

Source: ME Housing Demand Model 2021

The supporting Technical Report contains more detailed tables that offer a closer view of dwelling ownership for each ethnic group, and from that, patterns of housing affordability.

The dwelling ownership rates for the four ethnicity groups are shown in Figure 4.6 for each household income band. Ownership rates are significantly higher for households of European and Other ethnicity,

across all income bands. Figure 4.7 shows the pattern by ethnicity and household type. Again, households of European and Other ethnicity have higher ownership levels.

Figure 4.6 – Dwelling Ownership by Income and Ethnicity 2020

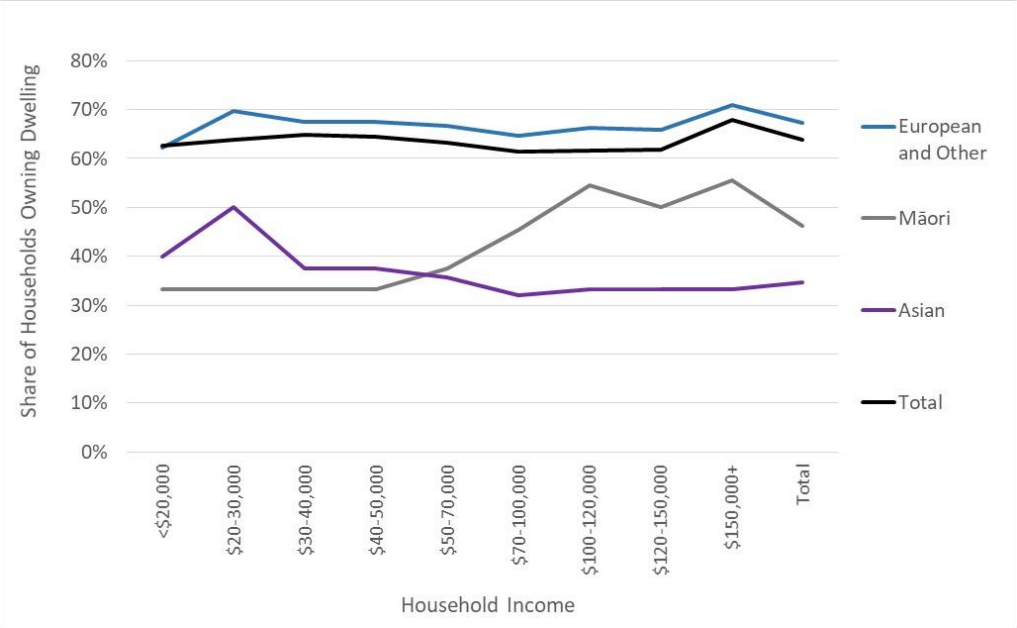
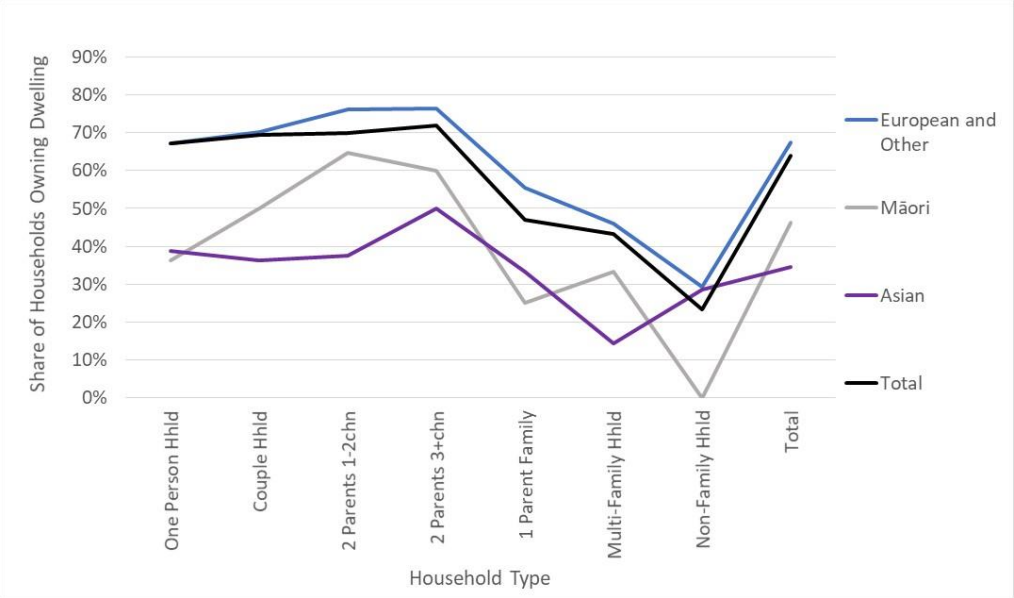
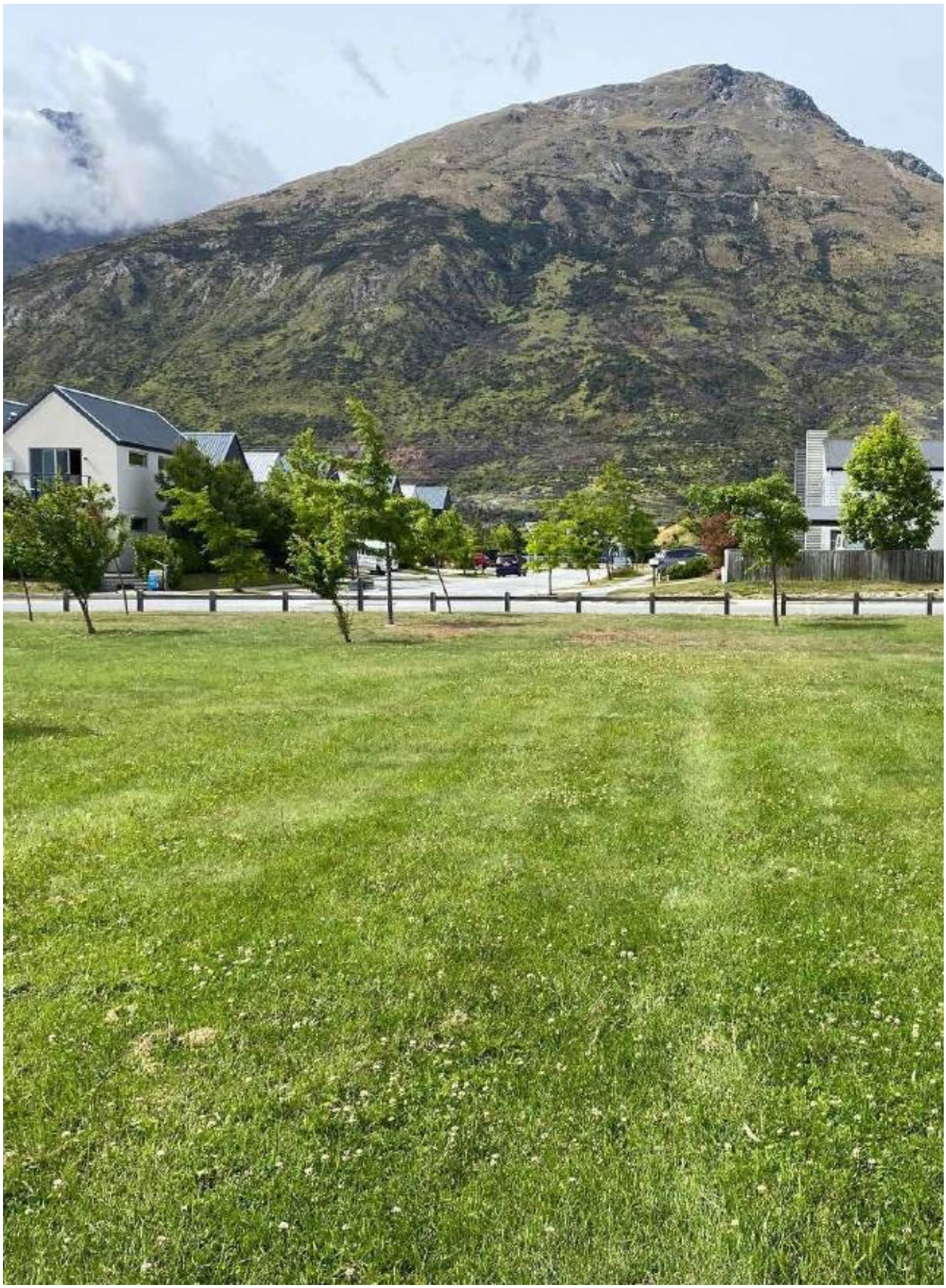


Figure 4.7 – Dwelling Ownership by Household Type and Ethnicity 2020



PART 2 – HOUSING CAPACITY ASSESSMENT



5 Plan Enabled Capacity

This section quantifies the maximum zoned dwelling capacity that the operative and proposed District Plan enables in the urban environment, as well as the additional capacity enabled within the indicative long term urban expansion areas identified in the Draft Spatial Plan based on a range of zoning assumptions in those future growth areas. M.E's Plan Enabled Capacity Model (2021) estimates infill and redevelopment capacity in existing urban areas as well as capacity in areas classified as greenfield land. Capacity in Special Zones within the urban environment has been provided by Council and combined with the parcel level modelling results. Capacity in the Rural Environment has been provided by Council and is reported separately. The plan enabled capacity reflects the zoned capacity without the application of infrastructure constraints.

A detailed discussion on the approach used to quantifying plan enabled capacity in the urban environment is contained in the supporting Technical Report.

5.1 Short Term Plan Enabled Capacity

The following short term plan enabled capacity[80] results relate to the zoned areas classified as Residential Only (blue) or Business and Residential (orange) in Figure 5.1.[81] These areas represent the zones in the defined urban environment that enable[82] housing in the ODP (including the settled version of Stage 1 and 2 of the PDP which are treated as operative).

Table 5.1 shows that there is a total plan enabled capacity for an additional 45,200 dwellings within the QLDC urban environment. The total additional urban environment plan enabled capacity amounts to nearly two and a half times the existing urban household base. The zoned greenfield capacity amounts to 121% of the existing household base. However, this zoned opportunity does not take into account infrastructure constraints or the commercial feasibility of capacity.

Approximately half (22,600 dwellings) of this capacity is within the already zoned greenfield areas of future urban expansion. This includes larger areas (such as in the Southern Corridor) that are within the spatial extent of the urban edge, but are not yet fully urbanised, with sizeable further development potential. The remainder (22,500 dwellings) is within the existing extent of the urban area. If redevelopment potential is excluded (i.e., only development that occurs on existing underdeveloped sites with no replacement or redevelopment), then the plan enabled infill capacity within the existing urban area equates to around an additional 9,800 dwellings.

Around two-thirds of the district's additional urban dwelling capacity is within Wakatipu Ward and one third within the Wānaka Ward. Around one-third of Wakatipu's capacity (23% of total urban environment

[80] In the NPS-UD short term development capacity is land already zoned and serviced.

[81] Areas shaded grey are within the urban environment but do not enable housing at all, or withing this time period.

[82] Enabled is where dwelling units are a permitted, controlled or restricted discretionary activity in the District Plan.

capacity) is concentrated within the central urban section of the Queenstown Town Centre reporting area. Capacity within the Queenstown Town Centre central area is predominantly focussed on intensification within the existing urban area, with a large share of this capacity occurring within the Higher Density Residential Zone.

Over half (54%) of the Wakatipu Ward capacity (36% of total urban environment capacity) is located within the eastern urban areas of Frankton, Southern Corridor, Kelvin Heights, Quail Rise and the Eastern Corridor. In contrast to the central areas, this capacity is characterised by future greenfield urban expansion, which accounts for nearly three-quarters of the zoned capacity within these eastern urban areas.

Wānaka Town Centre is another substantial area of plan enabled capacity. With an estimated zoned capacity for an additional 13,200 dwellings, it accounts for nearly one-third of the district's urban capacity, and nearly all (86%) of the Wānaka Ward's urban capacity. Around two-thirds of Wānaka Town Centre's capacity is within the existing urban area. Unlike Queenstown, much (68%) of the existing urban area capacity occurs within the lower density residential zones which also cover a much larger area than the comparatively smaller centre area.

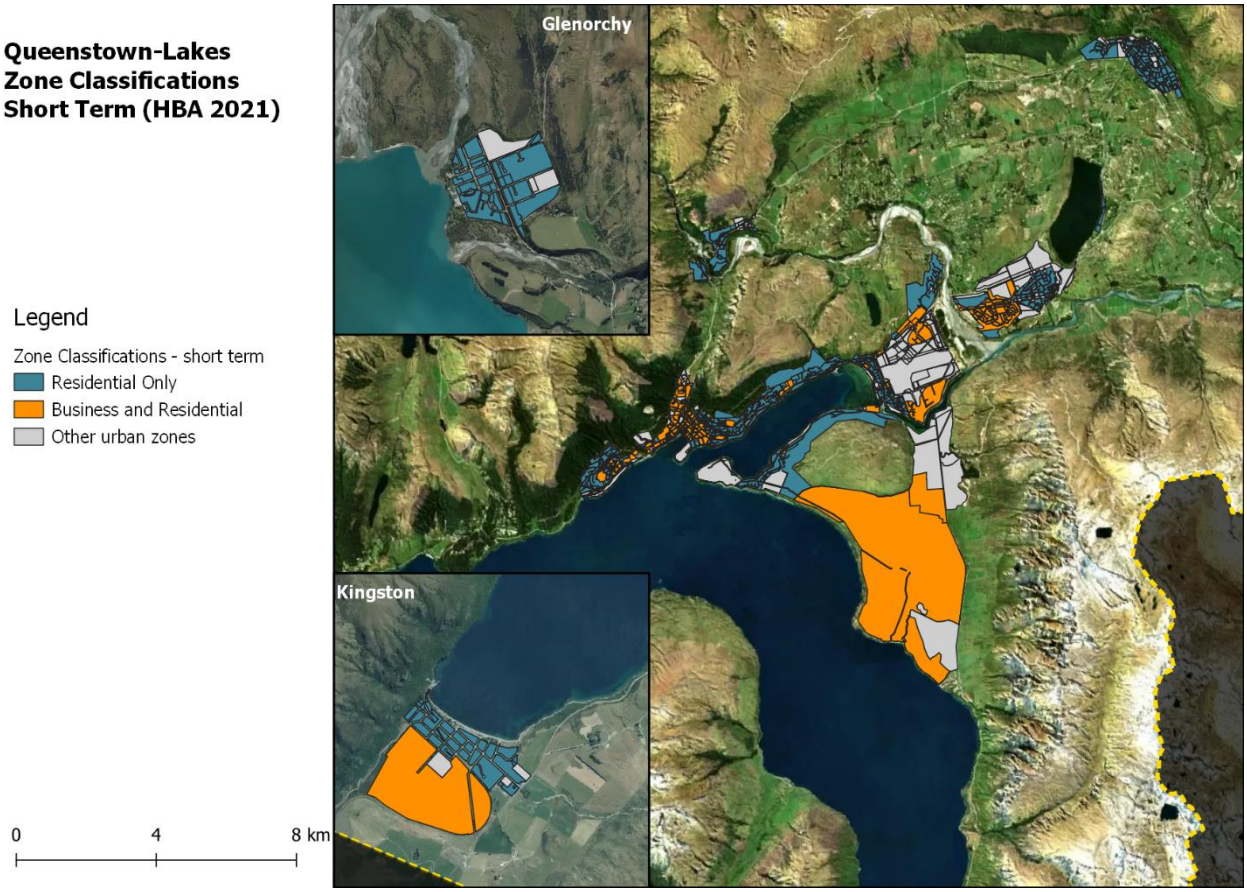
There is significant zoned opportunity for greenfield development across the district, including new areas of large scale urbanisation within the existing urban edge[83] (e.g. Remarkables Park). The capacity is focused around the larger existing urban areas of central Queenstown, the eastern urban areas and Southern Corridor, and Wānaka. Smaller amounts of greenfield capacity is also already zoned around the smaller urban areas (Arrowtown, Arthurs Point, Kingston, Glenorchy, Cardrona, Lake Hawea and Luggate), which represents significant relative increases in the extent of some of these locations. A high proportion of the greenfield capacity within Wakatipu Ward is for higher density dwelling typologies, with a significant proportion of the zoning allowing apartment development capacity. Greenfield capacity within the Wānaka Ward has comparatively fewer higher density dwelling typology options.

The two town centre reporting areas (Queenstown and Wānaka) form the main locations for urban intensification, together containing nearly three-quarters (71%; +16,000 dwellings) of the capacity within the existing urban area. There is also significant capacity for further urban intensification across the other reporting areas[84] within the district through both infill and redevelopment options (+6,600 additional dwellings).

[83] The urban edge refers to the geographical extent of urban development within the district at the time of modelling. It was identified through the examination of aerial photographs together with the parcel level location of building consent/CCC data.

[84] These refer to the balance of capacity (outside of the Queenstown and Wānaka Town Centre reporting areas) across the other reporting areas within the district's total urban environment. They include the Arrowtown, Arthurs Point, Eastern Corridor, Frankton, Kelvin Heights, Outer Wakatipu, Quail Rise, Small Township – Wakatipu (Glenorchy and Kingston), Southern Corridor, Cardrona, Lake Hawea, Luggate and Outer Wānaka reporting areas.

Figure 5.1 – Short Term Urban Land Zoned for Housing - Wakatipu & Wānaka Ward



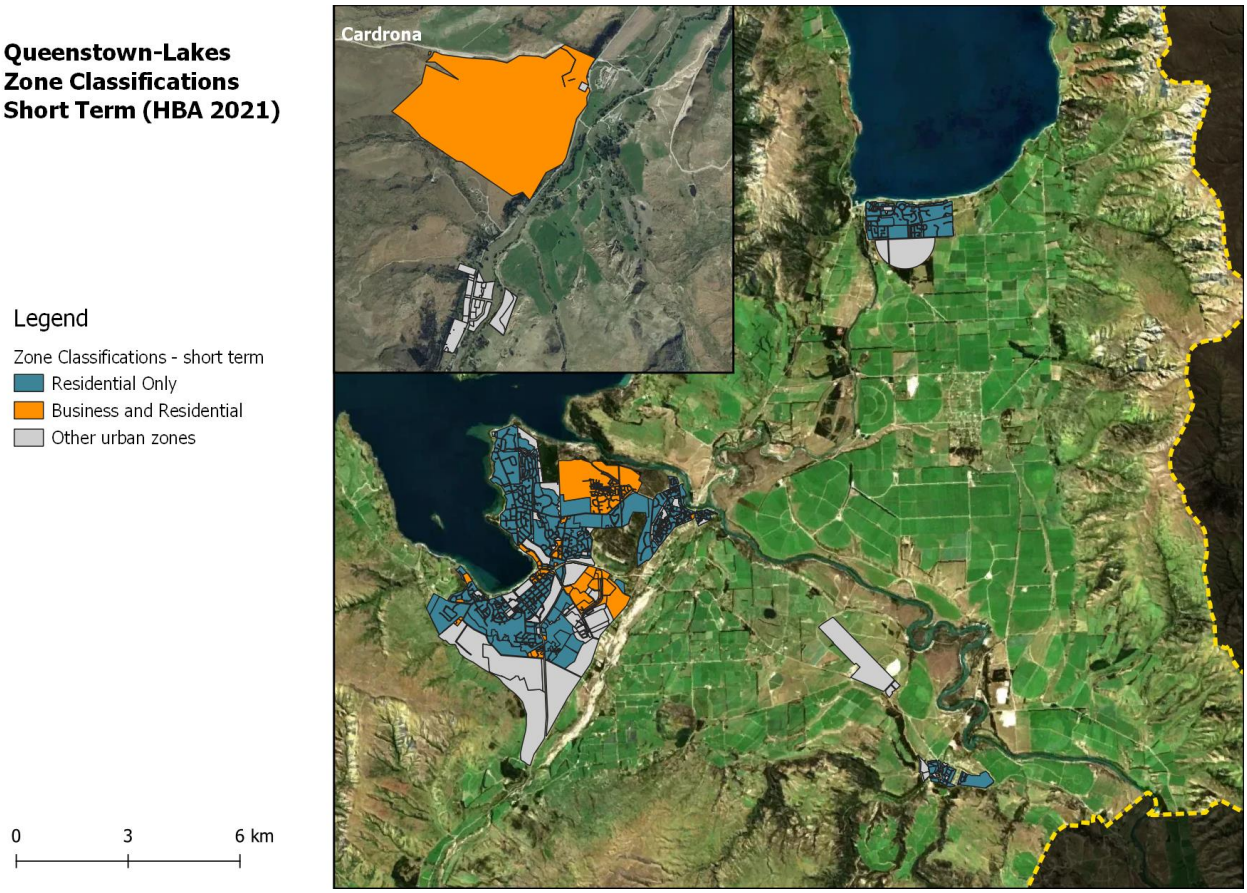


Table 5.1 – Short Term Plan Enabled Dwelling Capacity in the QLD Urban Environment[85]

		Plan Enabled Capacity														
		Infill				Redevelopment					Greenfield				Combined Total	
Ward	Reporting Area	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Max Infill or Redevelop-ment	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelopment
Wakatipu	Arrowtown	85	171	-	171	787	787	4	791	792	116	100	-	116	287	908
Wakatipu	Arthurs Point	366	447	-	447	841	841	-	841	844	210	210	-	210	657	1,054
Wakatipu	Eastern Corridor	199	349	-	349	808	808	-	808	824	92	43	-	103	452	927
Wakatipu	Frankton	173	304	66	370	917	917	208	1,125	1,145	101	101	3,896	3,997	4,367	5,142
Wakatipu	Kelvin Heights	325	575	245	575	2,430	2,573	321	2,573	2,591	745	745	-	745	1,320	3,336
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	11	11	-	11	11	11
Wakatipu	Quail Rise	20	20	-	20	73	73	-	73	73	778	1,270	2,040	2,156	2,176	2,229
Wakatipu	Queenstown Town Centre	1,678	3,000	2,524	3,704	3,759	5,764	5,647	7,620	7,665	1,014	1,120	1,674	2,548	6,251	10,212
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	1,156	776	-	1,441	1,441	1,441
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	3,685	653	185	4,523	4,523	4,523
Wakatipu Ward Sub-Total		**2,846**	**4,866**	**2,835**	**5,636**	**9,615**	**11,763**	**6,180**	**13,831**	**13,934**	**7,908**	**5,029**	**7,795**	**15,850**	**21,485**	**29,783**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	607	157	-	757	757	757
Wanaka	Lake Hawea	115	138	19	157	232	232	35	267	267	716	647	-	716	873	983
Wanaka	Luggate	12	12	-	12	54	54	-	54	54	429	429	-	429	441	483
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	2,300	3,455	721	4,013	7,032	7,071	1,410	8,201	8,292	2,941	1,976	1,556	4,885	8,898	13,177
Wanaka Ward Sub-Total		**2,427**	**3,605**	**740**	**4,182**	**7,318**	**7,357**	**1,445**	**8,522**	**8,613**	**4,693**	**3,209**	**1,556**	**6,787**	**10,969**	**15,400**
Total Urban Environment		**5,273**	**8,471**	**3,575**	**9,818**	**16,933**	**19,120**	**7,625**	**22,353**	**22,547**	**12,601**	**8,238**	**9,351**	**22,637**	**32,454**	**45,183**

Source: M.E QLD Capacity Model 2021.

Short Term

[85] Small Township – Wakatipu combines the capacity of Glenorchy and Kingston urban environments. While Outer Wakatipu is primarily a rural environment location, a small area of the Kingston township/settlement sits outside the Kingston Reporting area boundary and within the Outer Wakatipu reporting area. In future updates, reporting area boundaries will be revisited to remove such anomalies.

5.2 Medium Term Plan Enabled Capacity

The following medium term plan enabled capacity[86] results relate to the areas classified as Residential Only (blue) or Business and Residential (orange) in Figure 5.2. These areas represent the zones in the defined urban environment that enable housing in the ODP (including the settled version of Stage 1 and 2 of the PDP which are treated as operative), unless zoned for housing in the PDP (decisions version Stage 3 zoning and provisions). There are no differences in physical extent, but the Stage 3 decisions version changes to the District Plan introduced zone changes in Lake Hawea, Albert Town, Luggate, Glenorchy, Kingston, Cardrona, Wānaka Central and Arthurs Point[87].

Table 5.2 shows that there is an estimated 6% increase in the plan-enabled capacity under the medium-term planning provisions. In total, there is capacity for an additional 47,900 dwellings across the urban environment. The geographic patterns are largely similar to the short-term, with the changes in capacity occurring as a result of the decisions version Stage 3 changes to the District Plan. In total, the plan enabled capacity is distributed relatively evenly across the existing urban area and potential future areas of greenfield urban expansion.

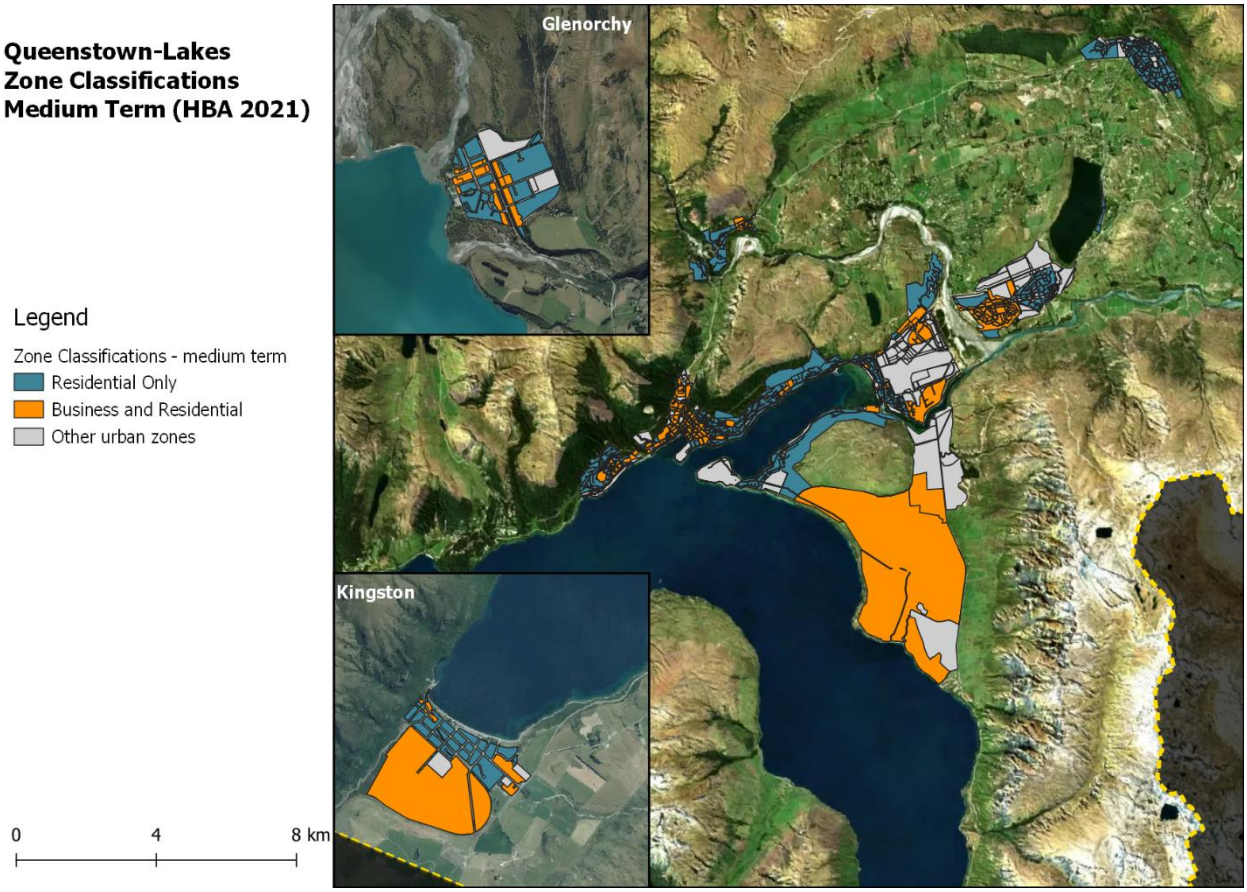
Table 5.3 highlights the impact that the decisions version Stage 3 changes to the District Plan have had on plan enabled capacity. The 6% increase in capacity amounts to an additional 2,700 urban dwellings. Nearly all (89%; +2,400 dwellings) of the increase in capacity occurs within the existing urban environment through changes in the underlying zoning provisions. The largest areas of change are estimated to occur within Lake Hawea, Wānaka Town Centre and Arthurs Point, with smaller changes in Small Township Wakatipu (Glenorchy) and Cardrona.

The change in capacity within Lake Hawea is due to the change from the Township Zone to the Low Density Suburban Residential ("LDSR") Zone. The LDSR zone has substantially lower minimum site size requirements, thus increasing the potential for infill opportunities, as well as the redevelopment and greenfield yields. The same situation applies in Albert Town (within Wānaka Town Centre) where the LDSR was also notified in Stage 3 of the PDP in place of the Township Zone.

[86] In the NPS-UD medium term development capacity is short term capacity plus areas expected to be zoned and serviced in the next 10 years.

[87] While the Three Parks Special Zone was also rezoned as part of the decisions version of Stage 3 of the PDP, we have retained developer estimates of dwelling capacity under the Special Zone for the medium term and long term. This maintains a consistent approach across all special zones in the modelling.

Figure 5.2 – Medium Term Urban Land Zoned for Housing - Wakatipu & Wānaka Ward



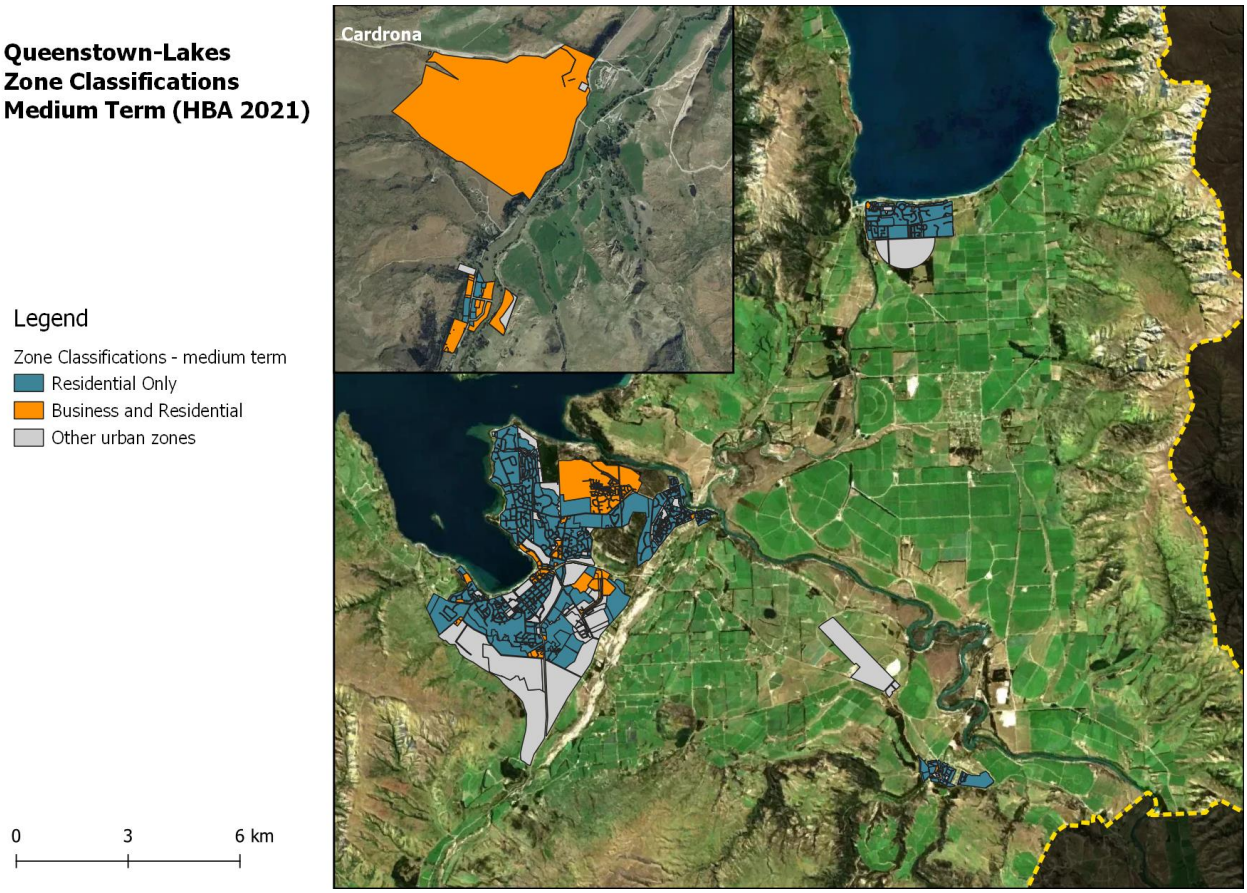


Table 5.2 – Medium Term Plan Enabled Dwelling Capacity in the QLD Urban Environment

Ward	Reporting Area	Plan Enabled Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelopment
Wakatipu	Arrowtown	85	171	-	171	787	787	4	791	792	116	100	-	116	287	908
Wakatipu	Arthurs Point	520	654	89	654	1,096	1,227	268	1,227	1,230	210	210	-	210	864	1,440
Wakatipu	Eastern Corridor	199	349	-	349	808	808	-	808	824	92	43	-	103	452	927
Wakatipu	Frankton	173	304	66	370	917	917	208	1,125	1,145	101	101	3,896	3,997	4,367	5,142
Wakatipu	Kelvin Heights	325	575	245	575	2,430	2,573	321	2,573	2,591	745	745	-	745	1,320	3,336
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	11	11	-	11	11	11
Wakatipu	Quail Rise	20	20	-	20	73	73	-	73	73	778	1,270	2,040	2,156	2,176	2,229
Wakatipu	Queenstown Town Centre	1,678	3,000	2,524	3,704	3,759	5,764	5,647	7,620	7,665	1,014	1,120	1,674	2,548	6,251	10,212
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	1,098	707	-	1,383	1,383	1,383
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	3,685	653	185	4,523	4,523	4,523
Wakatipu Ward Sub-Total		**3,000**	**5,073**	**2,924**	**5,843**	**9,870**	**12,149**	**6,448**	**14,217**	**14,320**	**7,850**	**4,960**	**7,795**	**15,792**	**21,634**	**30,111**
Wanaka	Cardrona	20	20	-	20	28	28	-	28	28	636	186	-	786	806	814
Wanaka	Lake Hawea	451	737	19	756	1,299	1,299	35	1,334	1,387	1,048	980	-	1,048	1,804	2,435
Wanaka	Luggate	12	12	-	12	54	54	-	54	54	434	434	-	434	446	488
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	2,476	3,810	721	4,368	7,908	7,947	1,410	9,077	9,185	2,941	1,976	1,556	4,885	9,253	14,070
Wanaka Ward Sub-Total		**2,959**	**4,579**	**740**	**5,156**	**9,289**	**9,328**	**1,445**	**10,493**	**10,654**	**5,059**	**3,576**	**1,556**	**7,153**	**12,309**	**17,807**
Total Urban Environment		**5,959**	**9,652**	**3,664**	**10,999**	**19,159**	**21,477**	**7,893**	**24,710**	**24,974**	**12,909**	**8,536**	**9,351**	**22,945**	**33,943**	**47,918**

Source: M.E QLD Capacity Model 2021.

Medium Term

Table 5.3 – Changes to Short to Medium Term Plan Enabled Urban Dwelling Capacity

Ward	Reporting Area	Plan Enabled Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelopment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	154	207	89	207	255	386	268	386	386	-	-	-	-	207	386
Wakatipu	Eastern Corridor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Frankton	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Kelvin Heights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Queenstown Town Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	- 58	- 69	-	- 58	- 58	- 58
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu Ward Sub-Total		**154**	**207**	**89**	**207**	**255**	**386**	**268**	**386**	**386**	**- 58**	**- 69**	**-**	**- 58**	**149**	**328**
Wanaka	Cardrona	20	20	-	20	28	28	-	28	28	29	29	-	29	49	57
Wanaka	Lake Hawea	336	599	-	599	1,067	1,067	-	1,067	1,120	332	333	-	332	931	1,452
Wanaka	Luggate	-	-	-	-	-	-	-	-	-	5	5	-	5	5	5
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	176	355	-	355	876	876	-	876	893	-	-	-	-	355	893
Wanaka Ward Sub-Total		**532**	**974**	**-**	**974**	**1,971**	**1,971**	**-**	**1,971**	**2,041**	**366**	**367**	**-**	**366**	**1,340**	**2,407**
Total Urban Environment		**686**	**1,181**	**89**	**1,181**	**2,226**	**2,357**	**268**	**2,357**	**2,427**	**308**	**298**	**-**	**308**	**1,489**	**2,735**

Source: M.E QLD Capacity Model 2021.

Short to Medium Term Change

5.3 Long Term Plan Enabled Capacity

The following long term plan enabled capacity[88] results relate to the areas classified as Residential Only (blue) or Business and Residential (orange) in Figure 5.3. These areas represent the zones in the defined urban environment that enable housing in the ODP (including the settled version of Stage 1 and 2 of the PDP which are treated as operative), unless zoned for housing in the PDP (decisions version Stage 3 zoning and provisions) or identified for future housing in the QLD Draft Spatial Plan. The spatial extent of the land area able to be considered for plan enabled capacity in the long term is larger than in the short or medium term due to the indicative Spatial Plan urban expansion areas[89] included in Lake Hawea, Wānaka South, the Eastern Corridor, and the Southern Corridor. With the exception of these new greenfield growth areas, the urban environment zoning (and plan enabled capacity) is the same as in the medium term.

There is a significant increase in the estimated plan enabled capacity under the estimated long-term planning outcomes. Table 5.4 shows that plan enabled capacity increases by a further 16,600 additional dwellings, to reach a total capacity for 64,500 additional dwellings. This equates to nearly three and a half times the existing gross level of demand for dwellings within the urban environment over that time period.

In the long-term, greenfield areas across the urban environment play an increasingly larger relative role in the plan enabled development opportunity[90]. They contain 61% of the plan enabled capacity, up from 48% in the medium-term. In total, there is zoned capacity for an additional 39,200 dwellings within the greenfield areas in the long-term. However, this only takes account of the zoned opportunity and does not include infrastructure constraints or feasibility assessment.

In terms of capacity by reporting area boundaries (Figure 1.9), Wānaka Town Centre contains the largest plan enabled capacity for additional dwellings in the long term. It has capacity for an additional 20,100 dwellings, which is over three times the current number of existing urban dwellings. The next largest reporting areas for capacity are the Queenstown Town Centre and the Southern Corridor. Most (75%) of the capacity within the Queenstown Town Centre reporting area occurs within the existing urban area as opposed to greenfield areas.

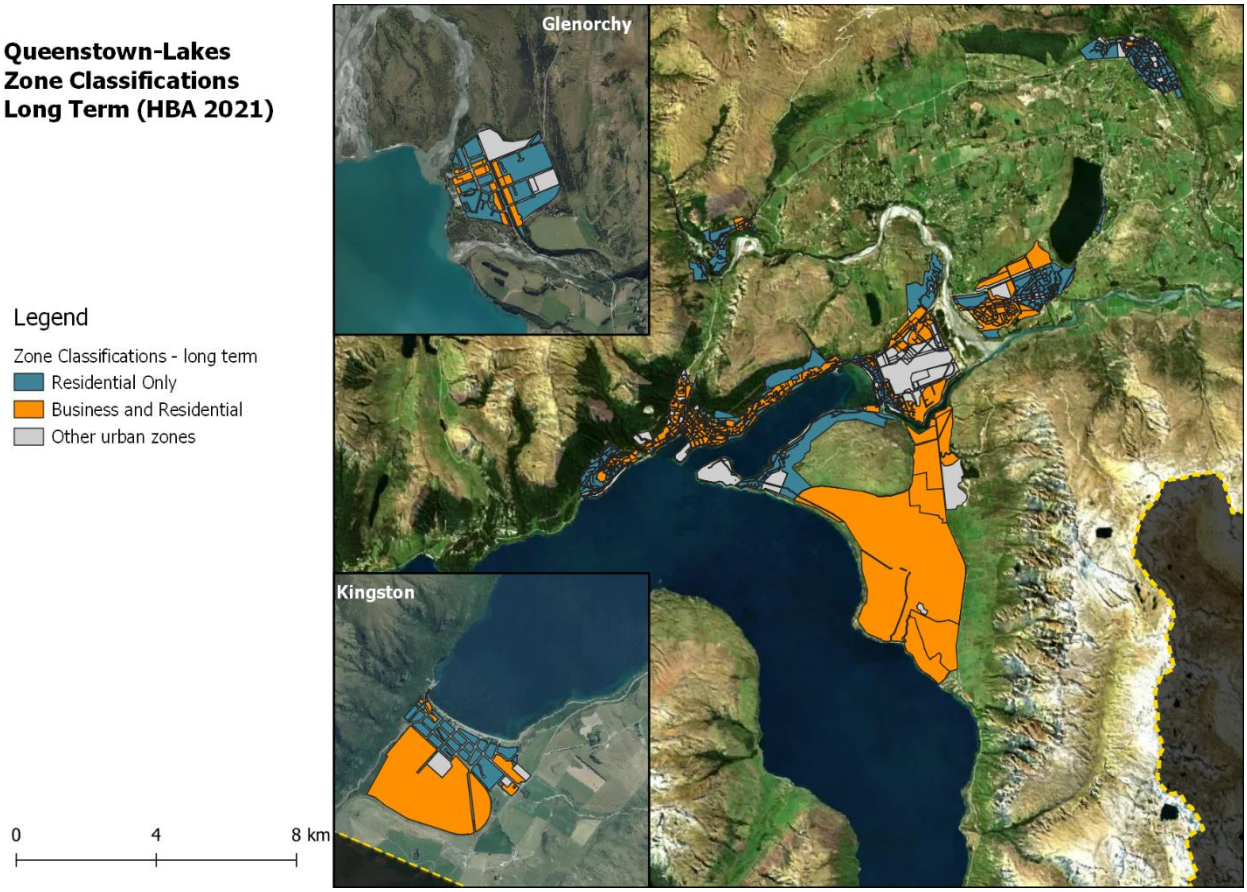
Increased plan enabled capacity within the long term occurs through substantial expansion of the zoned greenfield areas. Table 5.5 highlights the impact that the indicative urban expansion areas identified in the Draft Spatial Plan could have on plan enabled capacity in the long term. The largest areas of expansion occur within the Wānaka Town Centre reporting area adjoining the existing urban area (+5,900 additional dwellings relative to the medium term) and the Southern Corridor (+5,600 dwellings in areas adjoining existing zoned land). Sizeable expansion to the zoned opportunity also occurs within the Eastern Corridor

[88] In the NPS-UD long term development capacity is short and medium term capacity plus areas expected to be zoned and serviced in the next 30 years, based on the Queenstown Lakes Spatial Plan and the Infrastructure Strategy.

[89] The Draft Spatial Plan was developed at a high level at the time of modelling.

[90] This HBA does not include any intensification (up-zoning) changes in the existing urban area in the long term (although this is indicated in the Draft Spatial Plan). Some form of intensification is anticipated in response to the requirements for Tier 2 urban environments in the NPS-UD. This would shift the balance of long-term capacity somewhat away from greenfield. Such outcomes will be captured in the next update of the HBA.

Figure 5.3 – Long Term Urban Land Zoned for Housing - Wakatipu & Wānaka Ward



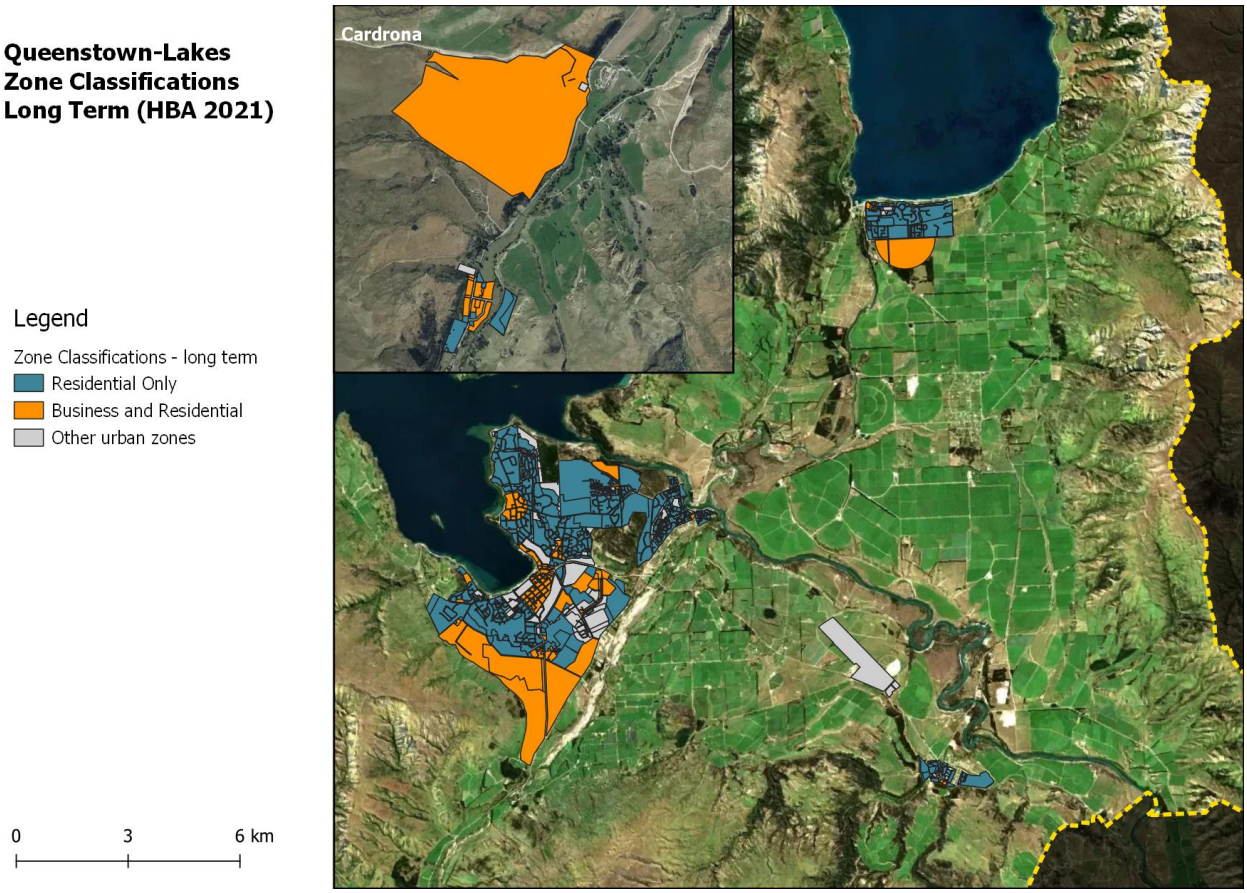


Table 5.4 – Long Term Plan Enabled Dwelling Capacity in the QLD Urban Environment

		Plan Enabled Capacity														
		Infill				Redevelopment					Greenfield				Combined Total	
Ward	Reporting Area	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Max Infill or Redevelop-ment	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelopment
Wakatipu	Arrowtown	85	171	-	171	787	787	4	791	792	116	100	-	116	287	908
Wakatipu	Arthurs Point	520	654	89	654	1,096	1,227	268	1,227	1,230	210	210	-	210	864	1,440
Wakatipu	Eastern Corridor	199	349	-	349	1,033	1,033	-	1,033	1,049	2,245	2,196	614	2,870	3,219	3,919
Wakatipu	Frankton	173	304	66	370	917	917	208	1,125	1,145	101	101	3,896	3,997	4,367	5,142
Wakatipu	Kelvin Heights	325	575	245	575	2,430	2,573	321	2,573	2,591	745	745	-	745	1,320	3,336
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	11	11	-	11	11	11
Wakatipu	Quail Rise	20	20	-	20	73	73	-	73	73	778	1,270	2,040	2,156	2,176	2,229
Wakatipu	Queenstown Town Centre	1,678	3,000	2,524	3,704	3,759	5,764	5,647	7,620	7,665	1,014	1,120	1,674	2,548	6,251	10,212
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	1,098	707	-	1,383	1,383	1,383
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	8,139	5,107	1,315	10,107	10,107	10,107
Wakatipu Ward Sub-Total		**3,000**	**5,073**	**2,924**	**5,843**	**10,095**	**12,374**	**6,448**	**14,442**	**14,545**	**14,457**	**11,567**	**9,538**	**24,142**	**29,985**	**38,687**
Wanaka	Cardrona	20	20	-	20	28	28	-	28	28	636	186	-	786	806	814
Wanaka	Lake Hawea	451	737	19	756	1,299	1,299	35	1,334	1,387	3,041	2,973	-	3,041	3,797	4,428
Wanaka	Luggate	12	12	-	12	54	54	-	54	54	434	434	-	434	446	488
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	2,476	3,810	721	4,368	7,998	8,037	1,410	9,167	9,275	7,863	7,208	2,980	10,815	15,183	20,090
Wanaka Ward Sub-Total		**2,959**	**4,579**	**740**	**5,156**	**9,379**	**9,418**	**1,445**	**10,583**	**10,744**	**11,974**	**10,801**	**2,980**	**15,076**	**20,232**	**25,820**
Total Urban Environment		**5,959**	**9,652**	**3,664**	**10,999**	**19,474**	**21,792**	**7,893**	**25,025**	**25,289**	**26,431**	**22,368**	**12,518**	**39,218**	**50,217**	**64,507**

Source: M.E QLD Capacity Model 2021.

Long Term

Table 5.5 – Changes to Medium to Long Term Plan Enabled Urban Dwelling Capacity

Ward	Reporting Area	Plan Enabled Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelopment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Eastern Corridor	-	-	-	-	225	225	-	225	225	2,153	2,153	614	2,767	2,767	2,992
Wakatipu	Frankton	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Kelvin Heights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Queenstown Town Centre	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	4,454	4,454	1,130	5,584	5,584	5,584
Wakatipu Ward Sub-Total		**-**	**-**	**-**	**-**	**225**	**225**	**-**	**225**	**225**	**6,607**	**6,607**	**1,744**	**8,351**	**8,351**	**8,576**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Lake Hawea	-	-	-	-	-	-	-	-	-	1,993	1,993	-	1,993	1,993	1,993
Wanaka	Luggate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	-	-	-	-	90	90	-	90	90	4,922	5,232	1,424	5,930	5,930	6,020
Wanaka Ward Sub-Total		**-**	**-**	**-**	**-**	**90**	**90**	**-**	**90**	**90**	**6,915**	**7,225**	**1,424**	**7,923**	**7,923**	**8,013**
Total Urban Environment		**-**	**-**	**-**	**-**	**315**	**315**	**-**	**315**	**315**	**13,522**	**13,832**	**3,168**	**16,274**	**16,274**	**16,589**

Source: M.E QLD Capacity Model 2021.

Medium to Long Term Change

(+2,800 dwellings adjoining existing zoned land) and Lake Hawea (+2,000 dwellings adjoining existing zoned land)[91].

Nearly three-quarters (71%) of the increase in the Wānaka Town Centre reporting area could (if zoned in the future) occur through the higher density residential zoning indicated within the expansion area (Medium Density Residential and High Density Residential assumed for the purpose of the capacity modelling). In total, nearly half (41%) of the long term greenfield capacity could occur through this indicative zoning which would help maximise the efficient use of this rural fringe land.

The Draft Spatial Plan identified long term areas of greenfield expansion in the Southern Corridor reporting area. The increase in greenfield capacity in the long term within the Southern Corridor is spread across an indicative future mix of Medium Density Residential and Business Mixed Use zoning. This modelled indicative capacity is cumulative to the significant capacity enabled in the Jack's Point Special within the short and medium-term (which includes the Coneburn SHA).

5.4 Plan Enabled Urban Environment Capacity Summary

The plan enabled capacity modelling has found that there are large amounts of zoned capacity for additional residential dwellings across the short, medium, and long term. The level of zoned opportunity is large relative to the existing demand base within these areas, as well as future projected demand. Consequently, the quantity of zoned land, if all able to be built on, is likely to provide a sizeable range of development options for future residential development.

However, the plan enabled capacity does not take into account infrastructure constraints or feasibility assessment. It focuses on the zoned opportunity only, which is critical to understand to indicate whether there are likely to be any constraints in the level of zoned opportunity (i.e., whether the constraint is driven by planning) and the following sections progressively apply these further important tests.

There are some changes in zoned capacity between the short and medium term, most occurring through increased development density options within the existing urban environment as a result of the rolling review of the District Plan (i.e., PDP). The long term contains a large indicative expansion of zoned opportunity through the greenfield growth areas identified within the Draft Spatial Plan. This occurs as greenfield expansion, increasing the relative contribution of greenfield capacity to total urban capacity.

If the eventual future development pattern follows that of the zoned greenfield expansion areas, then the urban structure of the district could differ somewhat to the current spatial distribution of development. The potential future size of Wānaka, as enabled by the zoning provisions and identified indicative growth areas, is considerably larger than the current urban area. Sizeable urban expansion is also provided for, in the Draft Spatial Plan, in the southern and eastern urban extent of Queenstown. There is also substantial zoned provision for urban intensification within central parts of the district's urban area, particularly within Queenstown Town Centre already enabled in the short term.

[91] We note that the SHA in Lake Hawea (Universal Developments) consented in the Rural Zone adjoining the existing UGB is located within the indicative long term expansion area of Lake Hawea. This development is now underway, meaning that some of this long term urban capacity will be realised in the short term (within the extent of the SHA).

Assessment within the following sections identifies the feasibility of this urban capacity and the effect of infrastructure constraints on capacity.

5.5 Plan Enabled Rural Environment Capacity

Plan enabled dwelling capacity in the rural environment (i.e., the rest of the district) has been estimated by Council based on zoning and existing development. The rural environment includes a range of zones that enable dwellings including the Rural, Rural Lifestyle and Rural Residential zones; a number of Special Zones including Bendemeer, Gibbston Character, Gibbston Resort, Arrowtown South and Millbrook Resort; and the two Wakatipu Basin zones (Lifestyle Precinct and Rural Amenity Zone). While there are other special zones in the Rural Environment, these do not enable[92] residential developments (i.e., they provide business land capacity).

Importantly, not all of these zones in the rural environment deliver 'rural' properties, as some, like the Millbrook Resort, deliver urban density housing. The rural environment should not therefore be confused with 'rural' land use. Some SHAs are also consented in rural zones. [93] These are another form of urban density housing on the urban fringe that fall within the defined boundary of the rural environment (by virtue of their underlying zoning, not the housing demand that they satisfy). Any remaining capacity of those SHAs consented in the rural environment has not been captured in the results below which focus on plan enabled capacity, not consented development. This includes SHAs in the Eastern Corridor for example. The capacity in these SHA's provides net additional dwelling capacity that helps meet demand attributed to rural environment locations.

Rural environment plan enabled dwelling capacity has been estimated based on land/sites that have yet to be taken up in zones where minimum lot sizes apply (i.e., infill or greenfield capacity), and in the Rural Zone, where Approved and Active building platforms remain available for development. Capacity of the Wakatipu Basin Lifestyle Precinct has been calculated by land area and then discounted due to the number of constraints and conditions that would enable development in these zones.

Figure 5.4 shows that current estimates of plan enabled dwelling capacity in the rural environment is concentrated in the Outer Wakatipu reporting area (particularly within the Wakatipu Basin and the Rural Lifestyle Zone). This area provides for an estimated 430 additional dwellings. The Eastern Corridor reporting area provides for a further 150 estimated dwellings mainly in the Rural Zone but some in the Bendemeer Special Zone. Also in the Wakatipu Ward, the Gibbston Valley zones provide estimated plan enabled capacity of just over 100 additional dwellings. This is reported as Small Townships - Wakatipu. There is a small amount of capacity in the Southern Corridor (Rural Residential zone as the southern end of the Jacks Point Special Zone), and in Quail Rise (Wakatipu Basin zones). In total, the Wakatipu Ward has capacity for an estimated 721 dwellings in the rural environment. This is 72% of total district rural environment rural growth capacity.

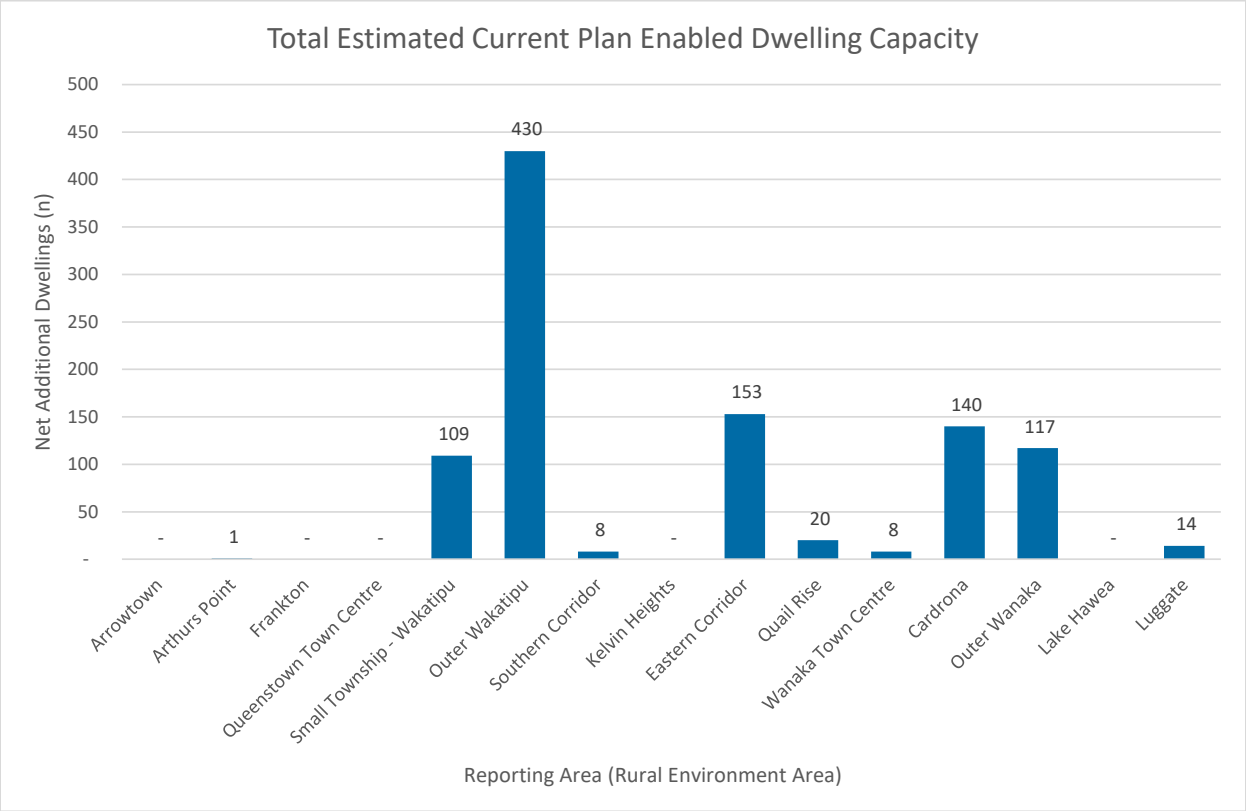
[92] Enable refers to permitted, controlled or restricted discretionary activity status for residential dwelling units.

[93] The capacity of the Coneburn SHA is included in the urban environment capacity of the Jack's Point Special Zone in the Southern Corridor and the capacity of the Universal SHA is captured in the indicative long term urban capacity of Lake Hawea. Where SHAs are located on residential enabled zones in the urban environment, the capacity of the land has already been included.

In the Wānaka Ward, the majority of rural capacity (140 potential additional dwellings) is in the large Cardrona reporting area – primarily in the Rural Zone, but also areas of Rural Lifestyle Zone (e.g. around Mount Barker, Studholme Road, and Glendhu Bay). This is followed by capacity for an estimated 117 dwellings in Outer Wānaka. While this includes Hawea Flat Rural Lifestyle and Rural Residential Zones, the significant majority of this capacity is in the Rural Zone, so spread from Makarora through to Dublin Bay, Upper Clutha Valley, and down towards Luggate and the Wānaka Airport (Figure 1.9). There is a small amount of additional capacity within the Luggate reporting area (Rural and Rural Residential Zone) and in the Wānaka Town Centre (i.e., the rural fringe of the township and Albert Town). In total, the Wānaka Ward provides estimated plan enabled capacity for 279 additional dwellings in the rural environment. This is 28% of the district total, which equates to 1,000 additional dwellings.

This capacity is not impacted by any zoning in Stage 3 of the PDP (i.e., the medium term) or changes identified in the Draft Spatial Plan (with capacity in the rural zones where indicative urban expansion areas are identified (estimated at 36 dwellings) already excluded). As such, for the purpose of this HBA, the rural environment plan enabled capacity of 1,000 potential additional dwellings is applied in the short, medium, and long term. It is also assumed that all 1,000 dwellings are 'commercially feasible', albeit that most will be developed by individual landowners where 'profit' is not the primary driver of house construction.

Figure 5.4 – Total Dwelling Capacity in the Long Term Rural Environment



6 Commercially Feasible Capacity

This section quantifies the plan enabled capacity that is commercially feasible to develop for a commercial developer. It shows the range of plan enabled capacity available to the market that is estimated to be commercially feasible to construct. Importantly, it shows the range of development opportunities available, a share of which are likely to be taken up by the market.

At a high level, the approach calculates the cost to construct the dwellings on each land parcel, then compares this to the likely dwelling sales price. If a sufficient profit margin is achieved, then the capacity is regarded as commercially feasible. In accordance with the NPS-UD, the assessment is based on current costs and prices within the 2020 market[94]. The assumptions within the model were adjusted to take account of any feedback from the QLD residential development sector where appropriate.

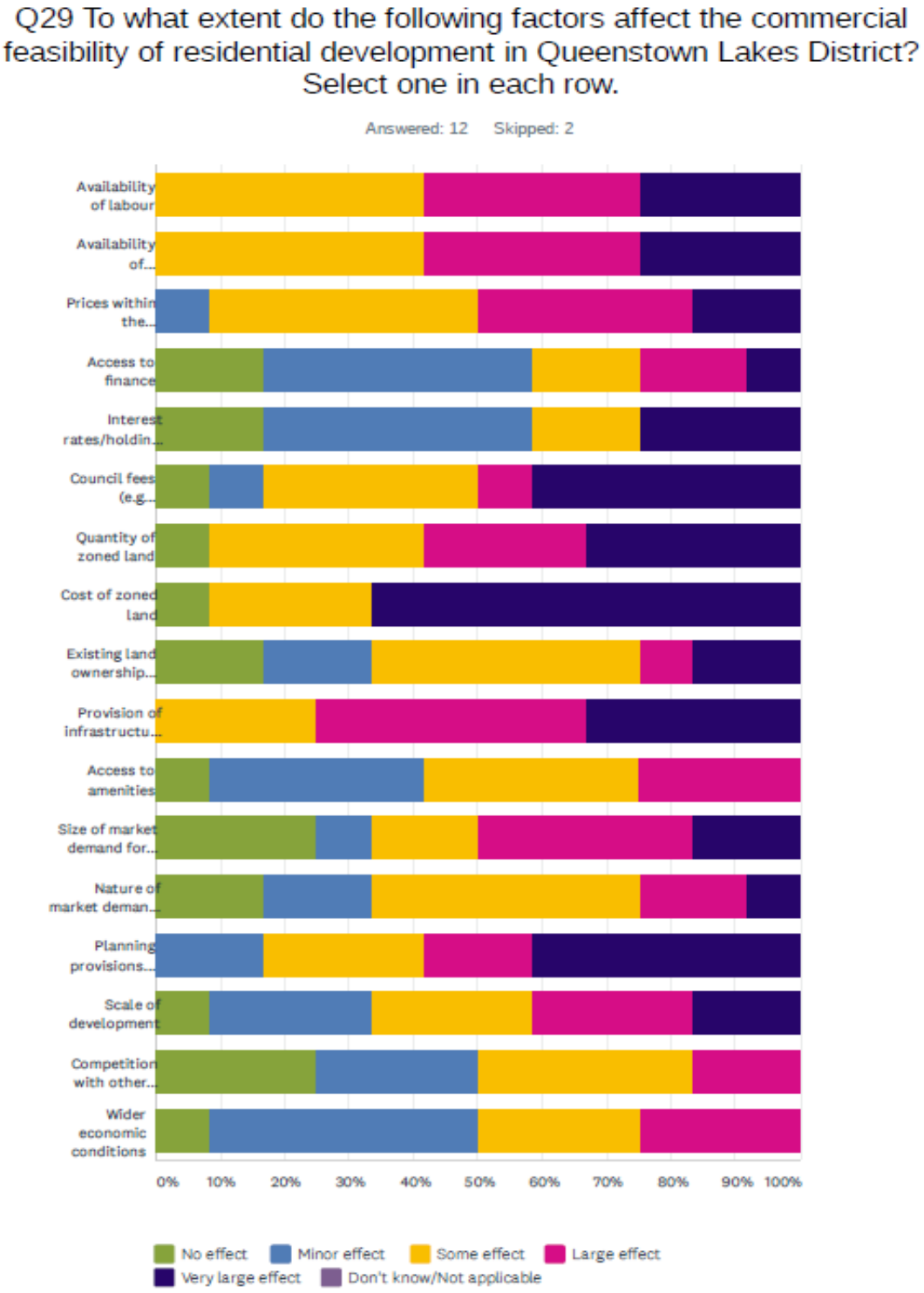
Stakeholders in the QLD residential development sector were asked to comment specifically on how slope (steep sites) impacted development costs in QLD. Net additional costs ranged from 10-30% compared to a flat site, although the majority stated 15-20%. This HBA accounts for slope in the commercial feasibility modelling and applies a progressive premium on construction costs up to a maximum of approximately 30%. The survey of stakeholders also asked for what profit margins they considered acceptable. The results varied significantly and there were not clear trends between developer types. Responses ranged from 10% to 30%, with one developer noting that it depended on the type of building/structure (suggesting that different profit margins apply to standalone, duplex, terrace and apartment buildings). This HBA has adopted 20% for all residential development, consistent with the 2017 HBA. Full details are discussed in the Technical Report.

A detailed discussion on the approach used to model commercially feasibility capacity is contained in the supporting Technical Report.

Stakeholders in the QLD residential development sector were also asked to comment on factors influencing commercial feasibility in the district for this HBA. Survey results are summarised in Figure 6.1. Cost of zoned land, followed by Council fees and then planning provisions (e.g. minimum lots sizes, dwelling typologies and building height limits) were the three factors with the highest 'very large effect' response. Although when combining large and very large effects, the provision of development infrastructure was considered the most impactful. Full details are discussed in the Technical Report.

[94] Increases in prices through time, in response to growth in demand, are an important driver of feasibility. As demand increases for a location, a greater range of development options generally become feasible. This includes increased dwelling density typologies, redevelopment to further intensity already urbanised sites, as well as outward expansion of the existing urban edge. A baseline scenario of current prices shows the level of feasibility of capacity if prices remained constant, with further scenarios able to show the additional level of capacity that is likely to become feasible through time.

Figure 6.1 – Factors Affecting Commercial Feasibility of Residential Development in QLD[95]



[95] Untruncated question wording as follows (top to bottom): Availability of labour; Availability of sub-contractors; Prices within the construction sector (materials & labour); Access to finance; Interest rates/holding costs; Council fees (e.g development contributions, consent fees); Quantity of zoned land; Cost of zoned land; Existing land ownership structures; Provision of infrastructure (three waters/transport); Access to amenities; Size of market demand for dwellings; Nature of market demand for

Stakeholders were asked to comment further on any factors that they felt had a very large effect on commercial feasibility for residential development. Two respondents attributed additional costs to the Council, with one estimating that "Council adds up to $100,000 to the price of every new dwelling currently produced." The other suggested that a lack of capacity in Council (to process consents) and inconsistencies in the way that Council operates, adds complexity and risk, elongating timeframes and adding a real cost to development. *It is noted that these comments are not necessarily representative of the views of other respondents.*

Commercially feasible capacity has been calculated across the total urban plan enabled zoned opportunity. This is important because the geography of the district means that it faces significant infrastructure constraints that apply to distinct geographic areas. It is important to understand the capacity within urban areas that are likely to be feasible to develop if infrastructure were supplied.

An assessment of the commercially feasible capacity that is served by infrastructure is contained in Section 8. The sequencing of the infrastructure assessment is important because the infrastructure constraints apply at the catchment level that include both areas that are already urbanised as well as areas for potential future urban expansion.

Growth can occur within a catchment (through a combination of intensification within the existing urban area and greenfield expansion) up to the point that infrastructure constraints are reached. The infrastructure constraint therefore 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[96]. As such it is not appropriate to identify areas of greenfield zoned opportunity (and their corresponding capacity) as served by infrastructure, as their capacity is also limited by the level of growth within the existing urban areas that fall within the same infrastructure catchments.

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. Further information on this approach is contained within the supporting technical report.

6.1 Short Term Commercially Feasible Capacity

The following short term commercially feasible capacity results relate to the urban environment short term plan enabled capacity results contained in Section 5.1. Table 6.1 shows that over half (56%) of the short-term plan enabled capacity is estimated to currently represent commercially feasible development

dwellings (e.g. type, size and location of dwellings); Planning provisions (e.g. minimum site sizes, dwelling typologies, building heights); Scale of development; Competition with other developers; Wider economic conditions.

[96] That is, the assessment does not simply identify geographical greenfield areas that are served by infrastructure through time and then regard these areas as infrastructure-served capacity once infrastructure is supplied. It instead takes account of the level of demand (growth) that can occur across the catchment as a whole, before constraints are reached at a particular point within the infrastructure network(s).

opportunities for the market[97]. It amounts to an estimated commercially feasible capacity of an additional 25,400 dwellings across the urban environment.

The main urban areas of Queenstown and Wānaka Town Centres are the largest areas of feasible development capacity, with a combined feasible capacity of 13,500 additional dwellings. A larger share of the estimated feasible capacity within Queenstown Town Centre occurs within the existing urban environment, through a combination of infill and redevelopment options. Nearly half (48%) of the existing urban area feasible capacity is within the High Density Residential Zone. A greater share (31%) of the feasible greenfield capacity is within the LDSR Zone.

Feasible capacity within Wānaka Town Centre is more evenly distributed across the existing urban and greenfield areas. The LDSR Zone makes up the largest area of feasible capacity, with smaller shares feasible within the higher density zones. Significant capacity is also estimated to be feasible within the Special Zones.

Sizeable amounts of feasible capacity are also estimated to occur across most other areas. The next largest areas of feasible capacity include Kelvin Heights, Frankton, Quail Rise and the Southern Corridor, which have a combined feasible capacity of around 9,400 additional dwellings. With the exception of Kelvin Heights, most of the feasible capacity is within the greenfield areas of these locations.

highlights the share of short-term plan enabled capacity that is also commercially feasible to develop (using current prices and costs). Overall, over half (56%) of the plan enabled capacity is feasible to construct by 2023. Some of the plan enabled capacity is estimated to be feasible at lower densities (than enabled by the Plan), which has been captured within the calculation. A higher share (60%) of the greenfield development opportunities are estimated to be feasible than capacity within the existing urban area (52%). This occurs across most areas, with smaller, more remote, urban settlements, having lower shares of their capacity feasible within the existing urban area. Higher shares of the plan enabled capacity within the existing urban areas are feasible within the larger or higher value urban areas than in the smaller urban settlements or lower value areas.

[97] It was assumed that 45% of the capacity on Special Zones is likely to be feasible within the short-term. A share of the plan enabled capacity on other sites is also feasible, but at yields below those enabled by the Plan (i.e., larger sites). This translates into a share of the plan enabled capacity yield not being feasible, although the same spatial area would be developed.

Table 6.1 – Short Term Commercially Feasible Dwelling Capacity in the QLD Urban Environment

Ward	Reporting Area	Commercially Feasible Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	19	7	-	19	19	13	4	23	33	62	55	-	62	81	95
Wakatipu	Arthurs Point	277	152	-	282	380	137	-	380	429	210	169	-	210	492	639
Wakatipu	Eastern Corridor	96	-	-	96	10	-	-	10	101	50	5	-	55	151	156
Wakatipu	Frankton	90	40	66	158	366	308	106	472	566	95	95	1,864	1,959	2,117	2,525
Wakatipu	Kelvin Heights	248	340	245	378	1,775	1,895	321	1,918	1,990	745	745	-	745	1,123	2,735
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	11	-	-	11	11	11
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	691	1,087	2,039	2,068	2,068	2,068
Wakatipu	Queenstown Town Centre	1,541	2,235	1,940	3,040	1,981	3,026	3,559	4,631	5,198	981	1,068	925	1,778	4,818	6,975
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	471	128	-	600	600	600
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	1,658	294	83	2,035	2,035	2,035
Wakatipu Ward Sub-Total		**2,271**	**2,774**	**2,251**	**3,973**	**4,531**	**5,379**	**3,990**	**7,434**	**8,317**	**4,975**	**3,646**	**4,910**	**9,522**	**13,495**	**17,839**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	270	68	-	338	338	338
Wanaka	Lake Hawea	-	-	19	19	-	-	14	14	25	345	345	-	345	364	370
Wanaka	Luggate	6	-	-	6	6	-	-	6	6	373	-	-	373	379	379
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	1,583	1,691	425	2,194	2,395	2,000	663	2,862	3,483	2,160	1,747	700	3,035	5,229	6,518
Wanaka Ward Sub-Total		**1,589**	**1,691**	**444**	**2,219**	**2,401**	**2,000**	**677**	**2,882**	**3,514**	**3,148**	**2,159**	**700**	**4,091**	**6,310**	**7,605**
Total Urban Environment		**3,860**	**4,465**	**2,695**	**6,192**	**6,932**	**7,379**	**4,667**	**10,316**	**11,831**	**8,123**	**5,805**	**5,611**	**13,613**	**19,805**	**25,443**

Source: M.E QLD Capacity Model 2021

Short Term

Table 6.2 – Short Term Commercially Feasible Capacity as a Share of Plan Enabled Capacity

Ward	Reporting Area	Commercially Feasible Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	22%	4%	0%	11%	2%	2%	100%	3%	4%	54%	55%	0%	54%	28%	10%
Wakatipu	Arthurs Point	76%	34%	0%	63%	45%	16%	0%	45%	51%	100%	80%	0%	100%	75%	61%
Wakatipu	Eastern Corridor	48%	0%	0%	28%	1%	0%	0%	1%	12%	55%	12%	0%	54%	33%	17%
Wakatipu	Frankton	52%	13%	100%	43%	40%	34%	51%	42%	49%	94%	94%	48%	49%	48%	49%
Wakatipu	Kelvin Heights	76%	59%	100%	66%	73%	74%	100%	75%	77%	100%	100%	0%	100%	85%	82%
Wakatipu	Outer Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	100%
Wakatipu	Quail Rise	0%	0%	0%	0%	0%	0%	0%	0%	0%	89%	86%	100%	96%	95%	93%
Wakatipu	Queenstown Town Centre	92%	75%	77%	82%	53%	52%	63%	61%	68%	97%	95%	55%	70%	77%	68%
Wakatipu	Small Township - Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	41%	17%	0%	42%	42%	42%
Wakatipu	Southern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	45%	45%	45%	45%	45%	45%
Wakatipu Ward Sub-Total		**80%**	**57%**	**79%**	**70%**	**47%**	**46%**	**65%**	**54%**	**60%**	**63%**	**73%**	**63%**	**60%**	**63%**	**60%**
Wanaka	Cardrona	0%	0%	0%	0%	0%	0%	0%	0%	0%	44%	43%	0%	45%	45%	45%
Wanaka	Lake Hawea	0%	0%	100%	12%	0%	0%	40%	5%	9%	48%	53%	0%	48%	42%	38%
Wanaka	Luggate	50%	0%	0%	50%	11%	0%	0%	11%	11%	87%	0%	0%	87%	86%	78%
Wanaka	Outer Wanaka	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wanaka	Wanaka Town Centre	69%	49%	59%	55%	34%	28%	47%	35%	42%	73%	88%	45%	62%	59%	49%
Wanaka Ward Sub-Total		**65%**	**47%**	**60%**	**53%**	**33%**	**27%**	**47%**	**34%**	**41%**	**67%**	**67%**	**45%**	**60%**	**58%**	**49%**
Total Urban Environment		**73%**	**53%**	**75%**	**63%**	**41%**	**39%**	**61%**	**46%**	**52%**	**64%**	**70%**	**60%**	**60%**	**61%**	**56%**

Source: M.E QLD Capacity Model 2021

Short Term

6.2 Medium Term Commercially Feasible Capacity

The following medium term commercially feasible capacity results relate to the urban environment medium term plan enabled capacity results contained in Section 5.2. Table 6.3 shows the amount of plan enabled capacity that is estimated to represent commercially feasible development options. In total, there is an estimated commercially feasible capacity of around 32,100 additional dwellings in the medium term.

There is a net increase of 6,700 further additional dwellings in the medium term from the short term. Most (+5,100 dwellings) of the net increase occurs within the Special Zones, where it has been assumed that a higher share of the capacity is likely to be feasible for developers to construct within the medium term.

Under the current-prices scenario, beyond the Special Zones, changes to feasible capacity only occur as a function of additional plan enabled capacity supplied since the short term. This is because costs and prices are held constant, therefore, the feasibility of the development options remains the same as the short term. Beyond the Special Zones, the further increase (+1,600 dwellings) in feasible capacity therefore only occurs on the areas where a zoning change has occurred as part of the decision version of Stage 3 of the PDP (see Section 5.2).

Table 6.4 highlights the share of medium term plan enabled capacity that is also commercially feasible to develop (using current prices and costs). With the changes outlined above, the share of plan enabled capacity estimated to be feasible increases to 67%. The difference in the share of capacity as feasible between the existing urban and greenfield areas is estimated to increase in the medium term. This is largely due to the assumed increase in the share of the Special Zones capacity that is estimated to be feasible in the medium term and not any other modelled outcomes. Overall, it is estimated that 84% of the plan enabled greenfield capacity represents feasible development options, and 51% of the capacity within the existing urban area.

Table 6.3 – Medium Term Commercially Feasible Dwelling Capacity in the QLD Urban Environment

Ward	Reporting Area	Commercially Feasible Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	19	7	-	19	19	13	4	23	33	68	55	-	68	87	101
Wakatipu	Arthurs Point	431	359	58	489	628	520	145	763	812	210	169	-	210	699	1,022
Wakatipu	Eastern Corridor	96	-	-	96	10	-	-	10	101	59	9	-	68	164	169
Wakatipu	Frankton	90	40	66	158	366	308	106	472	566	95	95	3,157	3,252	3,410	3,818
Wakatipu	Kelvin Heights	248	340	245	378	1,775	1,895	321	1,918	1,990	745	745	-	745	1,123	2,735
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	11	-	-	11	11	11
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	691	1,087	2,039	2,068	2,068	2,068
Wakatipu	Queenstown Town Centre	1,541	2,235	1,940	3,040	1,981	3,026	3,559	4,631	5,198	981	1,068	1,388	2,241	5,281	7,438
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	700	228	-	928	928	928
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	2,948	522	148	3,618	3,618	3,618
Wakatipu Ward Sub-Total		**2,425**	**2,981**	**2,309**	**4,180**	**4,779**	**5,762**	**4,135**	**7,817**	**8,700**	**6,508**	**3,978**	**6,731**	**13,208**	**17,388**	**21,908**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	480	120	-	600	600	600
Wanaka	Lake Hawea	200	123	19	229	313	117	14	327	376	943	902	-	943	1,172	1,319
Wanaka	Luggate	6	-	-	6	6	-	-	6	6	373	-	-	373	379	379
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	1,763	1,764	425	2,410	2,563	2,038	663	3,030	3,765	2,599	1,882	1,245	4,154	6,564	7,919
Wanaka Ward Sub-Total		**1,969**	**1,887**	**444**	**2,645**	**2,882**	**2,155**	**677**	**3,363**	**4,147**	**4,395**	**2,904**	**1,245**	**6,070**	**8,715**	**10,217**
Total Urban Environment		**4,394**	**4,868**	**2,753**	**6,825**	**7,661**	**7,917**	**4,812**	**11,180**	**12,847**	**10,903**	**6,883**	**7,976**	**19,279**	**26,104**	**32,125**

Source: M.E QLD Capacity Model 2021

Medium Term

Table 6.4 – Medium Term Commercially Feasible Capacity as a Share of Plan Enabled Capacity

Ward	Reporting Area	Commercially Feasible Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	22%	4%	0%	11%	2%	2%	100%	3%	4%	58%	55%	0%	58%	30%	11%
Wakatipu	Arthurs Point	83%	55%	65%	75%	57%	42%	54%	62%	66%	100%	80%	0%	100%	81%	71%
Wakatipu	Eastern Corridor	48%	0%	0%	28%	1%	0%	0%	1%	12%	64%	20%	0%	66%	36%	18%
Wakatipu	Frankton	52%	13%	100%	43%	40%	34%	51%	42%	49%	94%	94%	81%	81%	78%	74%
Wakatipu	Kelvin Heights	76%	59%	100%	66%	73%	74%	100%	75%	77%	100%	100%	0%	100%	85%	82%
Wakatipu	Outer Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	100%
Wakatipu	Quail Rise	0%	0%	0%	0%	0%	0%	0%	0%	0%	89%	86%	100%	96%	95%	93%
Wakatipu	Queenstown Town Centre	92%	75%	77%	82%	53%	52%	63%	61%	68%	97%	95%	83%	88%	84%	73%
Wakatipu	Small Township - Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	64%	32%	0%	67%	67%	67%
Wakatipu	Southern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	80%	80%	80%	80%	80%	80%
Wakatipu Ward Sub-Total		**81%**	**59%**	**79%**	**72%**	**48%**	**47%**	**64%**	**55%**	**61%**	**83%**	**80%**	**86%**	**84%**	**80%**	**73%**
Wanaka	Cardrona	0%	0%	0%	0%	0%	0%	0%	0%	0%	75%	65%	0%	76%	74%	74%
Wanaka	Lake Hawea	44%	17%	100%	30%	24%	9%	40%	25%	27%	90%	92%	0%	90%	65%	54%
Wanaka	Luggate	50%	0%	0%	50%	11%	0%	0%	11%	11%	86%	0%	0%	86%	85%	78%
Wanaka	Outer Wanaka	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wanaka	Wanaka Town Centre	71%	46%	59%	55%	32%	26%	47%	33%	41%	88%	95%	80%	85%	71%	56%
Wanaka Ward Sub-Total		**67%**	**41%**	**60%**	**51%**	**31%**	**23%**	**47%**	**32%**	**39%**	**87%**	**81%**	**80%**	**85%**	**71%**	**57%**
Total Urban Environment		**74%**	**50%**	**75%**	**62%**	**40%**	**37%**	**61%**	**45%**	**51%**	**84%**	**81%**	**85%**	**84%**	**77%**	**67%**

Source: M.E QLD Capacity Model 2021

Medium Term

6.3 Long Term Commercially Feasible Capacity

The following long term commercially feasible capacity results relate to the urban environment long term plan enabled capacity results contained in Section 5.3. Table 6.5 shows it is estimated that 51,400 dwellings of the plan enabled capacity represent feasible development options.

There is an estimated net increase of around 19,200 feasible dwellings in the long term since the medium term. This is due almost entirely to the increase in greenfield plan enabled capacity added through the Draft Spatial Plan indicative urban expansion areas together with a further increased share of the Special Zones assumed to be feasible. Under the current-prices scenario, changes to feasible capacity only occur as a function of additional plan enabled capacity supplied since the medium term and no other assumptions. This is because costs and prices are held constant, therefore, the feasibility of the development options remains the same as the short term. If prices were instead to gradually increase, then greater shares of the capacity, particularly within the existing urban area, would become commercially feasible development options through time[98].

Wānaka Town Centre area contains the largest amount of feasible capacity overall in the long term, with an estimated feasible capacity of 14,500 dwellings. Around two-thirds of this occurs within the greenfield areas. Within the existing urban area, feasible development capacity is estimated to mainly occur within the Low Density Suburban Residential zone, with some capacity in other zones, reflecting the zoning pattern of the existing urban area. Feasible development options are spread across a wider range of zones within the greenfield area.

Nearly two-thirds (63%) of the feasible dwelling capacity is estimated to occur within the Wakatipu Ward urban environment. Within this, the largest areas of feasible capacity are within the Southern Corridor (+10,100 additional dwellings) and Queenstown Town Centre (+7,700 dwellings). Feasible capacity within the Southern Corridor is entirely within greenfield areas, including the Jacks Point Resort Special Zone.

Around two-thirds (67%; 5,200 dwellings) of the Queenstown Town Centre feasible capacity is estimated to occur within the existing urban area. Nearly two-thirds of this occurs within the High Density Residential Zone. Queenstown Town Centre is one of the key areas of feasible capacity within the district's existing urban area, accounting for 40% of the district's existing urban area feasible capacity. This is a key area for higher density feasible development options, where it contains nearly three-quarters (74%) of the district's feasible apartment redevelopment capacity within the existing urban area.

Table 6.6 highlights the share of long-term plan enabled capacity that is also commercially feasible to develop (using current prices and costs). In the long term, it is estimated that around 80% of the plan enabled capacity represents commercially feasible development options. The share would be higher under a different modelling scenario where prices were assumed to increase. Nearly all (98%) of the greenfield plan enabled capacity is estimated to represent commercially feasible development options. Just over half (52%) of the plan enabled capacity within the existing urban area represents feasible development options.

[98] While not discussed in this HBA, M.E's commercial feasibility model provides the ability for price/cost changes over time to be run.

Table 6.5 – Long Term Commercially Feasible Dwelling Capacity in the QLD Urban Environment

		Commercially Feasible Capacity														
		Infill				Redevelopment					Greenfield				Combined Total	
Ward	Reporting Area	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Max Infill or Redevelop-ment	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	19	7	-	19	19	13	4	23	33	71	55	-	71	90	104
Wakatipu	Arthurs Point	431	359	58	489	628	520	145	763	812	210	169	-	210	699	1,022
Wakatipu	Eastern Corridor	96	-	-	96	172	-	-	172	263	2,156	11	614	2,781	2,877	3,044
Wakatipu	Frankton	90	40	66	158	366	308	106	472	566	95	95	3,896	3,991	4,149	4,557
Wakatipu	Kelvin Heights	248	340	245	378	1,775	1,895	321	1,918	1,990	745	745	-	745	1,123	2,735
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	11	-	-	11	11	11
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	691	1,087	2,039	2,068	2,068	2,068
Wakatipu	Queenstown Town Centre	1,541	2,235	1,940	3,040	1,981	3,026	3,559	4,631	5,198	981	1,068	1,653	2,506	5,546	7,703
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	833	285	-	1,118	1,118	1,118
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	8,139	653	1,315	10,107	10,107	10,107
Wakatipu Ward Sub-Total		**2,425**	**2,981**	**2,309**	**4,180**	**4,941**	**5,762**	**4,135**	**7,979**	**8,862**	**13,932**	**4,168**	**9,516**	**23,607**	**27,787**	**32,468**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	600	150	-	750	750	750
Wanaka	Lake Hawea	200	123	19	229	313	117	14	327	376	2,936	2,895	-	2,936	3,165	3,312
Wanaka	Luggate	6	-	-	6	6	-	-	6	6	373	-	-	373	379	379
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	1,763	1,764	425	2,410	2,618	2,093	663	3,085	3,820	7,772	7,192	2,900	10,644	13,054	14,464
Wanaka Ward Sub-Total		**1,969**	**1,887**	**444**	**2,645**	**2,937**	**2,210**	**677**	**3,418**	**4,202**	**11,681**	**10,237**	**2,900**	**14,703**	**17,348**	**18,905**
Total Urban Environment		**4,394**	**4,868**	**2,753**	**6,825**	**7,878**	**7,972**	**4,812**	**11,397**	**13,064**	**25,613**	**14,405**	**12,416**	**38,310**	**45,135**	**51,373**

Source: M.E QLD Capacity Model 2021

Long Term

Table 6.6 – Long Term Commercially Feasible Capacity as a Share of Plan Enabled Capacity

Ward	Reporting Area	Commercially Feasible Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	22%	4%	0%	11%	2%	2%	100%	3%	4%	61%	55%	0%	61%	31%	11%
Wakatipu	Arthurs Point	83%	55%	65%	75%	57%	42%	54%	62%	66%	100%	80%	0%	100%	81%	71%
Wakatipu	Eastern Corridor	48%	0%	0%	28%	17%	0%	0%	17%	25%	96%	1%	100%	97%	89%	78%
Wakatipu	Frankton	52%	13%	100%	43%	40%	34%	51%	42%	49%	94%	94%	100%	100%	95%	89%
Wakatipu	Kelvin Heights	76%	59%	100%	66%	73%	74%	100%	75%	77%	100%	100%	0%	100%	85%	82%
Wakatipu	Outer Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	100%	100%
Wakatipu	Quail Rise	0%	0%	0%	0%	0%	0%	0%	0%	0%	89%	86%	100%	96%	95%	93%
Wakatipu	Queenstown Town Centre	92%	75%	77%	82%	53%	52%	63%	61%	68%	97%	95%	99%	98%	89%	75%
Wakatipu	Small Township - Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	76%	40%	0%	81%	81%	81%
Wakatipu	Southern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	13%	100%	100%	100%	100%
Wakatipu Ward Sub-Total		**81%**	**59%**	**79%**	**72%**	**49%**	**47%**	**64%**	**55%**	**61%**	**96%**	**36%**	**100%**	**98%**	**93%**	**84%**
Wanaka	Cardrona	0%	0%	0%	0%	0%	0%	0%	0%	0%	94%	81%	0%	95%	93%	92%
Wanaka	Lake Hawea	44%	17%	100%	30%	24%	9%	40%	25%	27%	97%	97%	0%	97%	83%	75%
Wanaka	Luggate	50%	0%	0%	50%	11%	0%	0%	11%	11%	86%	0%	0%	86%	85%	78%
Wanaka	Outer Wanaka	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wanaka	Wanaka Town Centre	71%	46%	59%	55%	33%	26%	47%	34%	41%	99%	100%	97%	98%	86%	72%
Wanaka Ward Sub-Total		**67%**	**41%**	**60%**	**51%**	**31%**	**23%**	**47%**	**32%**	**39%**	**98%**	**95%**	**97%**	**98%**	**86%**	**73%**
Total Urban Environment		**74%**	**50%**	**75%**	**62%**	**40%**	**37%**	**61%**	**46%**	**52%**	**97%**	**64%**	**99%**	**98%**	**90%**	**80%**

Source: M.E QLD Capacity Model 2021

Long Term

6.4 Commercially Feasible Capacity Summary

The commercially feasible capacity modelling has found that there are sizeable shares of the plan enabled capacity that are estimated to represent commercially feasible development options. The total estimated commercially feasible capacity is large relative to the projected urban dwelling demand growth across the district's urban environment.

The feasible development options are spread over both existing urban and greenfield areas, across all areas of the district's urban environment. The assessment finds generally that higher shares of the greenfield plan enabled development options are feasible than infill or redevelopment capacity within the existing urban environment. Part of this is due to the modelled scenario of current prices where the feasibility of capacity is only calculated for the current 2020 market. Therefore, increases in feasible capacity through time only occur as a function of zoning changes or the addition of further greenfield land.

The feasibility of greenfield development is also generally higher due to the easier development process. Larger scale development is often able to occur within greenfield areas, resulting in scale economies through parts of the development process. Costs associated with the purchase of existing buildings and their demolition are lower within greenfield areas (or not applicable). However, this typically favours less sustainable patterns of lower density outward urban growth.

Meanwhile, growth in demand and rises in value within areas of higher amenity within the existing urban environment (which are excluded from the current prices scenario) are instead important drivers of feasibility. Generally, growth in demand through time, and consequent rises in the value of location, result in a wider range of infill and redevelopment options becoming feasible through time. This has historically characterised much of the intensification within Queenstown's central urban areas.

The future zoning pattern of Wakatipu Ward involves large greenfield urban expansion through the existing Special Zones and other current greenfield areas; and in the long term through the Draft Spatial Plan identified indicative future growth areas. The expansion of this zoning pattern generates increased shares of greenfield commercially feasible capacity through time.

It is noted that the Draft Spatial Plan also envisages increased levels of infill within the Priority Development areas. At a very high level this would enable an additional 10,000 houses. This was not modelled in this HBA as the areas need to be investigated in more detail.

The feasible capacity within the greenfield areas is estimated to cover a range of development densities, reflecting the underlying zoning pattern (or indicative assumptions of this in the long term). On average, the density is lower than within the existing urban environment, with relatively large proportions within the lower density residential zones and lower density typologies within the Special Zones. In the long-term, density generally increases across the greenfield areas as higher density base zones are assumed to apply to use the land more efficiently.

Higher shares of the feasible capacity within the existing urban area occur in higher density typologies. The Queenstown town centre area represents a key location for higher density development and intensification. While the modelling shows that high shares of the plan enabled capacity are likely to represent feasible development options, these would be higher under a modelled growth scenario.

The feasibility modelling generally suggests that a large proportion of the plan enabled capacity is likely to represent feasible development options. There are a wide range of feasible options available to the market.

Although the feasible capacity modelling does not take into account the constraints of infrastructure (which are analysed within the following section), it is an important step in the analysis. It is important to understand though the feasibility of capacity irrespective of infrastructure because:

i. It assesses the range of options available to the market.

ii. Assists in distinguishing whether any potential constraint relates to the zoned provision (i.e., planning), or the supply of infrastructure.

The former is critical because infrastructure constraints are applied at a catchment wide level as a function of total growth across the catchment, rather than being tightly tied to a specific area of zoned land. It is therefore important to identify whether there is flexibility through the range of feasible development options across the catchment for growth to occur within the infrastructure limit. The following section applies the infrastructure constraints where reasonably expected to be realised capacity is constrained by infrastructure limits.

7 Infrastructure Ready Capacity

This section examines what amount of dwelling growth is estimated to be infrastructure ready. This element of the NPS-UD is central to the requirement for well-planned urban environments whereby infrastructure and land use provision are to be aligned, and the provision of infrastructure is timely so to avoid unnecessary costs. Quantifying urban housing capacity that is infrastructure ready also helps to determine the impact that planning and infrastructure is having on the capacity for growth and the affordability and competitiveness of the QLD housing market.

Clause 3.4(3) of the NPS-UD states that development capacity is infrastructure ready if:

a) In relation to the short term, there is adequate existing development infrastructure to support the development of land.

b) In relation to the medium term, either paragraph (a) applies, or funding for adequate infrastructure to support development of the land is identified in a long term plan.

c) In relation to the long term, either paragraph (b) applies, or the development infrastructure to support the development capacity is identified in the local authority's infrastructure strategy (as required as part of its LTP).

Clause 3.5 of the NPS-UD states that local authorities must be 'satisfied' that the additional infrastructure to service the development capacity is likely to be available.

Development infrastructure refers to network infrastructure for water supply, wastewater and stormwater (referred to here as 'three waters infrastructure') and land transport controlled by a local authority or council controlled organisation. In the case of QLD, three waters infrastructure is controlled by QLDC and public land transport infrastructure is controlled by QLDC, with ORC controlling public transport services. Additional infrastructure means public open space, community infrastructure, social infrastructure like schools and healthcare facilities, telecommunication, electricity and gas networks, and land transport that is not controlled by local authorities. The later includes private roads and land transport infrastructure controlled by Waka Kotahi – New Zealand Land Transport Agency ("NZTA").

7.1 Overview of Development and Additional Infrastructure in QLD

QLDC is looking to the future in its planning, and it is aware that the reliable and efficient provision of infrastructure is essential in developing a robust and resilient foundation for the future that the community wants. Ensuring existing infrastructure networks and services are well-maintained, safe, and compliant is Council's core infrastructure business.

To achieve this, a step-change in capital expenditure is required to respond to aging infrastructure, levels of service, changing legislation, and high levels of growth in the district. The effect of this high-cost,

essential investment is a portfolio that is predominantly aligned to the district community and economic strategic outcomes. People will be protected from harm, and services will strike a balance of quality and affordability. Council invest in protecting the natural environment and take positive steps towards understanding and building resilience.

It is important that the Council can make informed decisions about how infrastructure should be developed, maintained and disposed in order to meet resilience and service efficiency. Although this may involve making some difficult decisions, Council are always working towards ensuring that the requirements of the residents and businesses are met as they plan for a sustainable outcome.

The first ten-years of infrastructure investment will create the necessary foundations to realise the district's health promotion, economic stability, resilient communities, and environmental regeneration goals.

7.1.1 Three Waters Infrastructure

Water Management

Water management in New Zealand is undergoing significant change with the development of new legislation, the establishment of Taumata Arowai as the new Water Services Regulator, and exploration of new service delivery models for drinking water, stormwater and wastewater management. Significant changes include: improving compliance levels, asset management initiatives, network resilience improvements, and the delivery of network renewals.

Human activities and development can impact on surface water resources through changing drainage patterns, confinement of waterway corridors, and the introduction of contaminants. It is important that new developments are designed in such a way that there is minimal adverse environmental and community impact and that our water ways are protected from potential adverse effects. Phasing out discharges to the district's lakes and rivers will require greater integration of infrastructure with the blue-green network, requiring ecological restoration to be a core feature of development and design. QLDC is also investigating and implementing initiatives such as water demand management, algae treatment, wastewater discharges to land and technological advancements in the long term.

QLDC's three waters programme consists of a continuous programme, indicating how Council will maintain, operate and renew the network, as well as the improvements programme, which addresses gaps in level of service and new growth areas that need to be serviced.

The QLDC three waters programme for the 2021/31 LTP has been developed to maximise delivery of benefits clearly aligned with QLDC's Vision 2050 and 30 year Infrastructure Strategy within a constrained funding environment. The financial impact of the post-COVID-19 environment on the district cannot be underestimated. QLDC have lost numerous non-rate related revenue streams and are very cognitive that it must minimise the impact on district ratepayers and as such have limited rates increase to under 6%. This has resulted in a rethink on the priorities within the Council's corporate investment programme.

QLDC have had an intensive review of the timing of the programme. A number of improvement projects have been pushed beyond years 1-3, whilst others have been pushed later into the 21-31 investment cycle.

A key driver that has shaped the first three years of QLDC's Long Term Plan is the Taumata Arowai's new drinking water supply compliance rules, which has highlighted the urgency for required upgrades in six out

of the district's ten water supply schemes. The upgrades of these six schemes consists of a water treatment element but in all cases, there are also upgrades required for water storage, conveyance and/or the water intake to meet the growing population.

Significant upgrades are required to the district's wastewater treatment plants, this is driven by growth and regulatory and environmental reasons. The urgency of these upgrades is felt more in the Upper Clutha (Wanaka Ward) as opposed to Queenstown (Wakatipu Ward) and as such upgrades to both Hawea wastewater scheme and the existing Project Pure treatment plant have been prioritised and programmed in the first three years of the Long Term Plan. Due to financial constraints, the difficult decision to defer the upgrades to the Shotover treatment plant in Queenstown was made and that is now programmed in year 4.

Drinking water

As the primary water supplier to the district, QLDC are required to provide a supply of water to homes and businesses that is safe for human consumption. Safe and reliable drinking water supplies are recognised as being crucial to the wellbeing and prosperity of the district.

Due to the geography of the district, the smaller townships have their own distinct schemes, which are supplied from local bore takes. The larger towns, Queenstown and Wanaka, are predominately serviced by lake intakes (2-Mile and Kelvin Heights in Queenstown, Beacon Point and Western in Wanaka). The Shotover Country supply in Queenstown is from a bore field.

Significant investment is required to upgrade the water treatment facilities to ensure that Council are compliant with New Zealand Drinking Water Standards ("NZDWS"). This includes investment to address the problem of lake algae found in the networks where there are direct lake intakes in Wanaka and Queenstown. Further investment is required for several of the smaller schemes, mainly Luggate, Glenorchy, Kingston, and Cardrona where the investment is a combination of upgrades to existing schemes and new schemes. When upgrading these water treatment plants, provisions will be made to increase the capacity as well as the treatment to accommodate future growth predicted in the district.

QLDC's long-term strategy provides for the following significant investments:

- Wanaka – The provision of new water treatment plants ("WTP") and supporting reticulation upgrades to distribute compliant water across Wanaka and to remove algae from the network.
- Queenstown – The provision of new and upgraded WTP and supporting reticulation upgrades to distribute compliant water across Queenstown and to remove algae from the network.

Wastewater

There is significant investment and several key wastewater projects that will contribute to future growth in QLD by providing for network resilience improvements, and the delivery of network renewals, these include:

- Project Pure – Wanaka: Project Pure WWTP will continue to provide high quality treatment of wastewater for the Wanaka Ward, including Luggate. The capacity of this treatment plant will be increased to cater for future growth within the region. The current consent is valid until 2041.

- Project Shotover – Queenstown: major investment will continue in the upgrade and improvement of the Shotover wastewater treatment plant with a view to reducing the environmental impact. A major shift in the treatment and disposal of wastewater has seen treated effluent discharged to land rather than into the Shotover River. The quality of treated effluent will continue to improve as phased improvements and upgrades continue at the Shotover treatment plant. The next stage of upgrades puts all flows through the MLE plant to enable decommissioning of the oxidation ponds (allowing space for the Kimiakau Eco Park), improving effluent quality and allowing for future growth.

Wastewater constraints and issues

Project Shotover WWTP is approaching its consents limits. With the reduced demand due to the district's post-COVID population, it has prolonged the time until the consent limits are breached. QLDC will continue to monitor the discharges and accelerate the delivery of plant upgrades if it moves beyond an acceptable level.

Cardrona Wastewater Servicing – The need to invest in the Cardrona wastewater scheme is driven by several risks to public health and the environment. There is a significant risk of contamination of the water supply due to the current wastewater disposal fields (Norovirus outbreak, 2012). Growth in Cardrona is restricted due to insufficient wastewater treatment capacity. Provisions have been made for a new scheme in 2022.

Communities such as Glenorchy[99] and Gibbston have no reticulated wastewater schemes and are currently serviced by septic tanks on individual properties. There are no known concerns with Gibbston, but Glenorchy Township has been identified by the ORC as a septic tank contamination hotspot.[100] Provisions have been made in the infrastructure strategy for a Glenorchy wastewater scheme in 2027-29.

Hawea Wastewater Servicing: The Hawea WWTP is continuously breaching its consent conditions for nitrogen discharge, as there has been insufficient opportunity to use the land disposal system (spray irrigation). The existing consent expires in 2022 and it is expected that more stringent discharge conditions will be imposed in the revised consent. Council are exploring options to improve the existing plant's performance to mitigate these risks during the first tranche of the Three Waters Reforms.

Stormwater

The Council identifies a need to manage urban catchment activities to minimise the risk to public health and safety and effects on the environment. The crucial factor in stormwater management is integrating land use, stormwater, and infrastructure management.

Urban environments can introduce a range of contaminants to receiving water bodies. There are no current regional requirements for consenting to stormwater discharges. Council is interested in better understanding the sources and contaminants associated with stormwater and is currently working on catchment planning and contaminated load modelling to better understand the nature of stormwater contaminants that are being discharged into the lakes. The catchment planning will also identify overland

[99] Glenorchy is included as part of the district's urban environment, while Gibbston is part of the rural environment.

[100] https://qldc.serve1.net/assets/Uploads/Your-Council/Projects/GTSS/Environmental-Effects-of-On-site-Sewage-Management-in-Glenorchy-Township-20170828-FINAL.pdf

flow paths and flood prone areas which are to be accounted for during land use planning and engineering design approaches.

Stormwater per capita demands are expected to remain unchanged where increases in impermeable surfaces are offset with appropriate sustainable urban design and potential increases in rainfall events due to climate change effects over the longer term. QLDC will continue to work with developers to ensure that appropriate measures are taken when there is a change in land use to ensure there is efficient and effective stormwater management in place.

7.1.2 Land Transport Infrastructure

A holistic, integrated approach to transport planning is now being actively pursued through a collaboration of partners called 'Way to Go', combining the inputs of QLDC, Waka Kotahi and ORC. Emerging matters, such as land use integration, mode shift, travel demand management and disruptive technology will all play a part in future outcomes.

With the exception of the State Highways, QLDC owns and operates transportation corridors (and associated support infrastructure, i.e., streetlights, signage etc.) to provide the community with safe and efficient access to their homes, schools, places of work, recreational areas and public services. These corridors also support the national, regional and local economy by enabling the efficient movement of goods and services and people, particularly tourists.

QLDC is in a state of transition in how it operates its transportation network. This has been led by Local Government reforms, adoption, implementation and embedding of the One Network Road Classification as well as ensuring the continual upskilling of in-house resources to ensure capability, capacity and continuity. QLDC is moving from a legacy business model of 'operating transport infrastructure assets' to a proactive, evidence/risk based, and outcome focused 'integrated transportation solution' .

Key transport related issues facing the district are:

- increasing road congestion leading to reduced liveability;
- transport corridors that do not cater well for all modes of travel; and
- land use patterns and parking requirements that affect the affordability of housing and enable the dispersal of activities.

The transport system has not been able to keep up with exponential traffic growth, and only limited improvements have taken place since 2006.[101] Cars remain the dominant transport mode throughout the region. New roads and connections to existing roads are undertaken at the expense of the developer, primarily at the subdivision stage.

QLDC is highly dependent on Waka Kotahi funding assistance for roads and the servicing and maintenance of state highways. Waka Kotahi funds approximately 50% of most transport projects (with the exception of parking and those not in the roading corridor) and their support is critical to addressing transport network growth in the district.

[101] Source: Land Transport Activity Management Plan 2018/19 – 2032/33 published December 2017.

The Council has also partnered with Waka Kotahi and ORC to offer a flat fare of $2 for all bus transport in the Wakatipu Ward which commenced in early 2018. Monitoring of bus services has seen a doubling of its use since the introduction of the reduced fares, and this may increase over time as the routes and timetables are refined. The increasing uptake and feasibility for commuters using a bus service can affect decisions over locations of housing demand.

Several significant infrastructure projects have been completed in the Queenstown and Frankton urban areas. These include the completion of Hawthorne Dr to provide improved access and route choice around Frankton and Remarkables Park, additional capacity in the form at the Kawarau Falls Bridge with the addition of a second lane, and increased capacity in the Queenstown Town Centre with the signalisation of two key intersections on Stanley St.

The strategic approach of the PDP is based on demand management and more enabling of public transport and its associated facilities, promoting choice in modes of transportation and integrated transport management. The PDP also seeks to enable mixed use and increased levels of development within areas that are deemed appropriate.

Key Projects:

- Queenstown Town Centre Street Upgrades
- Queenstown Arterials – Stage 1 (detailed design/construction), 2 and 3
- Wakatipu Active Travel Network – various routes
- Wanaka Active Travel Network – Aubrey Rd and Anderson Rd

7.1.3 Additional Infrastructure

Key aspects of other additional infrastructure that are relevant to housing, include open space, community infrastructure, social infrastructure, telecommunications and energy. Land transport has been addressed above.

QLDC plays an important role in facilitating community development. QLDC is responsible for building and managing key public assets (e.g. parks, community facilities) and delivering essential services (e.g. building and resource consents, community event facilitation). Integral to good Local Government and strong governance is an essential and vested interest in the social wellbeing of the district community.

QLDC manages over 2,084 ha of parks and reserves from sports fields and neighbourhood playgrounds to natural areas, forests and lakefronts. The Parks and Open Space Strategy 2021 sets the direction of the types of open spaces and experience that the community should be able to access, the provision of open space in greenfield developments, development and use of existing open spaces, spending of development contributions, ecological and biodiversity protection and enhancement and acquisition aspirations. In addition, QLDC regularly undertakes satisfaction surveys on the Council's services and facilities. The most frequently used services in recent surveys are trails, walkways and cycle ways, parks, reserves and gardens. Since 2010, over 80% of respondents have consistently been satisfied with these community services and facilities.

The total provision of parks, reserves and open space needs to be balanced against the disproportionately higher number of visitors, the majority of whom come to participate in some form of outdoor recreation, and the high resident population growth. Much of the existing reserve land is under pressure from this growth. The steep topography of the region means that flat, usable and accessible land is also under pressure. Due to the proposed intensification that is being promoted within the PDP, several existing urban areas are being targeted for increased levels of development. These areas are in walking distance from both the Queenstown and Wanaka Town Centres (including the proposed BMU Zone and increased densities promoted in the HDR Zone (including Gorge Road, Fernhill and Queenstown Hill).

QLDC acknowledge that existing reserves in these areas will be subject to increased use, particularly along the BMU Zone (Gorge Road), Remarkables Park and Frankton Flats where up to four to six storeys in height is enabled and the PC50 area in the Queenstown Town Centre (up to 26m in height permitted in some areas). Apartment style living relies heavily on good quality public space to provide the amenity and high-quality living standards for these residents. To promote housing affordability within existing urban areas, QLDC does not take reserve land contributions. However, reserve improvement development contributions are required to enhance the quality and the provision of facilities in the nearby reserves.

In respect of open space and community infrastructure within the Wakatipu and Upper Clutha areas, the Draft Spatial Plan includes the following two priority initiatives[102] under well designed neighbourhoods that provide for everyday needs:

1. To develop open space network plans to deliver Blue-Green Networks; and

2. Complete, update and implement Community Wellbeing, QLDC Community Facilities and Parks and Reserves and strategies and plans.

The Blue-Green Network is the compilation of all the parks, open spaces, streets and accessible waterways that deliver a variety of educational, recreational, ecological, cultural, landscape and health benefits. Establishing a connected open space network needs to be planned for in the initial stages of new developments, as well as taking opportunities to add, retrofit and improves links with the existing network wherever possible. Increasing density to provide more housing choices will mean more people will be living in attached housing and apartments in the future. These types of houses often have less private open space than traditional detached suburban properties. Public open space will increasingly become the 'kiwi backyard' for residents and will need to provide for a wider range of activities, such as community gardens that allow residents to mingle and grow their own food. Ensuring residents in higher density housing have easy access to open space is critical to make this an attractive option for more of the community.

In terms of greenfield / future urban residential developments, the provision of parks in these areas needs to be in accordance with the guidance contained within the Parks and Open Space Strategy 2021. This is to ensure that any proposed reserves are adequate and that the open space values and amenity of the local residents are enhanced or protected. The provision guidance also seeks to better integrate new reserves to existing trails and reserves and to the transport networks. It also sets a programme of a significant body of work in terms of parks and reserves. Overall, QLD is considered to be well placed in terms of its provision

[102] Priority Initiatives 15 and 16 – See page 102 - https://www.qldc.govt.nz/media/hsdjlrv3/the-spatial-plan_a4-booklet_jul21-final-web-for-desktop.pdf

for parks and reserves but needs to plan for future growth and ensure quality open space especially in new residential growth areas.

QLDC is committed to delivering high quality services that satisfy the growing expectations and needs of its community. At present, there is no comprehensive data source or reporting mechanism that reflects the impact of growth on our community in relation to community facilities. However, QLDC is currently undertaking and is participating in various projects aimed at community facilities such as work on a new Community Facilities Strategy.[103] This will provide a framework to guide the Council's future decision-ng relating to the development of new facilities, upgrades to existing facilities, the potential to transition away from facilities that no longer meet current community needs, and opportunities to partner with other providers across the district. The strategy as drafted outlines a series of measures based around the following four objectives:

- Ten minute urban neighbourhoods - Targeted 800m or 20 minute return walk, cycle or local public transport trip from home;
- Facility Hierarchy - 1) Neighbourhood 2) Local 3) Destination 4) Regional;
- Integrated network - Non-council facilities and alternative provision via community partnerships, clubs and organisations are taken into consideration; and
- Planned Provision - QLDC takes the lead in terms of proactive future community facility provision planning. Reducing ad hoc development and improving community facility outcomes

The Queenstown Lakes – Central Otago Sub-Regional Sport & Recreation Facility Strategy 2021 also provides a collaborative approach to planning and development of sport and recreation facilities across the two districts. It will enable local and regional government, the education sector, funders, national, regional sports organisations, and clubs to develop a shared purpose and deliver better value for these communities. The priority is to develop an informed strategic approach – both in the development of new facilities and the management of existing assets – for providers, participants, and funders.

There are a number of key social infrastructure projects in the short, medium and long term that will help facilitate growth in a number of areas, these include:

Wakatipu

- Development of a Community Centre at Ladies Mile to accommodate the lack of community facilities for Lake Hayes Estate and Shotover Country residents.
- The development of an arts & culture hub at Remarkables Park (Te Atamira – meaning The Platform) to cater for arts and culture groups across the Wakatipu basin such as music, pottery, dance, workshops.
- Continued development of sporting infrastructure at the Queenstown Events Centre including an artificial turf, indoor courts, shared clubrooms/studios, movement centre and more sports fields

[103] https://letstalk.qldc.govt.nz/community-facilities-strategy

Wanaka

- Development of a Youth & Community Centre at the old Mitre 10 building in Plantation Road to accommodate a number of groups who do not have permanent homes or groups requiring more fit for purpose space.
- Development of the Ballantyne Road Oxidation ponds into a sporting and community hub. This may include additional sports fields, community buildings and both formal and informal recreation areas.
- Continued development of the Wanaka Recreation Centre masterplan including indoor courts, artificial turf and movement centre.

Other Additional Infrastructure

It is considered that the provision of 'other infrastructure' that is outside of the control of QLDC is largely aligned with the PDP. With the exception of the known land transport capacity issues, no capacity or future supply issues were raised by the telecommunications and energy infrastructure providers (including suppliers) throughout stage 1 of the PDP process.

In terms of the provision of new schools, Te Kura Whakatipu o Kawarau Primary School in the Southern Corridor, Te Kura O Take Kārara Primary School in Wanaka and the Wakatipu High School were opened between 2018 and 2020. And in terms of forward planning, a new Primary School and a High School are planned for the Eastern Corridor. QLDC works closely with the Ministry of Education regarding the future growth of the district and what this means for the provision of new schools and facilities associated with these. The QLDC often provide funding for the development of shared facilities such as new gyms, on the basis that these can be utilised by community groups after school hours. The Ministry of Education is also building in additional capacity in some schools throughout the district to cater for the increased roles, including new classrooms at the Arrowtown Primary School and the Mount Aspiring College. The Ministry of Education in collaboration with the QLDC is currently investigating future new school sites (both primary and high schools) in the Wakatipu Basin.

The Lakes District Hospital was established onsite in Frankton since 1989 and is the only hospital servicing the district. Various medical centres exist throughout Queenstown and Wanaka, with a new medical centre proposed as part of the Queenstown Country Club. In addition, Pacific Radiology has installed the district's first MRI scanner at Remarkables Park.

Waka Kotahi operates, maintains, and improves the state highway network across the country. There is 232 km of state highway in the district that connects the district and its main centres to the rest of New Zealand. Under the Way to Go banner, the collaboration of Waka Kotahi, ORC and Council, has meant the planning and development of upgrades and new services are now co-ordinated.

All state highway works are 100% funded through Waka Kotahi, except urban footpaths and landscaping that are maintained by Council. Funding requests for projects are prioritised against other state highway projects across the country.

Key projects funded (or co-funded) by Waka Kotahi in the district at present include:

- Bus lanes and intersection improvements on State Highway 6 between Ladies Mile and Kawarau Bridge and State Highway 6A as part of the New Zealand Upgrade Programme (NZUP).
- Wakatipu Active Travel Network – various routes (joint work programme with QLDC).

In respect of the additional infrastructure discussed above that relates to open space, community infrastructure, social infrastructure, telecommunications, and energy, QLDC is satisfied that there is sufficient additional infrastructure required to support urban development and that it is likely to be available commensurate with demand growth. Noting that QLDC is currently undertaking a number of projects to better understand the demand and use of some of their facilities.

However, Council is less certain that land transport infrastructure controlled by Waka Kotahi will keep pace with projected growth in certain parts of the district. This issue is discussed further in Section 7.2.2 below.

7.2 Approach for Infrastructure Ready Capacity

7.2.1 Three Waters Development Infrastructure

Council has collated the Three Waters infrastructure ready capacity data for this HBA. This draws on the Council's Three Waters Infrastructure modelling, inclusive of planned infrastructure investment that maintains and upgrades existing infrastructure, and most relevant to this HBA, investment that provides for future growth in demand across the urban network. Three main data sources were relied on: existing and future housing numbers, planned infrastructure upgrades, and infrastructure capacities. These are described below in more detail.

- Existing houses and demand projections: The existing houses and the future number of houses was taken from the draft Spatial Plan growth figures.[104]:
- Planned Infrastructure upgrades: the infrastructure planned projects described in the short and medium term upgrades are committed projects in QLDC's LTP 2021 and the timings of them align with it. The long term projects were from QLDC 30 year infrastructure strategy.
- Infrastructure capacity: Existing

    i) Wastewater: the major trunk mains, pump stations and wastewater treatment plants were considered. The trunk mains and pump station capacities were taken from QLDC hydraulic modelling which highlights infrastructure that is nearing capacity. The WWTP was taken from the Project Shotover WWTP Stage 3 upgrades and Project Pure WWTP Upgrades Basis of Design.

    ii) Water Supply: the water supply source (pump capacity and water take consent), water treatment plants, rising mains and major truck main were considered. For towns where QLDC do not currently service water (i.e., Cardrona, Kingston), staged upgrades will be designed for the entire schemes as opposed to individual components of the water network. The water source pump capacity and water treatment capacity were taken from

[104] Capacity Distribution Final_Inf Ass Data_120820.xlsx

QLDC Operation & Maintenance manuals. Rising and Trunk mains were taken from QLDC hydraulic model which highlights infrastructure that is nearing capacity.

- Infrastructure capacity: Future

  i) For projects in the implementation phase, Basis of Designs were used (usually short term upgrades).

  ii) For projects in the medium to long term it was assumed that the upgrades would suffice for approximately 25 years (design life of pump etc.)

Once the infrastructure capacity was determined, all the catchments that this piece of infrastructure service was identified. The capacity utilised by each catchment and the remaining capacity in it was divided up based on the proportional population.[105] This was done separately for the existing, short, medium and long term future as between each time frame the housing growth is not proportional in each catchment. This methodology is slightly limiting when it comes to the remaining capacity for each time frame as it assumes the same existing proportion remains.

In some locations, multiple works are planned in the short, medium, and long term. Where improvements to the capacity of the water supply network (for example) might support a quantum of additional houses, but improvements to the capacity of the waste-water network (for example) during that period supports a lesser quantum of additional houses, the minimum number of dwelling units supported has been adopted for the HBA in that location and time period.

Key assumptions applied by Council in preparing the Three Waters HBA data:

- QLDC's wastewater and water supply networks service resident accommodation, visitor accommodation, commercial units and industrial units. The capacity in the network for residential units was taken as a proportion of the total number of rateable units in the areas.[106] If commercial or industrial activities were to grow significantly in an area compared to the forecasts there would be less capacity for residential growth, and vice versa.
- For water supply, reservoir sizing was not used as part of the infrastructure assessment. QLDC is currently below its level of service in regard to reservoir storage, including it in the assessment limited the amount of growth that could be serviced.
- Demand management is an intervention planned for the district to reduce the water consumption, which in turn would allow more houses to be serviced within the existing infrastructure or postpone the need for water upgrades. It is assumed that demand in high usage areas is 30% and in low usage areas 15%.

The full detail of the Council's Three Waters analysis is not provided here but is summarised by reporting area in Table 7.1. The spatial extent of the reporting areas is directly comparable with the approach taken for modelling demand and plan enabled capacity, with the exception of Arrowtown, Quail Rise and Frankton. Quail Rise does not include the northern side of Five Mile in the Three Waters modelling, and

[105] I.e., Trunk Main has capacity for 1,000 houses and service Arthurs Point with 600 houses and Warren Street with 200 houses, it therefore has capacity for 200 more houses which is proportionally split as: 150 houses for Arthurs Point and 50 houses for Warren Street.

[106] The total rateable services in each area was taken from External QLDC Demand Projections to 2053_July 2020_v1.xlsx.

instead includes this serviced dwelling capacity with Frankton. The Arrowtown area includes serviced capacity in Millbrook Special Zone, which in the HBA does not form part of the urban environment. M.E accounts for these variations when drawing conclusions around infrastructure ready capacity.

Across the district, existing Three Waters capacity currently services 20,025 dwelling units in the urban environment, which is slightly (4%) greater than estimated current urban dwellings in the Council's model (inclusive of Millbrook Special Zone). The existing buffer of serviced capacity plus planned investments are anticipated to increase the number of urban dwelling units able to be serviced by Three Waters infrastructure to just over 35,700 (growth of 186%) over the long term. In the Wānaka Ward, serviced dwelling capacity in the long term increases by 10,380 additional urban dwelling units (growth of 130% above existing dwellings[107]) and in the Wakatipu Ward, serviced urban dwellings more than doubles by 2050 (growth of 25,360 above existing dwellings or a 225% increase). The single area of greatest growth (investment) in Three Waters serviced dwellings is the Southern Corridor which would provide for an additional 10,740 dwellings by 2050 (Table 7.1).

Table 7.1 – Projected Net Additional Dwellings Serviced by 3 Waters Infrastructure 2020-2050

Reporting Area	Short Term Additional Dwelling Units Serviced	Medium Term Additional Dwelling Units Serviced	Long Term Additional Dwelling Units Serviced
Arrowtown	13	158	158
Arthurs Point	66	148	526
Frankton	369	1,679	2,779
Queenstown Town Centre	588	2,353	5,983
Small Township - Wakatipu	84	419	779
Outer Wakatipu	N/A	N/A	N/A
Southern Corridor	417	4,260	10,742
Kelvin Heights	88	183	1,408
Eastern Corridor	17	737	2,737
Quail Rise	27	247	247
Total Wakatipu	1,669	10,184	25,359
Wanaka Town Centre	517	2,517	6,517
Cardrona	245	245	1,110
Outer Wanaka	N/A	N/A	N/A
Lake Hawea	90	740	2,240
Luggate	140	140	515
Total Wanaka	992	3,642	10,382
Total District	2,661	13,826	35,741

Source: QLDC. Note, detailed data took a 2021 base year not 2020, but we have adopted the short, medium and long term results as specified. In the underlying data, the northern side of Five Mile is included with Frankton, while the dwelling capacity for this area is included with Quail Rise in M.E's model in accordance with spatial boundaries provided. Growth based on count of dwelling units serviced above current estimates of existing dwellings as contained in the Council Three Waters Model.

Overall, the planned investments in Three Waters Infrastructure reflects the timing and location of growth as reflected in Council's growth projections (Change the Path scenario). The growth in dwelling capacity

[107] As estimated in the Three Waters Model.

serviced by Three Waters infrastructure in the short term is relatively minor compared to long term investment (a 14% increase or an additional 2,661 dwelling units serviced over the period 2020-2023). This is not unexpected as there is limited growth in total urban dwellings projected in Council's preferred growth scenario in the short term. But even so, this growth in Three Waters-ready capacity tracks well ahead of that projected dwelling growth over the next three years, so reduces the potential of any constraints and provides some (although not necessarily total) leeway should dwelling growth prove faster than projected. Through monitoring of growth, the Council has the ability to adjust their medium and long term planning to ensure that growth areas are prioritised for investment (with flexibility to make changes in the short term likely to more limited).

7.2.2 Land Transport Infrastructure

For the purposes of this HBA, Council and M.E have agreed to elevate consideration of land transport controlled by Waka Kotahi from the more high-level evaluation required for provision of 'additional infrastructure', to include it in the more detailed modelling and quantification of land transport as part of 'development infrastructure'. It is considered that this approach is more appropriate for QLD in light of the significant presence and role of the state highway network in the district's urban environment. It gives more appropriate weight to the current and future impact of Waka Kotahi infrastructure on Council's growth planning. It also reflects the current structure of the Council's (external) transport model that looks at the roading network as a whole, inclusive of those parts of the network that happen to be state highways.

To inform the degree to which future dwelling capacity in QLD is land transport infrastructure ready, data has been sourced from the QLD Strategic Transport Model developed and operated by Abley, which also incorporates the Wakatipu Basin Public Transport Demand Model, developed and operated by WSP. These models underpin Council's transport planning/infrastructure funding as well as transport business cases carried out in the district. The results supplied by Abley for this HBA are therefore consistent with the basis of transport planning throughout the district.

The approach that has been adopted for this first HBA under the NPS-UD (2020) is to focus on the current and projected constraints to dwelling and other growth of four strategically located bridges on the roading network that serve the Urban Environment.[108] These bridges (identified by yellow dots in Figure 7.1) are:

- the Shotover Bridge that crosses the Shotover River in Wakatipu Ward,
- the Kawarau Falls Bridge that crosses the Kawarau River in Wakatipu Ward,
- the single lane Edith Cavell Bridge that crosses the Shotover River at Arthurs Point in Wakatipu Ward, and
- the single lane Albert Town Bridge that crosses the Clutha River at Albert Town in Wānaka Ward.

Council is the controlling authority for the Edith Cavell Bridge, while the other three bridges are on the state highway network and are controlled by Waka Kotahi.

While there are other locations of the transport network that have been flagged as areas of potential or future concern and that Council are aware of, including but not limited to State Highway 6A near the marina

[108] Future updates may take a more extensive look at land transport infrastructure constraints across the network.

on Frankton Arm, it was decided not to include those locations in the modelling of land transport infrastructure ready capacity at this time. Excluding other potential road network constraints from the modelling is therefore considered a minor limitation of this HBA but does not detract from the findings and conclusions related to bridge infrastructure in this report.

Strategic Bridge Demand Catchments

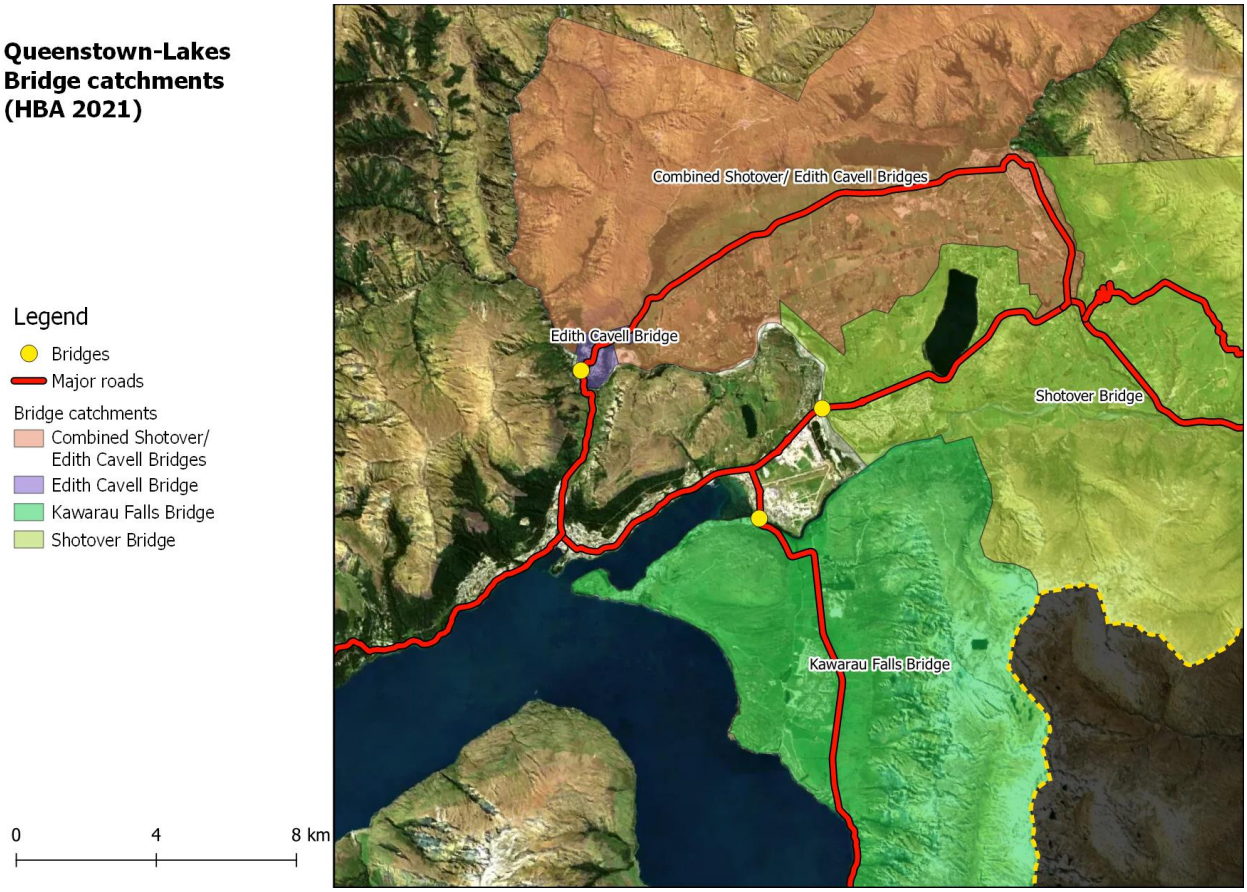
Using an understanding of trip origin-destination patterns across the roading network from more than 200 land use areas (broadly equivalent to SA1s), Abley has identified broad catchments that use each bridge in the morning and/or evening peak (i.e., commuter and other regular household travel patterns) (Figure 7.1).

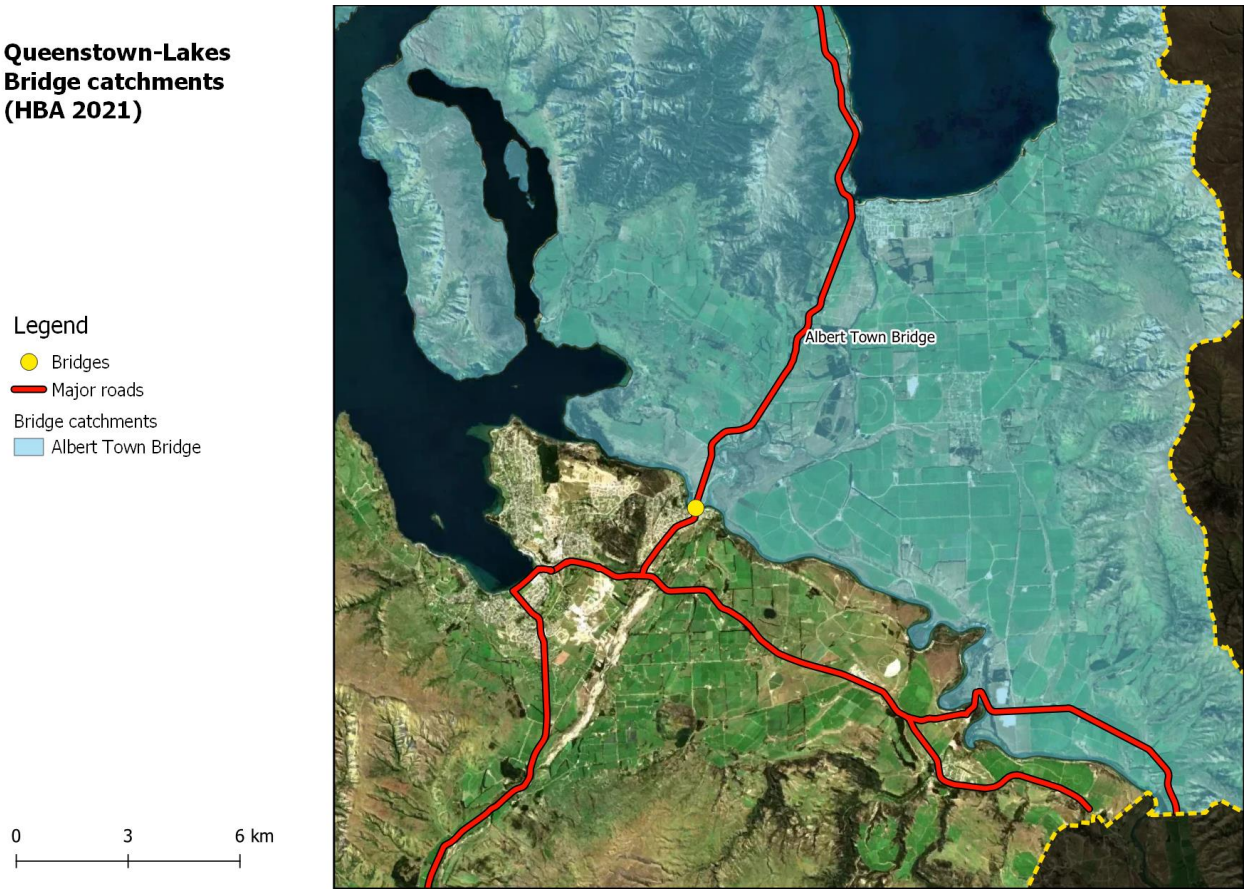
These catchments are described as follows:

- Albert Town Bridge – the urban and rural areas on the northern side of the Clutha River. This includes those households living in Hawea, Hawea Flat and the rural surrounds that travel to Wānaka on a regular basis, particularly for work but also including for schooling, shopping, sports and leisure. The Urban Environment within this catchment that is dependent on the capacity of the bridge to manage traffic flows is Lake Hawea, which includes an indicative area identified for long-term housing growth.
- Kawarau Falls Bridge - the urban and rural areas on the southern side of the Kawarau River. This includes those households living in Kelvin Heights, the Southern Corridor and the rural surrounds that travel to Frankton and/or Queenstown Town Centre on a regular basis, particularly for work but also including for schooling, shopping, sports and leisure.[109] The urban environment within this catchment that is dependent on the capacity of the bridge to manage traffic flows is Kelvin Heights and the Southern Corridor (the Jack's Point Special Zone and the two discrete areas identified for indicative long-term housing growth (Coneburn and an area south of Jack's Point)). It is noted that Kawarau Falls Bridge is on State Highway 6 which is a key transport route to/from Invercargill in the south.

[109] While Kingston residents commuting to Frankton/Queenstown would also fall into this catchment, the Strategic Transport Model does not currently extend to the southern end of the district, and so demand from Kingston is excluded from the model.

Figure 7.1 – Strategic Bridge Demand Catchments – Wakatipu and Wānaka Wards (Source: Abley)





- Shotover Bridge - the urban and rural areas on the eastern side of the Shotover River where it passes Frankton/Quail Rise. This includes those households living in Shotover Country, Lake Hayes Estate, Ladies Mile, Lake Hayes, the Gibbston Valley and the rural surrounds that travel to Frankton and/or Queenstown Town Centre on a regular basis, particularly for work but also including for schooling, shopping, sports and leisure. The Strategic Transport Model does include parts of Central Otago District (Cromwell and north). While there are a number of residents from around Cromwell that also commute to Frankton/central Queenstown and cross the Shotover Bridge, these locations of demand are not included in the Shotover Bridge catchment, but their contribution to the morning and evening peak traffic flows is still captured in the modelling results. The Urban Environment within this catchment that is dependent on the capacity of the bridge to manage traffic flows is Shotover Country, Lakes Hayes Estate, Ladies Mile, the Lake Hayes Low Density Residential Zone. This 'Eastern Corridor' includes several areas identified for indicative long term housing growth, including Ladies Mile and Lake Hayes East. A share of Arrowtown and the Wakatipu Basin is also dependent on the capacity of the Shotover Bridge, discussed below. It is noted that Shotover Bridge is on State Highway 6 and therefore has regional significance as the main route of freight coming to Queenstown/Frankton from the east (i.e., via Cromwell).
- Edith Cavell Bridge - the urban and rural areas on the north-eastern side of the Shotover River where it flows through Arthur's Point. This is mainly limited to those households living in this part of Arthurs Point, in the Urban Environment, that travel to Gorge Road, Queenstown central and Frankton via this route on a regular basis, particularly for work but also including for schooling, shopping, sports and leisure. A share of Arrowtown and the Wakatipu Basin is also dependent on the capacity of the Shotover Bridge, discussed below.

Abley have also defined one further catchment (Figure 7.1) that spans from Arthurs Point to Arrowtown along Malaghans Road and Speargrass Flat. Vehicle trips generated in this catchment are considered likely to be split 50% to the Edith Cavell Bridge and 50% to the Shotover Bridge, depending on the location of the resident household and the purpose of the trip (i.e., the destination). This 50:50 split is not a geographic one (i.e., it is not a defined part of Arrowtown), and so is treated differently in the Land Transport modelling by M.E.

Drivers of Evening Peak Trip Generation

The demand drivers in the Strategic Transport Model (households, population, employment and visitors) generating trips on the road network are sourced from Council data and align with the growth assumption used in other transport business cases carried out in the district. These are aggregated for each bridge catchment described above and are summarised in Table 7.2.

Table 7.2 – Inputs to Strategic Transport Model – Catchment Drivers of Demand (Source: Abley)

	2016-2048			
	Household Growth	Population Growth	Employment Growth	Visiting Household Growth
No Bridge Catchment	14,065	32,455	21,555	2,233
Shotover Bridge	1,674	3,900	1,083	18
Kawarau Falls Bridge	2,621	6,024	1,144	133
Edith Cavell Bridge	196	443	195	113
Albert Town Bridge	1,423	3,308	719	16
Combined Shotover / EC	305	720	1,078	18

Source: Abley (QLD Strategic Transport Model), for the purpose of the HBA 2021. The No Bridge Catchment, includes some areas outside of the District (part of Central Otago District around Cromwell).

In terms of the demand inputs to the Model, the data shows that this is based on growth of around 6,200 households within the bridge catchments between 2016 and 2048. The combined bridge catchments make up just under a third (31%) of all household and population growth in that period captured in the Model (noting that the Model is not limited to QLD). They account for just 16% of the employment growth in the Model and 12% of visiting household growth in the Model.

The model does redistribute trip origins and destinations when employment is loaded in a particular location. The employment is broken down into agricultural, manufacturing, wholesale, retail, office, education and community categories in line with SNZ ANZSIC industry classifications. Traffic is then generated by broad trip purpose (work trips, business trips, other/school trips, tourism activity etc) using regression equations which link to these industry category types.

The fact that the share of employment growth is less than the share of household growth in the combined bridge catchments signals that the main employment areas are still concentrated elsewhere – in the main urban centres of Queenstown, Frankton and Wānaka, and further, that housing growth in these catchments will continue to generate commuter and other traffic in peak times as households travel to those centres to meet their employment and other households needs.

Abley has advised that household growth pre-dates the July 2020 growth projections of resident households. In the long term[110], the total quantum of household growth in the Strategic Transport Model is slightly lower (94%) than the most recent projections for the district although the exclusion of Kingston will account for a share of the difference. Across the Wakatipu Ward, they are almost the same (98% of the latest projections, and would be even closer with Kingston included), although the Strategic Transport Model assigns considerably more growth to Kelvin Heights, Frankton and Outer Wakatipu and considerably less to the Eastern Corridor and Quail Rise, and moderately less to Arrowtown[111]. In the Wānaka Ward, the Strategic Transport Model accounts for 88% of long term household growth in the latest Council projections. It significantly overstates growth in Outer Wānaka (a rural environment area in this HBA) and understates growth in Wānaka Town Centre, Cardrona, Luggate and Lake Hawea.

[110] When compared with 2048 – being the farthest that the Strategic Transport Model projects growth.

[111] Comparisons at the reporting area approximate only as the Transport Model sub areas do not aggregate directly with some reporting area boundaries.

Not all of these differences have consequences in terms of modelling land transport serviced growth, as not all reporting areas fall within the 4 main bridge catchments modelled. M.E has assumed that growth outside of the bridge catchments is not constrained in the long term, and so any variation in household projections is irrelevant. The areas of consequence are the Southern Corridor and Kelvin Heights (within the Kawarau Falls Bridge catchment), the Eastern Corridor and Arrowtown and Outer Wakatipu (in part) (within the Shotover Bridge catchment), and Outer Wānaka and Lake Hawea (within the Albert Town Bridge catchment). When netted out, M.E consider that the Shotover Bridge Catchment under-represents total growth to a minor degree, the Kawarau Falls Bridge Catchment significantly under-represents total growth, and the Albert Town Bridge Catchment over-represents growth to a minor degree. This issue is discussed further below (and in regard to overall infrastructure ready findings).

Measuring Service Constraints on Each Bridge

The Strategic Transport Model identifies the impact that each catchment has on the Volume to Capacity ("V/C") ratio of each bridge (indexed to a value of 1) in 2016, 2028 or 2048 measured in vehicle movements. The V/C ratios take into account the impact of planned projects on the road network in line with the Queenstown Town Centre NZUP infrastructure programme and the business case preferred programme. A V/C of 1.0 reflects the boundary for Level of Service F, which is the point at which the amount of traffic approaching a point exceeds that which can pass it. Flow break-downs occur, and queuing and delays result.

A V/C ratio of 1.0 may highlight triggers for utilising the vehicle capacity more efficiently - that is, the point at which it is necessary to move additional people in the same (or fewer) number of vehicles. To some degree the capacity constraints and delays should also be expected to provide a strong push factor to change behaviour - either towards buses, car-pooling or alternative times (discussed further below). Also, if such delays and constraints were in fact a significant issue (negative amenity) for people and households who choose to live in locations impacted by bridge constraints then it would also be reasonably assumed to shift a portion of future demand to locations that didn't experience them, assuming development capacity existed elsewhere (and at affordable prices).

While the Strategic Transport Model takes into account mode shift assumptions in line with business case work, including a 40% active and public transport mode share on State Highway 6A by 2028, increasing to 60% by 2048 required to ensure that SH6A and the Queenstown CBD continues to move, and it captures some changes in trip behaviour based on employment growth assumptions, the Strategic Transport Model does not incorporate any feedback loops when V/C ratios of 1 (or higher) are identified. The Model does not explicitly seek to replicate behaviour change other that the forced 'step change' in public transport uptake.

When the V/C ratio increases between 2016, 2028 and 2048 in the transport model, this indicates that the volume of traffic over the bridge has increased in line with demand assumptions. This is correlated with increased activity within each bridge catchment and a V/C ratio greater than 1.0 indicates that the activity exceeds the capacity of the bridge. The V/C ratio has been calculated based on the evening peak as this period experienced the highest volumes of traffic across each bridge (as advised by Abley). The results from the Strategic Transport Model are contained in Table 7.3.

Table 7.3 – Volume to Capacity Ratio Results by Bridge, 2016, 2028, 2048 (Source: Abley)

	Volumne: Capacity Ratio (V/C)		
	2016	2028	2048
No Bridge Catchment			
Shotover Bridge	1.34	1.68	2.07
Kawarau Falls Bridge	0.57	0.88	1.32
Edith Cavell Bridge	0.72	0.66	0.82
Albert Town Bridge	0.77	1.22	1.68
Combined Shotover / EC	*Incorporated Above*		

Source: Abley (QLD Strategic Transport Model), for the purpose of the HBA 2021.

These results show:

- Shotover Bridge - the activity in the evening peak exceeded the capacity of the bridge well before 2016. Continuing growth in the catchment further exacerbates this issue based on the assumptions in the model.
- Kawarau Falls Bridge - the activity in the evening peak will not exceed the capacity of the bridge until sometime after 2028 but before 2048 according to the assumptions in the model. Continuing growth in the catchment after 2028 will trigger the point at which the amount of traffic approaching the bridge (heading south) exceeds that which can pass it, leading to flow break-downs, and queuing and delays. It is noted that because the Strategic Transport Model significantly under-represents projected growth in this bridge catchment (according to Council's latest projections), the year in which the V/C ratio is modelled to exceed a value of 1.0 is expected to be sooner than implied in the Model (and potentially prior to 2028).
- Albert Town Bridge - the activity in the evening peak will not exceed the capacity of the bridge until sometime after 2016 but before 2028 according to the assumptions in the model. Continuing growth in the catchment prior to and after 2028 will trigger the point at which the amount of traffic approaching the bridge (heading north towards Hawea) exceeds that which can pass it, leading to flow break-downs, and queuing and delays. This result does not take into account the traffic signals added to the Bridge in recent years which are expected to help manage congestion and improve the Level of Service of the bridge for a given amount of traffic. The timing of when the V/C ratio exceeds 1.0 is therefore conservative in the Strategic Transport Model. There is insufficient information to determine how conservative (i.e., by how much the traffic signals allow for greater catchment growth before LOS F is reached).
- Edith Cavell Bridge - the activity in the evening peak is not expected to exceed the capacity of the bridge until sometime beyond 2048. Continuing growth in the catchment does not exceed the capacity of the bridge to manage traffic flows. It is noted that the V/C improves from 0.72 in 2016 to 0.66 in 2028. According to information provided by Abley, this reflects improvements made/planned in the State Highway 6A corridor which is expected to attract more vehicles to take that route (rather than the Shotover Bridge route) where an option exists. The effect of this improvement is however more than offset by further growth projected between 2028 and 2048, when the V/C rises to 0.82.

Constraints on Household Growth

In order to translate the Strategic Transport Model outputs (Table 7.3) into a format compatible with dwelling capacity estimates in this HBA, a number of steps were taken by M.E to interpolate the data to estimate the specific year in which the V/C ratio first exceeded 1 (if applicable) and understand the count of interpolated resident households (i.e. resident dwellings) that were assumed in each part of the bridge catchments in the Strategic Transport Model in that year[112]. It is these household counts – summarised by HBA reporting area – and not the year that set the limit as to how many dwellings are 'serviced' by land transport (bridge) infrastructure.

For this HBA, M.E has taken a conservative approach and assumed in the absence of new (but as yet unknown/unplanned for) investment, that no further increase in dwellings in those areas where the V/C ratios exceeds 1.0 is appropriate as it would not be 'serviced' by land transport. This is conservative because it sets a hard line between serviced and un-serviced at LOS F and does not allow for any tolerance to the queues and congestion that occurs (in the future or already). It also does not make allowance for changes of behaviour by some private vehicle drivers, that may in turn improve outcomes for other private vehicle drivers when using those bridges.

Where areas are not constrained by a bridge over the long term future, the dwelling growth is either entirely unconstrained by land transport or M.E has set 'serviced dwellings' to the maximum 2050 resident dwellings implied by the transport model depending on whether the location was wholly or partly unconstrained.[113]

This analysis implies that the Edith Cavell bridge is not anticipated to reach a V/C ratio of 1.0 over the long term (2050) based on the household (and other) growth assumptions used in the Strategic Transport Model. This means that household growth in the Arthurs Point location (north-eastern side of the bridge) is unconstrained over the long term, and that an estimated 50% share of household growth occurring in the Wakatipu Basin/Millbrook/Arrowtown areas that use the Edith Cavell bridge in the evening peak are also unconstrained (but as it is not possible to attribute that 50% to a 'part' of those catchment areas, the greatest (2050) household count has been adopted in the model for 50% of each area).

The situation is very different for the Shotover Bridge. This bridge was, according to the Strategic Transport Model, already above a V/C ratio of 1.0 back in 2016 (and well before) and has experienced an incremental worsening of service level since then. This is despite mode share assumptions and planned investments on the road network by Council/Waka Kotahi which have mitigated the future impact, but not fully alleviated the issue relative to rapid growth on this part of the network. Based on the assumptions made by M.E, this implies that the number of resident dwellings serviced by the Shotover Bridge is (conservatively) set at the 2016 resident households in the transport model in Shotover Country, Lake Hayes Estate, Lake Hayes, parts of the Wakatipu Basin, and Gibbston Valley. This household limit also applies to those parts of the wider Wakatipu Basin and Arrowtown that use the Shotover Bridge in the evening peak. Again, as it is not possible to attribute that 50% to a 'part' of those catchment areas, the 2016 households count has been adopted in the model for 50% of each area.

[112] It is not a linear relationship in the Strategic Transport Model.

[113] While the transport model had households as at 2048, M.E has extrapolated those households to 2050 using Council growth rates by location.

The Kawarau Falls bridge does not reach a V/C ratio of 1.0 until households in the bridge catchment reach approximately 2,100 in the Strategic Transport Model. At that point, resident dwellings in Jack's Point and Kelvin Heights are constrained at a combined total of 2,100. As Kingston is outside the scope of the Transport Model, its contribution to the bridge constraint is unknown and no constraints on dwelling growth have been imposed in that location.

Last, the Albert Town bridge does not reach a V/C ratio of 1.0 until households in the bridge catchment reach approximately 1,150 in the transport model. At that point, resident dwellings in Lake Hawea, Hawea Flat, Makarora and rural areas in between are constrained at around 530 dwellings in Lake Hawea and a combined 620 across the rest of the (rural environment) catchment.

The last step by M.E is to calculate the net increase in dwellings between the 2020 count of dwellings in Strategic Transport Model in each reporting area and the number of dwellings identified as serviced by land transport (bridge)[114] infrastructure described above. That growth is not linked to a specific time period, hence is the same for the short, medium and long term. These results are summarised in Table 7.4. No sub-totals/totals are included in the table as 'N/A' implies an unconstrained dwelling growth in that reporting area (either in any time period or within the time period considered for this HBA).

The effect of the Strategic Transport Model results for the Shotover Bridge - showing that the bridge reached capacity before 2020 (based on the assumptions in that Model and made by M.E) – on the Eastern Corridor and Arrowtown are significant – implying that no capacity for growth in these reporting areas (over and above 2020) is effectively serviced by land transport. The results for the Albert Town Bridge catchment imply, based on the assumptions set out above, that minimal growth (35 additional dwellings above 2020 dwelling counts) in the urban environment of Lake Hawea (cumulatively with minimal growth in the rural environment of that catchment) can occur and be serviced by land transport. As discussed above, this is expected to under-represent serviced dwelling growth in Lake Hawea because the traffic signals added to the one-lane Albert Town bridge are expected to help manage congestion and this was not factored into the Strategic Transport Model. How much more dwelling growth could be serviced, is however unknown.[115]

Last,[116] more dwelling growth is serviced by land transport in Kelvin Heights and the Southern Corridor – over 600 in each location above 2020 dwellings. A limitation of the analysis is that it adheres to the distribution of growth in the Transport Model. The same total growth could be weighted towards the Southern Corridor and not Kelvin Heights and achieve the same impact on the Kawarau Falls Bridge. M.E has factored this into the conclusions on infrastructure ready capacity later in the report.

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[114]Households in Jack's Point and a small portion of the Eastern Corridor (where road widths allow) are also serviced by public transport, although we do not know if the public transport service has additional capacity to cater for growth or not. Hawea has no public transport services currently. We do note that as there are no priority bus lanes currently in the urban environment, that buses are impacted by overall traffic congestion, the same as private vehicles. ORC has started procurement for a 2 year DCB on public transport and bus lanes are planned westbound from the Eastern Corridor via NZUP confirmed funding, planned for 2024. This is expected to help along the state highway but won't help with traffic movements coming out of Shotover Country and will only assist with the morning peak traffic flows, not the p.m. peak modelling for this HBA.

[115] This would require changes to the Strategic Transport Model itself to find out.

[116] The results also show that some growth in Outer Wakatipu is serviced by land transport (423 additional dwellings) on the assumption that it travels via the Edith Cavell Bridge. As this area is in the rural environment, it is inconsequential to infrastructure ready capacity in the urban environment in subsequent report sections.

Table 7.4 - Dwelling Units Serviced by Land Transport Infrastructure 2020-2050

Reporting Area	Short Term	Medium Term	Long Term
Arrowtown	-	-	-
Arthurs Point	N/A	N/A	N/A
Frankton	N/A	N/A	N/A
Queenstown Town Centre	N/A	N/A	N/A
Small Township - Wakatipu	N/A	N/A	N/A
Outer Wakatipu	423	423	423
Southern Corridor	627	627	627
Kelvin Heights	603	603	603
Eastern Corridor	-	-	-
Quail Rise	N/A	N/A	N/A
Total Wakatipu			
Wanaka Town Centre	N/A	N/A	N/A
Cardrona	N/A	N/A	N/A
Outer Wanaka	36	36	36
Lake Hawea	35	35	35
Luggate	N/A	N/A	N/A
Total Wanaka			
Total District			

Source: Abley, M.E. N/A equates to no dwelling growth constraint associated with land transport (bridge) infrastructure over the long term.

7.3 Combined Development Infrastructure Results

Table 7.5 combines the results from the Three Waters and land transport (bridge focussed) modelling. A key difference in the two inputs is that net additional dwelling growth able to be serviced by Three Waters increases over the short, medium, and long term because of ongoing planned investment. By contrast, a single amount of net additional dwelling growth is able to be serviced by land transport (bridge) infrastructure because no investment is confirmed/planned by QLDC or Waka Kotahi in the short, medium, or long term assessed in this HBA.[117]

The minimum dwelling growth is applied in each location in each time period. This is appropriate as improvements in one form of infrastructure do not offset limits in another form of infrastructure as it is the combined effect that counts in an integrated approach to urban planning. The minimum therefore represents the 'maximum' dwelling growth that is infrastructure ready. Where there was no applicable constraint in one form of infrastructure, the minimum is based on the dwelling growth estimate of the other form of infrastructure. As a result, not all growth is represented in the above results, hence sub-totals and totals are not provided for some columns as they would be misleading.

[117] A business case has been prepared for the Edith Cavell Bridge in Arthurs Point, and investment of $19m is now included in the LTP. Due to the timing of that funding agreement, it was not able to be included in this HBA but will be captured in future updates.

Table 7.5 - Combined Infrastructure Ready Dwelling Growth by Reporting Area (2020-2050)

Reporting Area	Short Term			Medium Term			Long Term		
	3 Waters	Land Transport	Minimum Serviced Dwellings	3 Waters	Land Transport	Minimum Serviced Dwellings	3 Waters	Land Transport	Minimum Serviced Dwellings
Arrowtown	13	-	-	158	-	-	158	-	-
Arthurs Point	66	N/A	66	148	N/A	148	526	N/A	526
Eastern Corridor	17	-	-	737	-	-	2,737	-	-
Frankton	369	N/A	369	1,679	N/A	1,679	2,779	N/A	2,779
Kelvin Heights	88	603	88	183	603	183	1,408	603	603
Outer Wakatipu **	N/A	423	423	N/A	423	423	N/A	423	423
Quail Rise	27	N/A	27	247	N/A	247	247	N/A	247
Queenstown Town Centre	588	N/A	588	2,353	N/A	2,353	5,983	N/A	5,983
Small Township - Wakatipu	84	N/A	84	419	N/A	419	779	N/A	779
Southern Corridor	417	627	417	4,260	627	627	10,742	627	627
Total Wakatipu			2,061			6,079			11,967
Cardrona	245	N/A	245	245	N/A	245	1,110	N/A	1,110
Lake Hawea *	90	35	35	740	35	35	2,240	35	35
Luggate	140	N/A	140	140	N/A	140	515	N/A	515
Outer Wanaka **	N/A	36	36	N/A	36	36	N/A	36	36
Wanaka Town Centre	517	N/A	517	2,517	N/A	2,517	6,517	N/A	6,517
Total Wanaka			973			2,973			8,213
Total District			3,034			9,052			20,180
Total Urban Environment			2,575			8,593			19,721

*Source: QLDC, Abley, M.E. Net Growth in Serviced Dwellings (2020 Base). * Land Transport results conservative. ** Rural environment only. N/A equates to no dwelling growth constraint associated with land transport (bridge) infrastructure over the long term.*

The 'minimum serviced dwellings' in the short, medium, and long term have been colour coded to highlight whether the minimum is based on the impact of Three Waters or Land Transport (bridge) infrastructure. In terms of locations within the urban environment, net additional dwelling growth in Arrowtown and the Eastern Corridor are constrained[118] by land transport infrastructure in the short term, although not significantly relative to Three Waters constraints on growth. Given the uncertainty around Lake Hawea results for land transport, the Three Waters constraint is considered more reliable in the short term (90 additional dwellings 2020-2023), but we have taken a conservative approach and adopted the land transport minimum. Overall, by 2023, it is estimated that there would be serviced capacity for just over 2,570 additional dwellings in the urban environment (Table 7.5). As commercially feasible capacity significantly exceeds this (as it does in all time periods), it is assumed that all infrastructure ready capacity is also commercially feasible[119].

In the medium term, the same areas are constrained by land transport, and this is more significant relative to the growth capacity enabled by Three Waters investment. The Eastern Corridor could, for example,

[118] This is not an absolute constraint on demand. This is assessed later in the report.

[119] In Cardrona and Luggate the planned long term Three Waters Infrastructure has capacity for additional dwellings that exceeds the number of dwellings that are plan enabled in residential enabled zones in the long term. This indicates that the capacity is intended to also cater for demand that is non-residential (i.e., capacity in the Visitor Accommodation sub-zone in Cardrona or other commercial business capacity in those locations); is non-urban (i.e., servicing some rural residential demand in zones adjacent to urban density zones); or demand beyond the long term. In these two locations therefore, not all infrastructure served capacity is also commercially feasible, as feasible capacity is a sub-set of plan enabled dwelling capacity in the urban residential and residential and business zones only. By in large though, we consider that the assumption that all infrastructure served dwelling capacity is also feasible in the short, medium and long term is a reasonable one (limitations of the data notwithstanding), and is certainly true for all other urban locations.

service an additional 737 dwellings if not for the modelled constraints on the Shotover Bridge (and based on the assumptions applied in this HBA) which indicatively enables no growth in the medium term. It is possible that Lake Hawea could be constrained by land transport in the medium term (although not at the level of growth shown), but there is insufficient data to test this. The Southern Corridor is significantly constrained relative to Three Waters dwelling capacity growth – just 627 additional dwellings indicatively serviced by the Kawarau Falls Bridge compared to over 4,000 serviced by Three Waters investment planned. As Kelvin Heights would have been constrained at 183 additional dwellings in the medium term due to Three Waters, one could reallocate the surplus land transport growth (420 dwellings) and assign this to the Southern Corridor to increase that growth to nearly 1,050. While this would be an improvement on growth capacity, but still only a quarter of planned growth by Three Waters infrastructure. Overall, by 2030, it is estimated that there would be serviced capacity for just over 8,590 additional dwellings in the urban environment (Table 7.5), all of which is assumed to be commercially feasible to develop.

In the long term, the results are the same, and the land transport infrastructure constraints are more significant relative to the opportunity for growth planned through Three Waters infrastructure investment. Of all the locations where indicative long term expansion areas are identified in the Draft Spatial Plan, only the one in Wānaka Town Centre is unconstrained by bridge infrastructure (and growth is limited to (a significant) 6,517 net additional dwellings provided for by Three Waters infrastructure investment. Overall, by 2050, it is estimated that there would be serviced capacity for approximately 19,720 additional dwellings in the urban environment (Table 7.5). Again, all of this infrastructure ready capacity is assumed to be commercially feasible to develop.

The Eastern Corridor, Southern Corridor and Lake Hawea are the areas where the requirement to be 'infrastructure ready' in the short, medium, and long term will be key issues for Council.[120] How significant those issues are, depends on the demand projected for those locations and whether any shortfalls in reasonably expected to be realised and infrastructure ready capacity can be met by surpluses in other nearby locations (and at an affordable price). This is discussed in the following section.

[120] While it is not uncommon in QLD for private developers to put in necessary infrastructure up front in order to bring forward development potential, this HBA has not assumed any private sector role in resolving congestion on stage highway bridges in foreseeable future.

8 Serviced, Feasible & Reasonably Expected Capacity

This section contains the results of infrastructure serviced, feasible and reasonably expected to be realised dwelling capacity estimates in the short, medium, and long term, collectively referred to here as "RER" capacity. The results estimate the amount of commercially feasible capacity (calculated in Section 6) that is likely to represent RER capacity across each time period within each of the reporting areas. They take into account the modelled infrastructure constraints across the district outlined in Section 7 as well as the likely development patterns across the district's urban environment.

A detailed discussion on the approach used to model RER is contained in the supporting Technical Report. The approach estimates the commercially feasible development options that are likely to represent RER capacity. A detailed analysis of Code of Compliance ("CCC") and building consent data was undertaken to establish the recent patterns and relative proportions of development activity occurring across the district's existing and greenfield urban environment. Levels of development were then limited by infrastructure constraints within each area where applicable. The RER capacity reflects the likely yields in the commercially feasible greenfield areas, and the corresponding levels of development across different parts of the existing urban environment. It is not an estimate of up-take of capacity as this is driven by demand projections by dwelling type, location, and price band (discussed already in Section 2).

The following outlines estimated RER capacity within each time period across the district's urban environment. These form the inputs into the subsequent sufficiency assessment in Part 3 of this HBA. Refer to the supporting Technical Report for tables of RER capacity by dwelling type in the short, medium and long term (also used as an input to sufficiency by dwelling type).

8.1 Short Term Serviced, Feasible & RER Capacity

Table 8.1 shows the estimated RER urban capacity in the short term across each of the district's reporting areas. It is estimated that around 9% of the commercially feasible capacity (and 5% of the plan enabled capacity) within the district's urban environment is likely to represent RER capacity by 2023. This equates to an estimated 2,400 additional dwellings.

The greenfield areas that are projected to be feasible in the short term have an estimated yield of 13,600 additional dwellings. Once infrastructure caps are applied, and further differences in likely yields are taken into account, this results in an RER capacity for an additional 1,500 dwellings – 11% of the commercially feasible yield.

Large amounts of the feasible greenfield areas are restricted in their development potential through the infrastructure limitations. Feasible greenfield development capacity is largely limited by infrastructure constraints across most areas of the urban environment. However, development, in the short-term, may not actually be constrained within some of these areas as there is still some growth that could occur within

the levels of infrastructure provision as only a portion of the feasible capacity would be likely to be taken up in the absence of infrastructure constraints anyway. The sufficiency assessment will therefore identify the areas where the infrastructure constraints will become binding on growth.

The largest areas of short term greenfield RER capacity occur within the Southern Corridor, Wānaka Town Centre, Frankton and Queenstown Town Centre. Together these areas have an estimated greenfield RER capacity of 1,100 additional dwellings. This amounts to nearly three-quarters (73%) of the estimated greenfield RER capacity.

The RER capacity within the existing urban environment amounts to an additional 900 dwellings based on the relative proportions of development across the greenfield and existing urban areas. Most of the existing urban RER capacity is estimated to occur within the main urban centres of Queenstown Town Centre and Wānaka Town Centre, reflecting patterns of recent urban development. It is estimated that development patterns within Queenstown Town Centre will contain a higher proportion of higher density dwelling typologies, while Wānaka is likely to have a greater share of lower density development through the construction of standalone dwellings.

The modelling also restricts the potential development options within the existing urban areas by the infrastructure catchment limitations. Taking these into account, together with the relative proportions of greenfield RER capacity, the existing urban RER capacity equates to around 37% of the district's total urban RER capacity. This is a slightly lower share of development than estimated over the last five years (40%) from patterns of development within CCCs and building consents. It reflects the large scale of capacity within greenfield areas.

Table 8.2 highlights the share of short term plan enabled capacity that is RER (serviced, commercially feasible and reasonably expected to be realised). In total, 5% of the plan enabled capacity is estimated to represent RER across the district's urban environment. Higher shares of the plan enabled greenfield capacity is estimated to be RER (7% overall), than the existing urban environment (4% overall).

Table 8.1 – Short Term Serviced, Feasible and RER Urban Dwelling Capacity

		Commercially Feasible & RER Capacity														
		Infill				Redevelopment					Greenfield				Combined Total	
Ward	Reporting Area	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Max Infill or Redevelop-ment	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	29	16	-	29	39	14	-	39	44	21	17	-	21	50	66
Wakatipu	Eastern Corridor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Frankton	20	9	15	36	83	70	24	107	129	12	12	227	238	274	367
Wakatipu	Kelvin Heights	7	10	7	11	54	57	10	58	60	28	28	-	28	39	88
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	7	-	-	7	7	7
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	6	9	17	17	17	17
Wakatipu	Queenstown Town Centre	115	166	144	226	147	225	265	345	387	111	121	105	201	427	588
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	59	16	-	76	76	76
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	323	57	16	396	396	396
Wakatipu Ward Sub-Total		**171**	**201**	**167**	**303**	**323**	**367**	**299**	**549**	**620**	**567**	**260**	**364**	**985**	**1,287**	**1,604**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	124	31	-	155	155	155
Wanaka	Lake Hawea	-	-	4	4	-	-	3	3	5	21	21	-	21	25	26
Wanaka	Luggate	4	-	-	4	4	-	-	4	4	87	-	-	87	91	91
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	114	122	31	159	173	145	48	207	252	189	153	61	265	424	517
Wanaka Ward Sub-Total		**119**	**122**	**34**	**167**	**177**	**145**	**51**	**214**	**261**	**421**	**204**	**61**	**528**	**695**	**789**
Total Urban Environment		**290**	**324**	**201**	**469**	**501**	**511**	**349**	**763**	**881**	**988**	**464**	**426**	**1,513**	**1,982**	**2,394**

Source: M.E QLD Capacity Model 2021 *Development Infrastructure Ready* *Short Term*

Table 8.2 – Short Term Serviced, Feasible & RER Capacity as a Share of Plan Enabled Capacity

Ward	Reporting Area	Commercially Feasible & RER Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wakatipu	Arthurs Point	8%	4%	0%	7%	5%	2%	0%	5%	5%	10%	8%	0%	10%	8%	6%
Wakatipu	Eastern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wakatipu	Frankton	12%	3%	23%	10%	9%	8%	12%	10%	11%	11%	11%	6%	6%	6%	7%
Wakatipu	Kelvin Heights	2%	2%	3%	2%	2%	2%	3%	2%	2%	4%	4%	0%	4%	3%	3%
Wakatipu	Outer Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	63%	0%	0%	63%	63%	63%
Wakatipu	Quail Rise	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%
Wakatipu	Queenstown Town Centre	7%	6%	6%	6%	4%	4%	5%	5%	5%	11%	11%	6%	8%	7%	6%
Wakatipu	Small Township - Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	5%	2%	0%	5%	5%	5%
Wakatipu	Southern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	9%	9%	9%	9%	9%	9%
Wakatipu Ward Sub-Total		**6%**	**4%**	**6%**	**5%**	**3%**	**3%**	**5%**	**4%**	**4%**	**7%**	**5%**	**5%**	**6%**	**6%**	**5%**
Wanaka	Cardrona	0%	0%	0%	0%	0%	0%	0%	0%	0%	20%	20%	0%	21%	21%	21%
Wanaka	Lake Hawea	0%	0%	20%	2%	0%	0%	8%	1%	2%	3%	3%	0%	3%	3%	3%
Wanaka	Luggate	36%	0%	0%	36%	8%	0%	0%	8%	8%	20%	0%	0%	20%	21%	19%
Wanaka	Outer Wanaka	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wanaka	Wanaka Town Centre	5%	4%	4%	4%	2%	2%	3%	3%	3%	6%	8%	4%	5%	5%	4%
Wanaka Ward Sub-Total		**5%**	**3%**	**5%**	**4%**	**2%**	**2%**	**4%**	**3%**	**3%**	**9%**	**6%**	**4%**	**8%**	**6%**	**5%**
Total Urban Environment		**5%**	**4%**	**6%**	**5%**	**3%**	**3%**	**5%**	**3%**	**4%**	**8%**	**6%**	**5%**	**7%**	**6%**	**5%**

Source: M.E QLD Capacity Model 2021 *Development Infrastructure Ready* *Short Term*

8.2 Medium Term Serviced, Feasible & RER Capacity

Table 8.3 shows the estimated RER capacity across the district's urban environment in the medium term. It is estimated that there is a RER capacity of 8,500 additional dwellings. Around two-thirds (66%) of the RER capacity is estimated to occur within the greenfield areas, with an additional 5,600 dwellings. The remaining 34% is estimated to occur within the existing urban environment, at around 2,900 additional urban dwellings.

The share of feasible capacity estimated to be RER is estimated to increase to around 27% in the medium term, up from 9% in the short term. The share is slightly higher, at 29%, within the greenfield areas, and at 23% within the existing urban area taking into account the relative proportions of development patterns. Increases in the share of feasible capacity as RER are predominantly driven by the increased provision of infrastructure within the time period.

In the medium-term, Frankton, Wānaka Town Centre and Queenstown Town Centre form the largest locations of greenfield RER capacity. Substantial increases in the infrastructure provision within these locations mean that a higher proportion of the commercially feasible capacity is likely to represent RER. Increases in greenfield RER capacity within these areas account for nearly three-quarters (74%; +3,000 dwellings since the short term) of the growth in greenfield RER capacity since the short term, and half of the increase in RER capacity (since the short term) overall across both the greenfield and existing urban area.

Queenstown Town Centre and Wānaka Town Centre also form the largest locations of RER capacity within the existing urban area in the medium term. Together they account for most (87%) of the district's RER capacity within the existing urban area. Increases in infrastructure supply within these locations is a key driver of the increase in RER capacity from the short term. Almost all (93%) of the growth of RER capacity within the existing urban area between the short and medium term is estimated to occur within these two areas.

Table 8.4 highlights the share of medium term plan enabled capacity that is also RER (serviced, commercially feasible and reasonably expected to be realised). In total, 18% of the plan enabled capacity is estimated to represent RER across the district's urban environment. A higher share of the plan enabled greenfield capacity is estimated to be RER (24% overall), than the existing urban environment (12% overall). Increases in the provision of infrastructure have a large effect on the increase in share of plan enabled capacity as RER. The infrastructure limits are exceeded by the commercially feasible development options in nearly all locations, suggesting that the RER is not limited by the range of feasible development options.

Table 8.3 – Medium Term Serviced, Feasible and RER Urban Dwelling Capacity

		Commercially Feasible & RER Capacity														
		Infill				Redevelopment					Greenfield				Combined Total	
Ward	Reporting Area	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Max Infill or Redevelop-ment	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	27	22	4	31	39	32	9	48	51	96	77	-	96	126	147
Wakatipu	Eastern Corridor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Frankton	40	18	29	70	161	136	47	208	250	41	41	1,358	1,399	1,469	1,649
Wakatipu	Kelvin Heights	9	13	9	14	66	70	12	71	74	109	109	-	109	123	182
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	11	-	-	11	11	11
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	83	130	244	247	247	247
Wakatipu	Queenstown Town Centre	397	576	500	783	510	779	917	1,193	1,338	442	481	625	1,010	1,793	2,348
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	316	103	-	419	419	419
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	511	90	26	627	627	627
Wakatipu Ward Sub-Total		**473**	**628**	**541**	**897**	**777**	**1,018**	**984**	**1,519**	**1,712**	**1,608**	**1,031**	**2,253**	**3,918**	**4,815**	**5,630**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	180	45	-	225	225	225
Wanaka	Lake Hawea	5	3	1	6	8	3	0	9	10	24	23	-	24	30	34
Wanaka	Luggate	4	-	-	4	4	-	-	4	4	127	-	-	127	131	131
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	569	569	137	778	827	658	214	978	1,215	815	590	390	1,302	2,080	2,517
Wanaka Ward Sub-Total		**578**	**573**	**138**	**788**	**840**	**661**	**214**	**991**	**1,229**	**1,146**	**658**	**390**	**1,678**	**2,466**	**2,907**
Total Urban Environment		**1,051**	**1,201**	**679**	**1,685**	**1,616**	**1,679**	**1,199**	**2,510**	**2,942**	**2,753**	**1,690**	**2,643**	**5,596**	**7,281**	**8,537**

Source: M.E QLD Capacity Model 2021 *Development Infrastructure Ready* *Medium Term*

Table 8.4 – Medium Term Serviced, Feasible & RER Capacity as a Share of Plan Enabled Capacity

Ward	Reporting Area	Commercially Feasible & RER Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wakatipu	Arthurs Point	5%	3%	4%	5%	4%	3%	3%	4%	4%	46%	37%	0%	46%	15%	10%
Wakatipu	Eastern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wakatipu	Frankton	23%	6%	44%	19%	18%	15%	22%	19%	22%	40%	40%	35%	35%	34%	32%
Wakatipu	Kelvin Heights	3%	2%	4%	2%	3%	3%	4%	3%	3%	15%	15%	0%	15%	9%	5%
Wakatipu	Outer Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	97%	0%	0%	97%	97%	97%
Wakatipu	Quail Rise	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	10%	12%	11%	11%	11%
Wakatipu	Queenstown Town Centre	24%	19%	20%	21%	14%	14%	16%	16%	17%	44%	43%	37%	40%	29%	23%
Wakatipu	Small Township - Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	29%	15%	0%	30%	30%	30%
Wakatipu	Southern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	14%	14%	14%	14%	14%	14%
Wakatipu Ward Sub-Total		**16%**	**12%**	**19%**	**15%**	**8%**	**8%**	**15%**	**11%**	**12%**	**20%**	**21%**	**29%**	**25%**	**22%**	**19%**
Wanaka	Cardrona	0%	0%	0%	0%	0%	0%	0%	0%	0%	28%	24%	0%	29%	28%	28%
Wanaka	Lake Hawea	1%	0%	3%	1%	1%	0%	1%	1%	1%	2%	2%	0%	2%	2%	1%
Wanaka	Luggate	34%	0%	0%	34%	8%	0%	0%	8%	8%	29%	0%	0%	29%	29%	27%
Wanaka	Outer Wanaka	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wanaka	Wanaka Town Centre	23%	15%	19%	18%	10%	8%	15%	11%	13%	28%	30%	25%	27%	22%	18%
Wanaka Ward Sub-Total		**20%**	**13%**	**19%**	**15%**	**9%**	**7%**	**15%**	**9%**	**12%**	**23%**	**18%**	**25%**	**23%**	**20%**	**16%**
Total Urban Environment		**18%**	**12%**	**19%**	**15%**	**8%**	**8%**	**15%**	**10%**	**12%**	**21%**	**20%**	**28%**	**24%**	**21%**	**18%**

Source: M.E QLD Capacity Model 2021 *Development Infrastructure Ready* *Medium Term*

8.3 Long Term Serviced, Feasible & RER Capacity

Table 8.5 shows the estimated RER capacity in the long term by location within Queenstown's urban environment. In total, there is an estimated RER capacity of 19,200 additional dwellings. Around two-thirds (66%) of the capacity is within the greenfield areas, amounting to 12,800 additional dwellings, and 34% (6,500 dwellings) within the existing urban area.

RER capacity is estimated to increase by an additional 10,700 dwellings between the medium and long term. Most of the increase is projected to occur within the greenfield areas where there are sizeable areas of greenfield zoned opportunity in the long term through the indicative urban expansion areas identified in the Draft Spatial Plan.

Wānaka Town Centre, Queenstown Town Centre and Frankton are the largest areas of projected increase in the RER capacity from the medium term. Their greenfield RER capacity is projected to increase by a combined additional 5,700 dwellings, which amounts to nearly four-fifths (79%) of the total growth in greenfield RER capacity. Growth is driven by increases in infrastructure provision across these areas together with the expansion of the zoned growth areas in the long term.

Queenstown Town Centre, followed to a smaller extent by Wānaka Town Centre, are also projected to have the largest increases in RER within the existing urban area. Together they account for 83% of the growth in RER within the existing urban environment, with nearly three-quarters of this increase occurring within Queenstown Town Centre.

If these patterns of growth occur in the future, then there are likely to be gradual changes to the overall spatial structure of the district's urban environment. Intensification would be likely to increase within Queenstown Town Centre, with an eventual urban form that has a high share of attached dwellings. There would be large scale urban expansion of Wānaka, with substantial increases in its overall scale and share of dwelling activity within the district. The form of Wānaka Town Centre would be likely to differ to Queenstown Town Centre with a higher share of development as lower to medium density dwellings over a larger area (potentially the result of being less geographically constrained for growth).

Overall, it is estimated that around 37% of commercially feasible capacity is likely to represent RER capacity by 2050. The share is lower, at 33%, within the greenfield areas due to constraints in infrastructure provision. Within the existing urban area, it is estimated that around half (49%) of the commercially feasible capacity would represent RER capacity. However, this share is higher under the current-prices scenario as the total size of the feasible capacity is largely held constant.

The above potential changes to the spatial structure of the district's urban environment correspond to the patterns of infrastructure provision, and secondly to the provision of greenfield areas of future expansion. The RER capacity is concentrated into these areas due to increases in the infrastructure, with increases in other areas correspondingly limited by the constraints in infrastructure.

The assessment finds that combined (existing urban and greenfield) RER capacity reaches the infrastructure limits in nearly all areas, with the commercially feasible development options exceeding the infrastructure caps in most locations. Development in the southern and eastern parts of the district's Wakatipu Ward urban environment is estimated to be constrained by infrastructure provision. There is only limited

projected RER capacity within the Southern Corridor and Eastern Corridor areas due to modelled land transport (bridge) infrastructure constraints.

Within Wānaka Ward, the same occurs within Lake Hawea, where RER capacity is almost completely constrained by no further planned infrastructure provision (i.e., additional capacity on the one-lane Albert Town Bridge and based on assumptions made in the infrastructure modelling). The plan enabled and commercially feasible capacity assessments show that there are sizeable portions of zoned capacity in this location, with a large share that is projected to represent feasible development options.

The estimated feasible capacity within Wānaka Town Centre also exceeds the RER capacity by a substantial margin. It shows that there are over double to amount of feasible dwelling development opportunities than RER capacity, which is capped by Three Waters infrastructure provision. However, the infrastructure limits within this area may not result in an actual constraint on development as the level of demand growth may be within the level of opportunity provided to the market. This is assessed within the sufficiency assessment.

Table 8.6 highlights the share of long term plan enabled capacity that is also RER (serviced, commercially feasible and reasonably expected to be realised). In total, 30% of the plan enabled capacity is estimated to represent RER across the district's urban environment. A higher share of the plan enabled greenfield capacity is estimated to be RER (33% overall), than the existing urban environment (26% overall). Increases in the provision of infrastructure have a large effect on the increase in share of plan enabled capacity as RER. The infrastructure limits are exceeded by the commercially feasible development options in nearly all locations, suggesting that the RER is not limited by the range of feasible development options.

Table 8.5 – Long Term Serviced, Feasible and RER Urban Dwelling Capacity

Ward	Reporting Area	Commercially Feasible & RER Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Arthurs Point	175	146	24	199	255	211	59	310	330	193	155	-	193	391	523
Wakatipu	Eastern Corridor	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wakatipu	Frankton	70	31	51	123	284	239	82	366	439	56	56	2,284	2,340	2,462	2,779
Wakatipu	Kelvin Heights	26	35	25	39	184	197	33	199	207	397	397	-	397	436	603
Wakatipu	Outer Wakatipu	-	-	-	-	-	-	-	-	-	13	-	-	13	13	13
Wakatipu	Quail Rise	-	-	-	-	-	-	-	-	-	83	130	244	247	247	247
Wakatipu	Queenstown Town Centre	1,031	1,495	1,298	2,034	1,326	2,025	2,381	3,099	3,478	981	1,068	1,652	2,505	4,539	5,983
Wakatipu	Small Township - Wakatipu	-	-	-	-	-	-	-	-	-	580	199	-	779	779	779
Wakatipu	Southern Corridor	-	-	-	-	-	-	-	-	-	505	41	82	627	627	627
Wakatipu Ward Sub-Total		**1,302**	**1,708**	**1,398**	**2,395**	**2,049**	**2,672**	**2,556**	**3,974**	**4,454**	**2,807**	**2,044**	**4,262**	**7,100**	**9,495**	**11,554**
Wanaka	Cardrona	-	-	-	-	-	-	-	-	-	600	150	-	750	750	750
Wanaka	Lake Hawea	5	3	1	6	8	3	0	9	10	25	24	-	25	31	35
Wanaka	Luggate	6	-	-	6	6	-	-	6	6	373	-	-	373	379	379
Wanaka	Outer Wanaka	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Wanaka	Wanaka Town Centre	914	915	220	1,250	1,357	1,085	344	1,600	1,981	3,312	3,065	1,236	4,536	5,786	6,517
Wanaka Ward Sub-Total		**926**	**918**	**221**	**1,262**	**1,372**	**1,088**	**344**	**1,615**	**1,997**	**4,309**	**3,239**	**1,236**	**5,683**	**6,945**	**7,680**
Total Urban Environment		**2,228**	**2,626**	**1,619**	**3,657**	**3,421**	**3,760**	**2,900**	**5,589**	**6,451**	**7,116**	**5,283**	**5,498**	**12,783**	**16,440**	**19,234**

Source: M.E QLD Capacity Model 2021 *Development Infrastructure Ready* *Long Term*

Table 8.6 – Long Term Serviced, Feasible & RER Capacity as a Share of Plan Enabled Capacity

Ward	Reporting Area	Commercially Feasible & RER Capacity Infill				Redevelopment				Max Infill or Redevelop-ment	Greenfield				Combined Total	
		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Stand-alone House	Duplex/ Terrace	Apart-ments	MAX		Stand-alone House	Duplex/ Terrace	Apart-ments	MAX	Green-field and Max Infill	Greenfield and Max Infill or Redevelop-ment
Wakatipu	Arrowtown	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wakatipu	Arthurs Point	34%	22%	26%	30%	23%	17%	22%	25%	27%	92%	74%	0%	92%	45%	36%
Wakatipu	Eastern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wakatipu	Frankton	40%	10%	78%	33%	31%	26%	40%	33%	38%	55%	55%	59%	59%	56%	54%
Wakatipu	Kelvin Heights	8%	6%	10%	7%	8%	8%	10%	8%	8%	53%	53%	0%	53%	33%	18%
Wakatipu	Outer Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	115%	0%	0%	115%	115%	115%
Wakatipu	Quail Rise	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%	10%	12%	11%	11%	11%
Wakatipu	Queenstown Town Centre	61%	50%	51%	55%	35%	35%	42%	41%	45%	97%	95%	99%	98%	73%	59%
Wakatipu	Small Township - Wakatipu	0%	0%	0%	0%	0%	0%	0%	0%	0%	53%	28%	0%	56%	56%	56%
Wakatipu	Southern Corridor	0%	0%	0%	0%	0%	0%	0%	0%	0%	6%	1%	6%	6%	6%	6%
Wakatipu Ward Sub-Total		**43%**	**34%**	**48%**	**41%**	**20%**	**22%**	**40%**	**28%**	**31%**	**19%**	**18%**	**45%**	**29%**	**32%**	**30%**
Wanaka	Cardrona	0%	0%	0%	0%	0%	0%	0%	0%	0%	94%	81%	0%	95%	93%	92%
Wanaka	Lake Hawea	1%	0%	3%	1%	1%	0%	1%	1%	1%	1%	1%	0%	1%	1%	1%
Wanaka	Luggate	53%	0%	0%	53%	12%	0%	0%	12%	12%	86%	0%	0%	86%	85%	78%
Wanaka	Outer Wanaka	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Wanaka	Wanaka Town Centre	37%	24%	31%	29%	17%	14%	24%	17%	21%	42%	43%	41%	42%	38%	32%
Wanaka Ward Sub-Total		**31%**	**20%**	**30%**	**24%**	**15%**	**12%**	**24%**	**15%**	**19%**	**36%**	**30%**	**41%**	**38%**	**34%**	**30%**
Total Urban Environment		**37%**	**27%**	**44%**	**33%**	**18%**	**17%**	**37%**	**22%**	**26%**	**27%**	**24%**	**44%**	**33%**	**33%**	**30%**

Source: M.E QLD Capacity Model 2021 *Development Infrastructure Ready* *Long Term*

8.4 Serviced, Feasible & RER Capacity Summary

The modelling within this section has estimated the future patterns of RER capacity across QLD's urban environment. The estimates of RER capacity taking into account the zoned potential, the commercial feasibility of development, the infrastructure constraints by location and the likely patterns of development across existing urban areas and greenfield urban expansion.

The assessment has found that the share of commercially feasible capacity that is likely to represent RER development options increases through time. In the short term, it is estimated that around 9% of feasible capacity is likely to be RER capacity, increasing to around 37% in the long term. This amounts to an RER capacity of 2,400 additional dwellings in the short term, 8,500 dwellings in the medium term and 19,200 dwellings in the long term.

Patterns of infrastructure provision were found to be likely to have a key influence on the spatial patterns of potential growth across the district's urban environment, together with the provision of areas of future greenfield expansion. RER capacity within the Southern and Eastern corridors, and Lake Hawea is significantly constrained by land transport infrastructure limitations, with little RER capacity within these areas. If land transport infrastructure constraints are ignored (or mitigated/resolved), then there are sizeable amounts of feasible capacity within these locations.

The future potential spatial structure of QLD's urban environment is also likely to be significantly influenced by the long term zoning pattern. Large areas for indicative future urban expansion have been identified within the Draft Spatial Plan. If realised, then this would result in large-scale expansion in the size of some parts of the urban environment. Wānaka has sizeable areas of future zoning potential, with a large amount planned to be served by infrastructure.

The RER modelling has estimated that the largest areas of RER capacity will occur within the main urban areas of Queenstown Town Centre and Wānaka Town Centre reporting areas. If these growth patterns are realised, then these areas, particularly Wānaka, are likely to increase their relative role within the district. RER capacity within Queenstown Town Centre reporting area is estimated to be characterised by higher density development, while a greater share of the Wānaka RER capacity is lower to medium density housing.

The analysis has not found any evidence of constraints in the zoned opportunity for development. It has found that there are large amounts of commercially feasible capacity beyond that which is RER across most locations. This will be further assessed within the sufficiency assessment to compare the feasible development options to the likely future demand. However, the scale of feasible capacity suggests that there are a wide range of feasible options within which to meet demand. There are also many locations where there is further zoned opportunity that is not yet feasible, particularly for future intensification within the existing urban area.

In many locations, the RER capacity is estimated to equate to the infrastructure limits, with a substantial additional amount of feasible development options beyond the infrastructure limit. In some locations this may reflect an infrastructure constraint on future growth where the estimated RER capacity is small. This is particularly evident across much of the southern and eastern areas of Wakatipu Ward where there is very limited RER capacity, but large amounts of feasible capacity are estimated.

It is important to note that the modelling takes a firm (and therefore, conservative) approach to land transport infrastructure constraints where it is assumed that no further growth is able to occur once a certain level of congestion on a piece of infrastructure is reached. If infrastructure constraints are relaxed in the modelling, and further growth is able to occur beyond the level of congestion, then it is likely that RER capacity would increase within the southern and eastern urban areas of Queenstown and also in Lake Hawea.

PART 3 – CONCLUSIONS

9 Sufficiency of Capacity

This section assesses the sufficiency of capacity to meet future urban dwelling demand across the district's urban environment. It compares the level of RER capacity estimated in Section 8[121] with the demand for urban dwellings in Section 2.6. Our approach to the sufficiency assessment and the sufficiency results by dwelling type and location across the district's urban environment in the short, medium, and long term are contained in the sub-sections below. This section further addresses sufficiency of total capacity in the rural environment and the total district to cater for projected growth. Housing Bottom Lines required for the District Plan and RPS are also specified.

9.1 Approach

Clause 3.2 of the NPS-UD specifies that QLDC "must provide at least sufficient development capacity in its … district to meet expected demand for housing: (a) in existing and new urban areas; and (b) for both standalone dwellings and attached dwellings; and (c) in the short term, medium term, and long term". That development capacity must be plan enabled, infrastructure ready, feasible and reasonably expected to be realised and include the appropriate competitiveness margin. The requirement to assessment sufficiency for housing development capacity is also set out in clause 3.27 of the NPS-UD.

To test whether the QLD urban environment provides at least sufficient capacity to meet projected demand, M.E has used the outputs from the RER assessment (Section 8 and Technical Report). These identify the RER dwelling capacity that is feasible, expected to be realised and constrained by infrastructure limitations. This is then compared to the net additional demand (using the 'Change the Path' growth scenario), including a margin, for the dwellings within the urban environment. The demand includes a 20% margin in the short and medium term and a 15% margin in the long term. The supporting Technical Report contains additional sufficiency assessment tables for the '5 Year Lag' (equivalent to medium growth) demand growth scenario.

Sufficiency is assessed by dwelling type (detached vs. attached) by each location across the urban environment. An assessment of sufficiency by dwelling value band is contained within the Impact of Planning and Infrastructure on Future Housing Affordability section (Section 10.3). It is a more nuanced model of sufficiency that differs from the assessments below which compare total demand with total capacity, irrespective of price and whether the dwelling is for resident households or holiday homes or is owned or un-owned. The assessment in Section 10.3 considers the demand by non-owner households for dwellings at different prices based on what they can afford, compared to current and projected future dwelling supply by price band.

[121] And shown in the supporting Technical Report for RER by dwelling type and location.

9.2 Urban Environment Sufficiency by Type and Location

The following sub-sections contain the sufficiency assessment results by dwelling type and location in urban environment in the short, medium, and long term. The first section of each table shows the projected future demand for detached and attached dwellings within each location. This includes the competitiveness margin on demand, which is applied to the net increase in demand across the assessment time period. The middle section of each table then shows the potential future dwelling estate. This includes the existing dwelling estate together with the RER capacity estimated in Section 8.

The final section of the table contains the sufficiency analysis. It shows the net difference in the potential future estate to the future demand (with a margin). Net differences greater than zero suggest a surplus in capacity, while negative net differences indicate a potential shortfall in capacity.

A summary across all three time periods is contained at the end of the section.

9.2.1 Short Term Sufficiency

Table 9.1 contains the sufficiency assessment for QLD's urban environment in the short term (2020-2023). In total, it shows that there is a net surplus in capacity of around 1,500 dwellings for the urban environment overall. The surplus occurs for both detached and attached dwellings at the total urban environment scale. The surplus equates to around 7% of the future dwelling demand (including a margin).

The analysis shows that there are projected capacity surpluses across most locations within QLD's urban environment. The largest net surpluses occur within the reporting areas of Queenstown Town Centre (+520 dwellings), Frankton (+250), Wānaka Town Centre (+230) and the Southern Corridor (+200).

There is a small projected shortfall of 100 detached dwellings within the Eastern Corridor. This occurs as there is a projected growth of around 75 dwellings (+90 with a margin) in this location, but there is no RER capacity due to land transport infrastructure constraints (as modelled for this HBA) – but equally, three waters infrastructure would also have been a constraint if not for land transport (although Council has the ability to reprioritise or bring forward funding in the LTP which could mitigate this). Shortfalls in capacity across other locations and dwelling types within the short term are minor.

The minor shortfall for the Quail Rise reporting area (which is broader than the existing Quail Rise residential subdivision) should be interpreted with care. Quail Rise is not constrained by modelled land transport infrastructure so any limits on RER are driven by Three Waters infrastructure. The planned Three Waters infrastructure for the northern side of Five Mile (which falls in the Quail Rise reporting area from a demand and plan enabled capacity perspective) is incorporated with the Frankton reporting area for the purpose of infrastructure analysis and therefore RER[122]. Frankton demonstrates a surplus of RER capacity in the short term which more than offsets the short fall in Quail Rise (assuming some reallocation).

The commercial feasibility assessment (Section 6) shows that there are substantial amounts of estimated feasible capacity across most locations if infrastructure constraints were not applied. If demand were

[122] This is determined by the way the Three Waters infrastructure data was supplied by Council. This inconsistency in spatial boundaries can be rectified in future updates of this HBA.

instead compared to commercially feasible capacity, then the surpluses would be substantially larger, with sizeable net surpluses occurring across most locations. This suggests that there are a wide range of feasible development options available to the market within each of these areas based on the zoned development opportunity.

The presence of large zoned feasible development opportunity beyond the RER capacity suggests that the small shortfalls, in the short term, are predominantly related to the infrastructure limits within each area. However, in most areas there are capacity surpluses, indicating that the short term level of infrastructure provision is likely to be sufficient in most areas to cater for the projected demand.

Table 9.1 – Short-Term Sufficiency of RER Dwelling Capacity - QLD Urban Environment[123]

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	-100	10	-90
Frankton	1,300	330	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	130	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	230
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**	**790**	**670**	**1,500**

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

9.2.2 Medium Term Sufficiency

Table 9.2 contains the sufficiency assessment for QLD's urban environment in the medium term (2020-2030). It shows that there is an overall net surplus of around 2,300 dwellings. This is an increase of a further 850 dwellings in the medium term. The overall net surplus equates to around 9% of the total future urban dwelling demand (or 10% of the future dwelling demand without the margin applied).

The projected surplus is largest in the Wakatipu Ward urban environment at around 1,900 dwellings, which is around 12% of the future dwelling demand (with a margin). Within the Wānaka Ward, there is a projected net surplus of around 440 dwellings, equating to 4% of the projected future dwelling demand (with a margin).

[123] Small Township – Wakatipu combines capacity for Kingston and Glenorchy urban environments.

At the total urban environment level, there is net sufficiency across both detached and attached dwelling types. There are projected shortfalls in detached dwellings within the Wakatipu Ward and in attached dwellings within the Wānaka Ward. This partly reflects the development patterns within each ward arising from the combination of infrastructure provision in relation to the type of underlying zoning.

It is important to note that the NPS-UD only requires sufficient capacity by dwelling typology at the total urban environment scale. There is no requirement for sufficiency by dwelling type at the local level. This is critical because urban areas will naturally evolve through time in the structure of their dwelling stock as higher value locations tend toward higher density typologies to increase the efficiency of development and thus provide for increased numbers of dwellings in areas of higher accessibility and amenity. These patterns are implicit in the zoning structure across the urban environment (i.e., some areas are simply more appropriate for intensive (attached) housing than others).

Queenstown Town Centre reporting area is one of the larger areas of additional infrastructure-served capacity, which has a higher share of high density dwelling typologies (and demonstrates at least sufficient provision for attached housing in the medium term). In contrast, there are several areas of projected shortfalls of detached dwellings across the Wakatipu Ward relative to projected demand. These include the Southern Corridor, the Eastern Corridor, Frankton, and Quail Rise. Of these, the Southern and Eastern corridors also have capacity shortages overall across both dwelling types (driven by land transport constraints as modelled for this HBA which mean that the significant plan enabled and commercially feasible capacity for attached and detached housing in these locations is unlikely to be realised in accordance with NPS-UD infrastructure ready requirements).

It is noted in this instance, when looking at shortfalls by dwelling type, that the issue discussed above for the short term in Quail Rise, is not resolved by a different allocation of RER capacity with Frankton, as both show a shortfall of detached housing in the medium term relative to demand (but sufficient attached capacity).

Overall, most locations across QLD's urban environment still have capacity surpluses in the medium term. The largest surpluses occur within the reporting areas of Queenstown Town Centre, Frankton, and Wānaka Town Centre, which contain the largest amounts of RER capacity.

There are several areas that have reasonably large capacity shortfalls in relation to the size of their future demand. These include the Southern Corridor (-690 dwellings), the Eastern Corridor (-600) and Lake Hawea (-320), with a smaller shortfall within Arrowtown (-50). Excluding Arrowtown, these shortfalls amount to between 26% to 31% of the future urban dwelling stock (with a margin) in these locations.

With the exception of the Eastern Corridor, there is a large amount of estimated commercially feasible capacity, beyond the RER capacity, within each of these locations. If the future demand were instead compared to the commercially feasible capacity (instead of the RER capacity), then they would have substantial capacity surpluses. This suggests that there is a large amount of zoned opportunity for feasible development options available to the market within each of these locations, with the constraint instead related to the provision of (land transport) infrastructure.

There are limited further feasible capacity options within the Eastern Corridor beyond the RER capacity, suggesting that there is a zoned capacity constraint in this location. The feasible development options are

around 400 fewer than total demand (plus a margin) in the Eastern Corridor. However, the assessment shows that there are large capacity surpluses in the adjacent Frankton location that exceed the estimated shortfall within the Eastern Corridor.

Table 9.2 - Medium-Term Sufficiency of RER Dwelling Capacity - QLD Urban Environment

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	-50
Arthurs Point	350	150	500	480	110	590	120	-40	90
Eastern Corridor	1,800	480	2,300	1,400	230	1,700	-350	-250	-600
Frankton	1,700	570	2,300	1,500	1,700	3,200	-250	1,100	880
Kelvin Heights	690	160	840	770	90	860	90	-60	20
Outer Wakatipu	-	-	-	10	-	10	10	0	10
Quail Rise	370	80	450	220	260	480	-150	180	20
Queenstown Town Centre	3,400	1,300	4,700	4,100	2,500	6,600	700	1,200	1,900
Small Township - Wakatipu	430	140	570	690	150	850	260	20	280
Southern Corridor	2,000	240	2,200	1,300	230	1,500	-680	-10	-690
Wakatipu Ward Urban Env.	**11,800**	**3,500**	**15,300**	**11,600**	**5,500**	**17,100**	**-170**	**2,000**	**1,900**
Cardrona	150	40	190	230	50	280	80	10	90
Lake Hawea	850	250	1,100	680	100	780	-170	-150	-320
Luggate	250	50	300	320	10	330	70	-40	30
Outer Wanaka	-	-	-	-	-	-	0	0	0
Wanaka Town Centre	6,500	1,700	8,100	7,100	1,600	8,800	670	-30	630
Wanaka Ward Urban Env.	**7,700**	**2,000**	**9,700**	**8,400**	**1,800**	**10,100**	**650**	**-210**	**440**
Total Urban Environment	**19,500**	**5,500**	**25,000**	**20,000**	**7,300**	**27,300**	**480**	**1,800**	**2,300**

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

9.2.3 Long Term Sufficiency

Table 9.3 contains the sufficiency assessment for QLD's urban environment in the long term (2020-2050). It shows that there is an overall surplus of around 30 dwellings (including a margin), just passing the test for "at least sufficient capacity". It is important to note that although the surplus is small, it includes the additional RER capacity for a further 2,700 dwellings above the actual projected demand due to the inclusion of a margin (which is around 4 years of further growth in the long term).

The assessment shows that there is a very minor shortfall in detached dwellings, and corresponding surplus in attached dwellings at the total urban area level. Within Wakatipu Ward, there is a large shortfall in detached dwellings (-1,700), and corresponding surplus in attached dwellings (+1,700), with the reverse patterns within the Wānaka Ward.

The patterns of surpluses and shortfalls by location across the district's urban environment partly reflect the patterns of RER capacity (Section 8) that are influenced by the indicative long term zoning provisions and infrastructure supply. The largest reporting areas of RER capacity – Queenstown Town Centre, Wānaka Town Centre, and Frankton – contain the largest surpluses of capacity within the sufficiency assessment. In the long term, these areas contain large amounts of additional infrastructure serviced capacity, and large expansion of the greenfield zoned opportunity within Wānaka Town Centre.

The surplus within Queenstown Town Centre reporting area is the largest at an estimated 4,600 dwellings, which equates to around 83% of the projected future dwelling demand (with a margin). The surplus in this

location occurs across both the detached and attached dwelling typologies and is centrally located within Wakatipu's overall urban environment.

The shortfalls in capacity that are projected to occur within the medium term across several areas become larger within the long term. These areas include the Southern Corridor (-3,400), the Eastern Corridor (-1,900), Lake Hawea (-1,100) and Arrowtown (-140), with a shortfall of 440 dwellings also emerging within Quail Rise within the long-term (although largely, but not entirely, offset by the sufficient capacity in Frankton once some reallocation is taken into account to mitigate data limitations).

When these shortfalls are compared to the additional feasible capacity (rather than RER capacity), the additional feasible capacity exceeds the size of the shortfall by a substantial amount in all locations except Arrowtown. The provision of further zoned opportunity within the Eastern Corridor has increased the estimated feasible development options within the long term in this location. This suggests that there is a large amount of zoned opportunity for feasible development options available to the market within each of the large greenfield growth areas, with the constraint instead related to the provision of infrastructure (specifically land transport as the net additional capacity of long term planned Three Waters infrastructure (in terms of dwelling units serviced) exceeds the estimated shortfalls in each of these greenfield growth areas).

Table 9.3 - Long-Term Sufficiency of RER Dwelling Capacity - QLD Urban Environment

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	140	-280	-140
Arthurs Point	370	260	630	760	210	970	390	-50	340
Eastern Corridor	2,400	1,100	3,500	1,400	230	1,700	-960	-890	-1,900
Frankton	2,500	1,400	3,900	1,600	2,700	4,300	-900	1,300	400
Kelvin Heights	840	330	1,200	1,200	110	1,300	330	-220	110
Outer Wakatipu	-	-	-	10	-	10	10	0	10
Quail Rise	670	250	920	220	260	480	-450	10	-440
Queenstown Town Centre	3,400	2,200	5,600	5,000	5,200	10,200	1,600	3,000	4,600
Small Township - Wakatipu	540	320	860	960	250	1,200	420	-70	350
Southern Corridor	3,600	1,400	5,000	1,300	230	1,500	-2,300	-1,200	-3,400
Wakatipu Ward Urban Env.	**15,400**	**7,700**	**23,100**	**13,700**	**9,400**	**23,100**	**-1,700**	**1,700**	**-30**
Cardrona	330	130	460	650	150	800	320	30	340
Lake Hawea	1,300	590	1,800	680	100	780	-570	-490	-1,100
Luggate	360	150	510	570	10	580	210	-140	70
Outer Wanaka	-	-	-	-	-	-	0	0	0
Wanaka Town Centre	8,400	3,700	12,100	10,100	2,700	12,800	1,700	-960	710
Wanaka Ward Urban Env.	**10,300**	**4,500**	**14,900**	**12,000**	**3,000**	**14,900**	**1,600**	**-1,600**	**60**
Total Urban Environment	**25,700**	**12,200**	**38,000**	**25,700**	**12,300**	**38,000**	**-70**	**100**	**30**

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

9.2.4 Summary of Sufficiency within the Urban Environment

The sufficiency of capacity is summarised by location in QLD's urban environment across the short, medium, and long term in Table 9.4 (and in Figure 9.1 for the total urban environment and including the existing 2020) housing estate). As well as showing the sufficiency of 'RER capacity' (which is constrained by infrastructure limits), the table and graph also show the sufficiency assessment using 'plan enabled and commercially feasible capacity' (without infrastructure constraints). For completeness, Figure 1.9 further

includes 'plan enabled capacity' and 'plan enabled, commercially feasible and infrastructure served capacity. The contrast between commercially feasible capacity and RER capacity is important because it shows the level of zoned feasible development opportunity available to the market in the absence of infrastructure constraints, which is a core aspect of understanding whether there is sufficient zoned development capacity.

The sufficiency assessment has shown that there are small surpluses in capacity for QLD's urban environment overall across all three time periods. The surpluses increase from the short to medium term but decrease in the long term to a very minor surplus mainly due to infrastructure limitations. It is relevant to note at this juncture that this HBA has not considered the additional capacity provided by minor dwellings (residential flats) in the urban environment. [124] Minor dwellings have not been quantified, but to the extent that a portion are made available as permanent accommodation for resident households (and not reserved for visiting family or residential visitor accommodation), this would absorb a small portion of demand for housing. If a small portion of demand is removed from the demand side of the equation, then the sufficiency margins become greater than modelled.

Table 9.4 – Summary of Sufficiency - RER & Commercially Feasible Capacity - Urban Environment

Reporting Area	SHORT TERM SUFFICIENCY		MEDIUM TERM SUFFICIENCY		LONG TERM SUFFICIENCY	
	RER	Commercially Feasible	RER	Commercially Feasible	RER	Commercially Feasible
Arrowtown	-10	90	-50	60	-140	-40
Arthurs Point	60	630	90	960	340	840
Eastern Corridor	-90	70	-600	-430	-1,900	1,200
Frankton	250	2,400	880	3,000	400	2,200
Kelvin Heights	60	2,700	20	2,600	110	2,200
Outer Wakatipu *	10	10	10	10	10	10
Quail Rise	-20	2,000	20	1,800	-440	1,400
Queenstown Town Centre	520	6,900	1,900	7,000	4,600	6,300
Small Township - Wakatipu	50	580	280	790	350	690
Southern Corridor	200	1,800	-690	2,300	-3,400	6,000
Wakatipu Ward Urban Env.	**1,000**	**17,300**	**1,900**	**18,200**	**-30**	**20,900**
Cardrona	140	320	90	470	340	340
Lake Hawea	-30	320	-320	970	-1,100	2,200
Luggate	80	360	30	280	70	70
Outer Wanaka **	0	0	0	0	0	0
Wanaka Town Centre	230	6,200	630	6,000	710	8,700
Wanaka Ward Urban Env.	**420**	**7,200**	**440**	**7,700**	**60**	**11,300**
Total Urban Environment	**1,500**	**24,500**	**2,300**	**25,900**	**30**	**32,200**

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

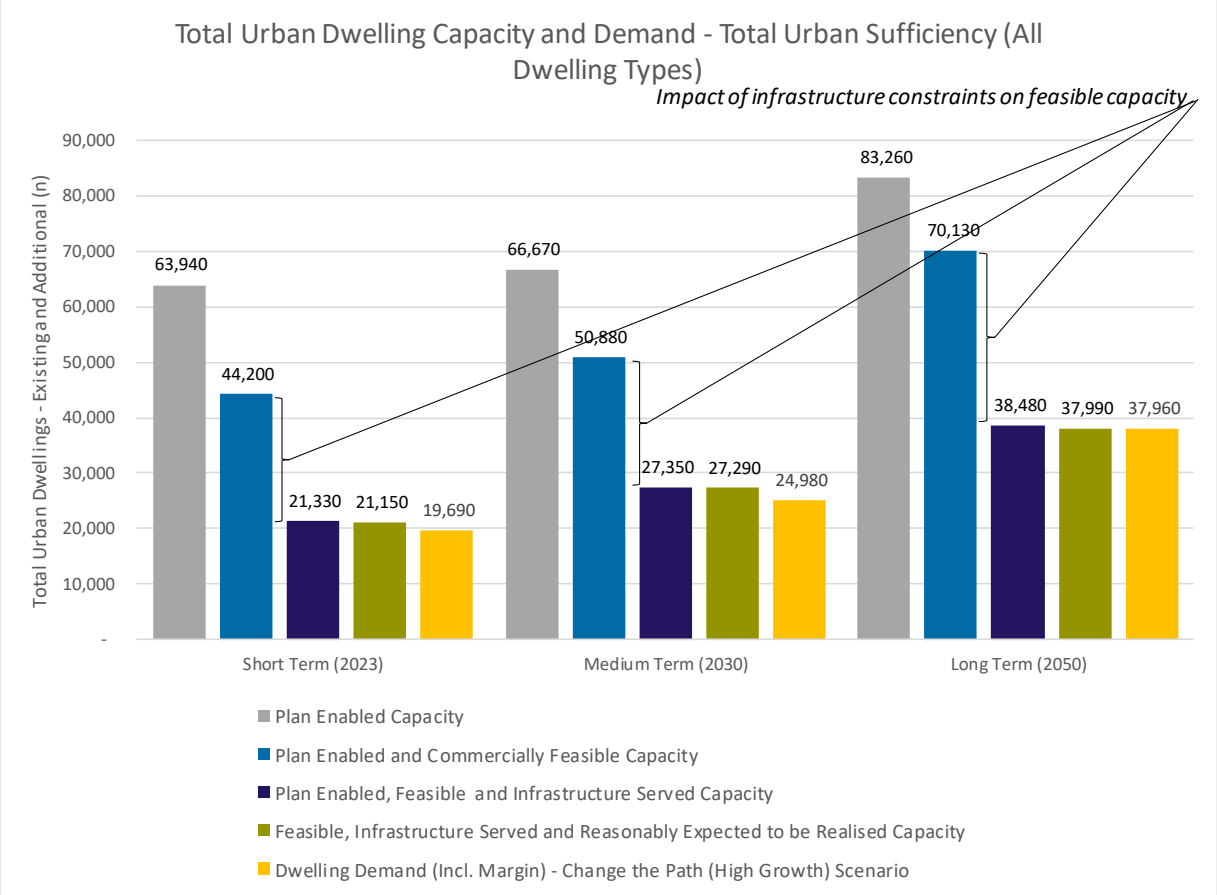
** This reporting area is almost entirely in the rural environment. ** This reporting area is totally in the rural environment.*

Most locations in the urban environment have capacity surpluses, or only minor shortfalls in the short term when assessed in relation to infrastructure constrained RER capacity. Shortfalls in capacity begin to emerge in some locations in the medium term and increase into the long term. However, in most cases, the shortfalls resolve and become sizeable surpluses when demand is instead compared to commercially

[124] As discussed previously, Jacks Point is experiencing very high numbers of new dwelling consents that include a residential flat.

feasible capacity, which is not constrained by infrastructure. This suggests that there is a large amount of zoned opportunity for feasible development options available to the market within each of these locations, with the constraint instead related to the provision of infrastructure (particularly land transport (bridge) infrastructure associated with the Shotover Bridge, Kawarau Falls Bridge, and Albert Town Bridge as modelled for this HBA).[125]

Figure 9.1 - Summary of Sufficiency - RER & Commercially Feasible Capacity Incl. Existing Estate - Urban Environment



Although capacity shortfalls have been identified across a number of locations, there may be the potential for demand to be met across different locations within the urban environment (and within the same ward), where the urban environment has a small surplus overall in the long-term. Furthermore, the modelling has taken a conservative approach in applying firm infrastructure limits on capacity. It has assumed that no further growth is able to occur within certain transport infrastructure (bridge) catchments once a certain level of traffic congestion occurs. The results are sensitive to this assumption and this HBA does not test

[125] As discussed in Section 7 (Infrastructure Ready Capacity), a conservative approach applies in the modelling with regard to constraints caused by the Albert Town Bridge on Lake Hawea growth. This provides some uncertainty on the shortfalls reported here in the short term, and maybe the medium term. M.E anticipates (but cannot confirm) that the impact of the conservative approach is unlikely to apply in the long term and that a shortfall result in the long term is potentially still realistic. Only through changes to the Strategic Transport Model could this be confirmed (all else being equal in this HBA).

alternative scenarios to mitigate the constraints of the bridge infrastructure in future (other than assumptions of mode share already captured).[126] It follows however, that if a less stringent approach was taken, the overall urban and ward surpluses reported above would be larger under the RER comparison.

9.3 Rural Environment Sufficiency – Total Dwelling Growth

Table 9.5 assesses the sufficiency of capacity for QLD's rural environment. The assessment compares the demand (under the Change the Path scenario[127]) for additional rural dwellings with the plan enabled capacity (as supplied by QLDC) within the rural environment (as discussed in Section 5).

The commercial feasibility of the plan enabled capacity has not been assessed within the rural environment. It is more useful to compare the rural demand with the capacity enabled by the Plan as the achievable margins within the profit-driven commercial development sector are unlikely to provide a useful indication of the viability of the development (in most rural environment zones). Most of the development within the rural environment is likely to consist of larger, higher end dwellings on lifestyle blocks. Many are likely to be constructed as customised dwellings commissioned by the intended occupiers rather than by the commercial developer sector to subsequently be sold for profit.

The assessment shows that there is a plan enabled capacity (across all three time periods) for around an additional 1,000 dwellings within the district's rural environment. Around three-quarters of these are within the Wakatipu Ward, and one-quarter within the Wānaka Ward. This compares to long term demand (without a margin as applying this outside the urban environment is not required by the NPS-UD based on M.E's understanding) for around 580 additional dwellings within the rural environment. This results in a capacity surplus of around 420 dwellings across the district's rural environment. Nearly all (91%) of the surplus occurs within the Wakatipu Ward.

[126] It is also noted that the 'limits' on growth identified in this HBA are a construct of the modelling in this HBA. Where capacity is already zoned and residential development is enabled, developers will continue to develop housing to meet demand irrespective of a modelled constraint on a bridge. Only when the congestion on the bridges surpasses the willingness of residents to tolerate the traffic delays (when weighed up against their housing options) will demand reduce and growth of development start to slow as a direct result of the infrastructure constraints. This timing is likely to differ from the modelled timing in this HBA.

[127] Refer to the supporting Technical Report for the equivalent table for the 5 Year Lag (Medium Growth) future.

Table 9.5 – Total Dwelling Sufficiency Excl. Existing Estate - Rural Environment by Ward – Change the Path Future

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	110	340	720	710	610	380
Wanaka Ward Rural Env.	10	80	240	280	270	200	40
Total Rural Environment	**30**	**180**	**580**	**1,000**	**970**	**820**	**420**

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.

9.4 Total District Sufficiency – Total Dwelling Growth

Table 9.6 shows the sufficiency of dwelling capacity for the total district overall. It combines the demand within the rural (no margin) and urban (with margin) environments, then compares it to capacity across both the rural and urban environments. The assessment uses the infrastructure constrained RER capacity for the urban environment and the plan enabled capacity for the rural environment as discussed in previous sections.

In total, there is a projected surplus of around 2,400 dwellings in the short term. This is projected to increase to 3,100 dwellings in the medium term and decrease to around 450 dwellings in the long-term.

Table 9.6 – Total District Dwelling Sufficiency Excl. Existing Estate by Ward – Change the Path Future

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	580	3,860	11,920	2,320	6,350	12,270	1,740	2,490	350
Urban Environment (+ Margin)	560	3,750	11,580	1,600	5,630	11,550	1,040	1,880	- 30
Rural Environment	20	110	340	720	720	720	710	610	380
Wanaka Ward Total	380	2,550	7,860	1,070	3,190	7,960	690	640	100
Urban Environment (+ Margin)	370	2,470	7,620	790	2,910	7,680	420	440	60
Rural Environment	10	80	240	280	280	280	270	200	40
Total District	960	6,400	19,780	3,390	9,530	20,230	2,430	3,130	450
Urban Environment (+ Margin)*	930	6,220	19,200	2,390	8,530	19,230	1,460	2,310	30
Rural Environment	30	180	580	1,000	1,000	1,000	970	820	420

*Source: QLD Council Growth Projections July 2020 (High Growth), M.E QLD Dwelling Demand Model 2021, M.E QLD Capacity Model 2021. * Demand figures equate to Housing Bottom Lines. Rural environment capacity included in the table is not infrastructure constrained. Figures rounded to nearest 10.*

9.5 Housing Bottom Lines

Clause 3.6(1) of the NPS-UD requires that "the amount of development capacity that is sufficient to meet expected housing demand plus the appropriate competitiveness margin" in the short-medium and in the long term is clearly stated in each district of a tier 2 urban environment. The Housing Bottom Line is to be based on the amount of "*feasible, reasonably expected to be realised development capacity that must be*

enabled to meet demand, along with the competitiveness margin". Once determined, the Housing Bottom Lines must be inserted into the District Plan and Regional Policy Statement.

The following are the calculated Housing Bottom Lines for the QLD urban environment for the short, medium and long term. They are based on an estimated current (2020) urban dwelling count of 18,757 as informed by Council's July 2020 growth projections and estimated by M.E to fall within the defined long term urban environment boundary. They relate to the Council's preferred 'Change the Path' or high growth future. Sufficient zoned and infrastructure-served, feasible development capacity is required to meet demand to accommodate the following number of projected additional dwellings in each time period:

i. Short Term (2023): an additional 930 dwellings.
ii. Medium Term (2030): an additional 6,220 dwellings.
iii. Long Term (2050): an additional 19,200 dwellings.

It is important to note that if Council's growth projections are updated (which they frequently are), that these Housing Bottom Lines would also need to be updated[128].

[128] As would this HBA.

10 Impact of Planning and Infrastructure

This section builds on the analyses of housing demand and feasibility and sufficiency of capacity to provide the assessment of how QLDC's planning decisions and provision of infrastructure is likely to affect the affordability and competitiveness of the local housing market, as specifically required to be addressed in the HBA as set out in clause 3.23 of the NPS-UD. This section forms only part of the key findings of this HBA and should be considered in conjunction with Part 1 and the sufficiency results in Section 9. Underpinning this section is a discussion of the concept of 'competitive land markets' which is central to the NPS-UD's focus on housing affordability. It then considers how Council's planning decisions and provision of infrastructure may impact on housing affordability in the future and competitiveness of the housing market.

That assessment takes account of the current situation with regard to the patterns of QLD growth and the evolution of the land and development market over the last two decades. Understanding the key influences evident in QLD over that period is important to distinguish between the effects of planning and infrastructure provision by Council and the effects of other influences on housing affordability and development.

10.1 Approach to s3.23

Clause 3.23 is a core requirement of the NPS-UD. It requires councils to analyse "*..how … planning decisions and provision of infrastructure affects the affordability and competitiveness of the local housing market."* This analysis *"..must be informed by .. market indicators, including .. housing affordability, housing demand, and housing supply; and information about household incomes, housing prices, and rents; and price efficiency indicators."*

Prima facie, this is a demanding economic analysis, especially at the local authority level. A key issue is that affordability and competitiveness are influenced by many factors, local and national, which are outside the ambit of council planning decisions and infrastructure. Separating the role of different factors in the past has been extremely difficult at the national level, let alone the district council level.

The assessment for this HBA is necessarily forward looking – while planning decisions and the provision of infrastructure have affected market conditions in the past, none of that can be changed now. At issue is how, from the current situation and moving forward, planning decisions and infrastructure can be expected to influence affordability into the future.

To minimise the complexity arising from a need to examine the long term outlook for key aspects of the national economy and each regional economy, the focus here is on housing affordability and competitiveness and the influence of planning decisions and infrastructure – but it is only on those matters. Ideally, all the other key influences on affordability and competitiveness would be held constant, to be able to address the question:

*"What is the likely effect on affordability and competitiveness of planning and infrastructure decisions **in and of themselves**."*

Otherwise, the impacts of planning and infrastructure will inevitably become conflated, as other core influences including interest rates, availability of finance, investment from overseas, migration, labour supply, materials costs, central government regulations and so on will inevitably have significant influence on housing prices.

Much of the analysis required for clause 3.23 is therefore addressed in the assessment of sufficiency of capacity (refer Section 9). As identified in the Randerson Review[129], the main impact of planning is through 'regulatory stringency' if the supply of housing to meet market demands is constrained by planning provisions. The most common paths are first, where there has not been sufficient land area provided for in appropriate locations and at appropriate times – predominantly through not zoning enough infrastructure ready land in suitable locations in time for its release and development to provide enough opportunity for the construction sector to produce housing capacity in time to meet demands – and second, where zoning provisions for the land are not sufficiently encompassing to enable the range of dwelling typologies and sizes which the housing market demands.

If the assessment of sufficiency does show that there is or will be sufficient capacity for housing growth, including the provision for additional land for the competitiveness margins (as it does show for QLD), then *a priori* it is to be expected that the key planning decisions – provision for sufficient land area serviced by infrastructure, and provision for a range of dwelling typologies and size – will have a largely neutral or net positive impact on housing affordability and competitiveness of the land market.

In this regard, one key indicator of the potential effect of planning on affordability is the level of price increase which is required for there to be sufficient feasible and reasonably expected to be realised capacity to meet future housing needs. In conditions where there is sufficient land area provided for, and sufficient range of dwelling typology and size enabled in the Plan (including the LTP, Infrastructure Strategy and long term urban growth strategies), then such future price increase would indicate the maximum or upper limit of the effect of planning and infrastructure by itself on future affordability. This approach is appropriate to help ensure that planning decisions and infrastructure do not materially reduce housing affordability and market competitiveness.

There is also potential for planning decisions and infrastructure to have a positive impact on affordability. This is predominantly where the Plan provides for dwellings which are relatively land-efficient, including smaller site sizes or land area per dwelling, leading to potentially lower land values per dwelling, and where dwelling sizes may be smaller and less costly than the average in the current market.

That said, it is important also to not expect that planning decisions and provision of infrastructure will necessarily bring material improvement to the established housing affordability and competitiveness conditions in QLD. That is because the current affordability conditions have arisen from a range of influences, including national and international economic conditions and trends, which are likely to have had significantly greater impact on housing prices than have planning decisions and infrastructure. While there is some literature which advances the view that planning and regulation have been a principal or

[129] https://environment.govt.nz/publications/new-directions-for-resource-management-in-new-zealand/

even *the* principal cause of the growth in housing prices world-wide, and in New Zealand, there is also substantial research to show the effects of planning have been much less than has been promoted – including in studies relating to the development of the NPS-UDC.

Consequently, there is not a requirement to demonstrate that QLDC planning decisions and infrastructure provision will **by themselves** have sufficient influence to offset those accumulated effects.

The appropriate focus is to ensure that planning decisions and infrastructure provision going forward are unlikely to have negative impacts on affordability and competitiveness.

An important aspect is to examine the concept of the Competitive land Market ("CLM"), or as it is being referred to in relation to Resource Management reforms, the Competitive Urban Land Market ("CULM"), and to consider how planning decisions may have impact on this. That consideration is to help identify a suitable evaluation framework (Section 10.2.3), to show whether negative impacts on affordability and competitiveness are likely. These matters are considered further also in the supporting Technical Report.

10.2 Competitive Land and Development Markets (CULM)

10.2.1 NPS-UD Provisions

A fundamental part of the NPS-UD is to support and contribute to "*competitive land and development markets*". That is set out at objective and policy level, and is referenced in various clauses:

> ***Objective 2:*** *Planning decisions improve housing affordability by supporting competitive land and development markets.*
>
> ***Policy 1:*** *Planning decisions contribute to well-functioning urban environments, which are urban environments that, as a minimum:*
>
> *d. support, and limit as much as possible adverse impacts on, the competitive operation of land and development markets;*

These aspects underpin the requirements set out in ***clause 3.23 Analysis of housing market and impact of planning***, under which:

> *1. Every HBA must include analysis of how the relevant local authority's planning decisions and provision of infrastructure affects the affordability and competitiveness of the local housing market.*
>
> *3. The analysis must be informed by:*
>
> *a. market indicators, including:*
>
> *i. indicators of housing affordability, housing demand, and housing supply; and*
>
> *ii. information about household incomes, housing prices, and rents; and*
>
> *b. price efficiency indicators.*

Objective 2 sits at the highest level and has two main elements – the expectation that planning decisions can contribute to improving the affordability of housing, and the related expectation that this will be through supporting land and development markets to be "competitive". The NPS-UD wording appears to

imply that the main apparent route through which planning decisions may improve housing affordability is by supporting[130] markets to be competitive.

However, as noted there are many influences on housing affordability, which include but are not limited to competition within the market.

10.2.2 Defining a Competitive Urban Land Market (CULM)

The NPS-UD itself does not contain a definition of competitive land markets, nor is there definition in the documents which support the NPS. However, the review of the Resource Management Act (the Randerson Review) does offer a useful definition, as follows:

> *Defining a competitive urban land market*
>
> *126. Competitive land markets should not be thought of as a laissez-faire regulatory approach to urban areas. In our view, a competitive urban land market is a well-planned and well-regulated built environment:*
>
> *• by 'competitive', we mean there is ample supply of alternative opportunities for development with the result that the price of land is not artificially inflated through scarcity*
>
> *• by 'well-planned' we mean that infrastructure and land use provision is aligned and timely provision of infrastructure avoids unnecessary costs*
>
> *• by 'well-regulated' we mean that the positive and negative external effects of land and resource use are considered in decision-making, and the costs of regulation are minimised and commensurate with the benefits. Positive effects include economies of agglomeration*, and the benefits of proximity and access to urban amenities. Negative effects include pollution and effects from industry, effects of development on heritage and character features, traffic congestion, and infrastructure costs (where they are not covered by development or user charges).*
>
> **This concept of agglomeration relates to the productivity gains of economies of scale, clustering and network effects.*

The definition in the Randerson review has been considered carefully, and it is considered that it offers a sound basis for this HBA. That definition is adopted here for the assessment.

The Review acknowledges generally how urban economies function, and how council planning may affect competition within the market, and that this is appropriate where the benefits of doing so are articulated and exceed the costs. Of particular note, it acknowledges that competition within markets is an important

[130] The term *supporting* is not defined, although it presumably equates with 'contributing positively to', or 'having a positive effect on'.

aspect, but it does not seek to place reliance for urban planning on the operation of competitive markets alone[131].

Importantly, it offers a straightforward definition of the term competitive - *"by 'competitive', we mean there is ample supply of alternative opportunities for development with the result that the price of land is not artificially inflated through scarcity."* That indicates the key condition to be met – *"..ample supply of alternative opportunities for development.."* – and the key effect to be avoided – *"..the price of land is not artificially inflated through scarcity."*

The Review also offers guidance on how councils' planning and infrastructure are most likely to have direct effect on housing and land prices, which it identifies as "*regulatory stringency*".

> *"Data and analysis of land prices can be used to measure the extent to which local regulations impact the type of development that is occurring. This is sometimes referred to in urban economics as regulatory stringency."*[132]

While somewhat simplified, since it can be difficult to separate out the effects of regulatory stringency from other effects on supply and development, that approach offers a useful and practical basis for meeting the requirements of clause 3.23. It allows focus on the extent to which regulations affect the type and scale of housing development, and land prices are seen as an indication of this. And it helps place attention on local (district level) conditions within the control (or potential influence) of the Council in the first instance.

Importantly, the definition in the Randerson Review is consistent with the Cabinet Minute on Objectives for the housing market[133] which confirm the government's overarching objectives for the housing market include to:

> *"4.3 Create a housing and urban land market that credibly responds to population growth and changing house preferences, that is competitive and affordable for renters, and homeowners, and is well planned and well-regulated."*

These documents impose a more nuanced view of competitive land markets than has been evident in earlier reports such as the *Signals of Under Capacity* report which was very influential in the evolution of the NPS-UDC and indicated a closer adherence to perfectly competitive markets.

A key feature of the definitions in both the Randerson Review and the Cabinet Minute is the expectation of well-planned and well-regulated markets, within which the competitive aspects of land markets would function.

10.2.3 Framework for Assessing Competitive Markets

Drawing from the above guidance, the two main arms of the CULM requirement can be identified:

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[131] The Randerson Review acknowledges there are some key challenges for the NPS-UD around competitive markets, noting (para 134) that *it "…addresses these issues to some extent. In our view, this work should be further developed and refined through national direction under our proposed Natural and Built Environments Act."* (p354)

[132] Randerson Report, para 130, p353.

[133] CAB-21-MIN-0045

a. first, that there is "*..ample supply of alternative opportunities for development..*"; and

b. second, that *"..the price of land is not artificially inflated through scarcity."*

The first arm is informed by the assessment of sufficiency, to show whether there is adequate feasible capacity for future growth with the substantial margins which are built in as the Competitiveness Margin (which increases the estimated demand) and the RER concept (which reduced the estimated supply).

The second arm can be informed by both sufficiency and the degree of choice in the market. If the assessment shows there is sufficient capacity, and it further demonstrates that the sufficient capacity includes a range of choices as to location and to dwelling type and to dwelling value, then it may be concluded that the price of land is unlikely to be "*artificially inflated through scarcity*" which can be attributed to planning decisions or infrastructure. In this, it is important to consider the effects of the Competitiveness Margin which builds in a 2-year margin in the medium term (20% of 10 years) and a 3 year margin in the long term (15% of the final 20 year period); and the RER filter which in most instances adds a buffer of at least those margins again. Taking account of the time lag between identifying land for urbanisation, and having it serviced and development ready, demonstration of sufficiency is taken here to show that the price of land will not be *"..artificially inflated through scarcity."*

It is noted that there are potentially other conditions which may contribute to scarcity which lie outside matters which Council can influence – for example, constraints in construction capacity or labour, or landowners' or developers' decisions on land release.

It is also important to note that competitive conditions vary through time, as the urban economy develops, and some opportunities become fully taken up and others emerge (especially more land for development). At the same time, the level of active demand also varies through time as new households arrive as incremental growth, their demands for housing arising and being met progressively. Moreover, the housing market includes existing and new dwellings, with already resident households and new arrivals having choice across both aspects.

On that basis, the assessment here is informed primarily by those two arms identified in the Randerson definition.

10.3 Impact of Planning and Infrastructure on Future Housing Affordability

In this section, the assessment draws together the analysis set out in previous sections covering the current and projected values of residential properties and dwelling tenure patterns, and dwelling feasibility, and adds in the other major influence on housing affordability – the possible future trends in household incomes. In combination, these aspects will influence households' ability to be dwelling owners in the short, medium, and long term in QLD. This provides insight on the sufficiency of RER capacity by price band to meet the demand of resident non-owner households in the short, medium, and long term and helps determine the impact of council planning and infrastructure on housing affordability as required in clause 3.23 of the NPS-UD.

10.3.1 Approach

As identified in Section 4, QLD's expected future dwelling estate is estimated from the current estate, and the estimated additional dwellings required to accommodate the net increase in households in the district. The focus is on the number of dwellings likely to be developed in each value band, as a key indicator of the opportunity for non-owner households to become owner households.

Estimating the affordability of housing is relatively straightforward, in terms of the using information on what households can afford to pay to compile deposits and meet mortgage commitments. From that, it is not difficult to calculate the price/value of dwelling which a non-owner household in each income band can afford to purchase – assuming that these households have access to finance. This method is relatively robust, in that it reflects very closely the process which households go through to secure finance from a bank or other financial institution in order to purchase a dwelling. This process is replicated all over the country each year as households purchase their first dwelling or seek to purchase a higher value dwelling. The financing perspective focuses on the debt to income ratio (rather than the dwelling price to income ratio) and the lender's comfort as to the security of the income streams on which the households rely.

The more challenging aspects of this assessment relate to the key assumptions which must be made to inform the modelling, particularly the likely rate of increase (or decrease) in household incomes over time, as well as the future changes in the values of dwellings in the existing estate, and the new dwellings whose prices/values are subject to trends in land value and construction costs.

Household Incomes

A key influence on future affordability is the likely real growth in household income levels. This presents some challenge, because household incomes are not influenced strongly by council planning or the provision of infrastructure. However, it is important to allow for some change in household incomes because the strongest influence on affordability arises from the combined effects of housing price levels and income levels. Simply, where household incomes rise faster than housing prices, then affordability improves. Where incomes lag behind housing price rises, then affordability declines. Moreover, planning decisions affect mainly the prices of new housing since the direct path is through providing for sufficient land and the plan provisions which affect the cost of the housing itself.

The base position for the assessment is that QLD household incomes will change in line with anticipated real growth at the national level, and with the regional effect identified from SNZ time series. Over the period since 2000, incomes in the Otago region have increased by 1.8% per annum in real terms, which is slightly faster than the New Zealand pattern (1.6% per annum).

The latest Treasury HYEFU[134] (June 2021) indicates an increase in real consumption per capita of 1.5% per annum in the period to 2025. Allowing for longer term income growth of that order of magnitude at the national level, the base case projection for the affordability assessment is for income growth of 1.6% per annum compounding.

[134] Half Year Economics and Fiscal Update.

Housing Costs

The projected increase in the cost of new dwellings is based on feasibility analysis and sufficiency assessment, according to the increase in prices needed for enough development to be feasible, and expected to be realised, to meet housing demand into the long term.

However, the assessment above (Section 9) shows that there would be sufficient feasible capacity in QLD's urban environment without any material change in housing prices. This is because there is sufficient RER capacity provided for, and new dwelling development is commercially feasible at current cost levels, and current prices. On that basis, planning provisions and infrastructure are not shown to place upward pressure on housing construction costs.

This does not mean there will be no increase in the costs of housing construction, just none that are directly attributable to planning and infrastructure.

10.3.2 Implications for Affordability

This circumstance where additional RER capacity is feasible without price increase, as shown in this HBA, indicates that planning and the provision of infrastructure will not have a negative impact on housing affordability in QLD. There can be sufficient additional capacity provided in the expected circumstances.

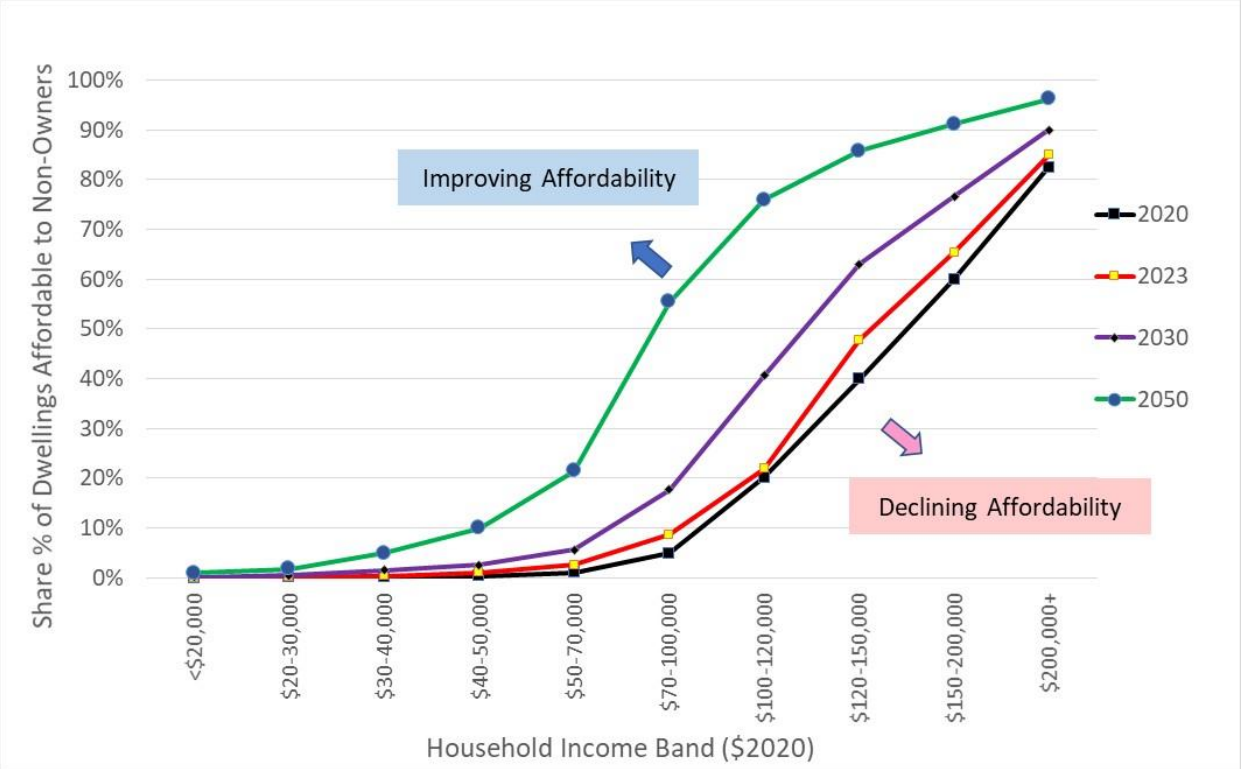
This means that on the basis of planning and infrastructure alone, housing affordability may be expected to improve in QLD. This is because while housing costs need not increase for enough RER capacity to be feasible, household incomes are expected to continue to grow, in line with income trends at the national level, and the increasing size of the QLD economy, and the associated increase in employment opportunities.

Over time, without price increase, housing affordability in QLD would improve. This is portrayed in Figure 10.1, where the affordability curve is shown to move progressively to the left, indicating greater affordability. This is because household incomes are assumed to continue to increase, while housing costs do not.

Table 10.1 shows the indicated shortfall in housing by dwelling value band into the short, medium, and long terms for the total District. In the table, a shortfall is indicated where the number of resident households who could afford to own a dwelling in that value band are compared with the numbers of dwellings expected in the same value band. For example, there are an estimated 770 households who would be able to afford (if they were non-owners) a dwelling in the $0-99,000 value band, if there were sufficient dwellings in 2020 (but there are not). In the higher value bands, the model indicates there are more dwellings in QLD than the resident population demands and could pay for.

Note that the analysis is based on projected dwelling numbers in each period. These do not include a margin of additional dwellings. The Competitiveness Margin applies an additional 20% and 15% to projected demand for housing, and this is translated to feasible capacity and RER on the basis that land would be available for the extra dwellings, and if there was demand then the dwellings could be feasibly built.

Figure 10.1 – Total District Resident Housing Affordability Trends 2020-2050 – Change the Path Future - Planning and Infrastructure Cost Only



Note: The above graph only includes planning and infrastructure cost and doesn't allow for other variables including growth in the economy, costs of labour and construction materials, migration, investment from overseas, consumer confidence, and availability of finance which also affect housing prices (refer Figure 10.2 and discussed below).

However, the comparison here examines projected demand for housing on the basis that each additional resident household would demand one dwelling. While the Competitiveness Margin is assumed to be in place as potentially available land to help keep down the price of housing, the demand projections assume that the projected increase in households is the actual increase, and it is not assumed that additional dwellings would be constructed for the notional 15% or 20% additional households.

The value bands which show a shortfall do not indicate that households are homeless. Rather, it shows that for the QLD dwelling estate, those households for which there are not sufficient dwellings that they could afford are (predominantly) in private rental accommodation. Overall, in each year there are more dwellings than the resident population demands, with a significant number in rental accommodation (around 5,890 households currently, 36% of total district resident houses) and many more of the dwellings owned by absentee owners (as holiday dwellings).

Table 10.1 indicates that there are current shortfalls of dwellings in price bands less than $500,000 to meet the demands of non-owner resident households. This equates to a gross shortfall of 2,350 dwellings in those price bands relative to a gross surplus of 7,670 dwellings in price bands greater than or equal to $500,000, giving a net surplus of 5,326 dwellings (2020) relevant to resident household demand. The

shortfall is similar in the short term (2023), but the net surplus increases. In the medium and long term, the shortfall is limited to dwellings priced up to $400,000. By 2050, the gross shortfall is 2,980 affordable dwellings and a net surplus of 6,125 dwellings relative to resident demand.

As noted, the shortfalls relate to dwelling ownership. Most households unable to afford to purchase a dwelling will rent a dwelling to live in. The projected numbers show usually resident households in the district, on the basis that all households are in a dwelling, whether as owner-occupiers or tenants (renters). The key implication of the table is that the dwelling shortfall shows limited change and does not increase as rapidly as the resident population over time. This indicates that with growth in household incomes, and no net change in prices attributable to planning and infrastructure, Council planning and infrastructure would not be a reason for housing affordability in QLD worsening, and it could potentially improve. Note also that the assessment relates to QLD resident households only, it excludes non-resident households.

Table 10.1 – Indicated Total District Resident Housing Shortfall by Value Band – Planning and Infrastructure Cost Only

Dwelling value Band	2020	2023	2030	2050
$0-99	- 770	- 980	- 1,060	- 1,430
$100-199	- 770	- 710	- 700	- 800
$200-299	- 490	- 400	- 490	- 540
$300-399	- 270	- 280	- 200	- 210
$400-499	- 50	- 60	60	-
$500-599	10	10	120	-
$600-699	240	230	330	-
$700-799	370	390	450	-
$800-899	440	520	510	900
$900-999	920	1,400	980	1,740
$1000-1099	1,040	1,100	1,160	1,290
$1100-1199	780	820	860	990
$1200-1299	600	640	670	760
$1300-1399	440	470	500	580
$1400-1499	330	360	430	620
$1500-1599	260	260	270	280
$1600-1699	200	210	200	190
$1700-1799	190	200	190	180
$1800-1899	180	190	180	170
$1900-1999	210	200	190	180
$2000-2199	70	100	90	90
$2200-2399	150	160	170	160
$2400+	1,240	1,080	1,050	980
Net Outcome	5,326	5,905	5,977	6,125
Shortfall	- 2,350	- 2,430	- 2,450	- 2,980
Surplus	7,670	8,340	8,410	9,110

Source: ME Housing Demand Model 2021

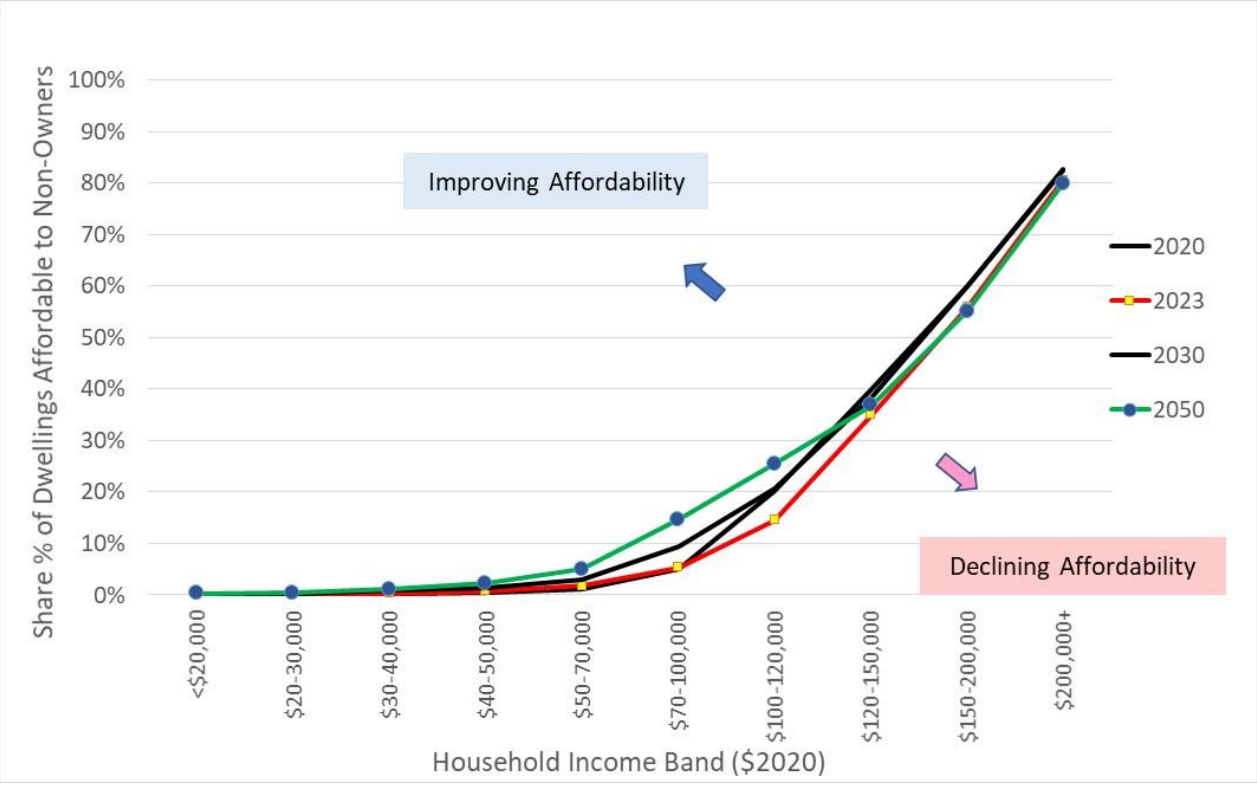
10.3.3 Future Outcome with Housing Price Growth

Nevertheless, it is important to place this indication in perspective. The above table and graph show the indicated change where the only two influences on housing affordability are income growth, and the effects of planning and infrastructure (i.e., RER capacity). That is important, as it indicates that the QLD plan context would not contribute to a decline in affordability.

However, when the other influences on housing prices and affordability are taken into account, the future outcome would likely be different. Over time, it is to be expected that QLD housing prices *will* continue to increase for a range of other reasons, including from growth in the QLD economy, growth in population, growth in employment opportunity, changes in interest rates and the availability of finance, and in rising construction materials costs (something that local stakeholders in the residential development sector have identified). Commonly, urban land values increase at least in line with the growth of the economy.

Accordingly, over time unless household incomes in QLD increase at a faster rate than the price of housing - as driven by those other factors - then housing affordability for non-owner households in the district can be expected to decline over the long term. This outcome is depicted in Figure 10.2, for a future that allows for the same growth in household incomes, but also for housing prices to increase by some 2.6% per annum into the long term (a price change faster than the growth in real incomes).

Figure 10.2 – Total District Resident Housing Affordability Trends 2020-2050 – Change the Path Future – Includes allowance for Housing Price Growth



The indicated shortfall in affordable housing by dwelling value band over time is shown in Table 10.2 and Figure 10.3 for the total district. The contrast is obvious with the previous table, where only the indicated cost of planning and infrastructure was included. However, where housing prices would grow faster than household incomes, then the indicated shortfall in each value band would increase.

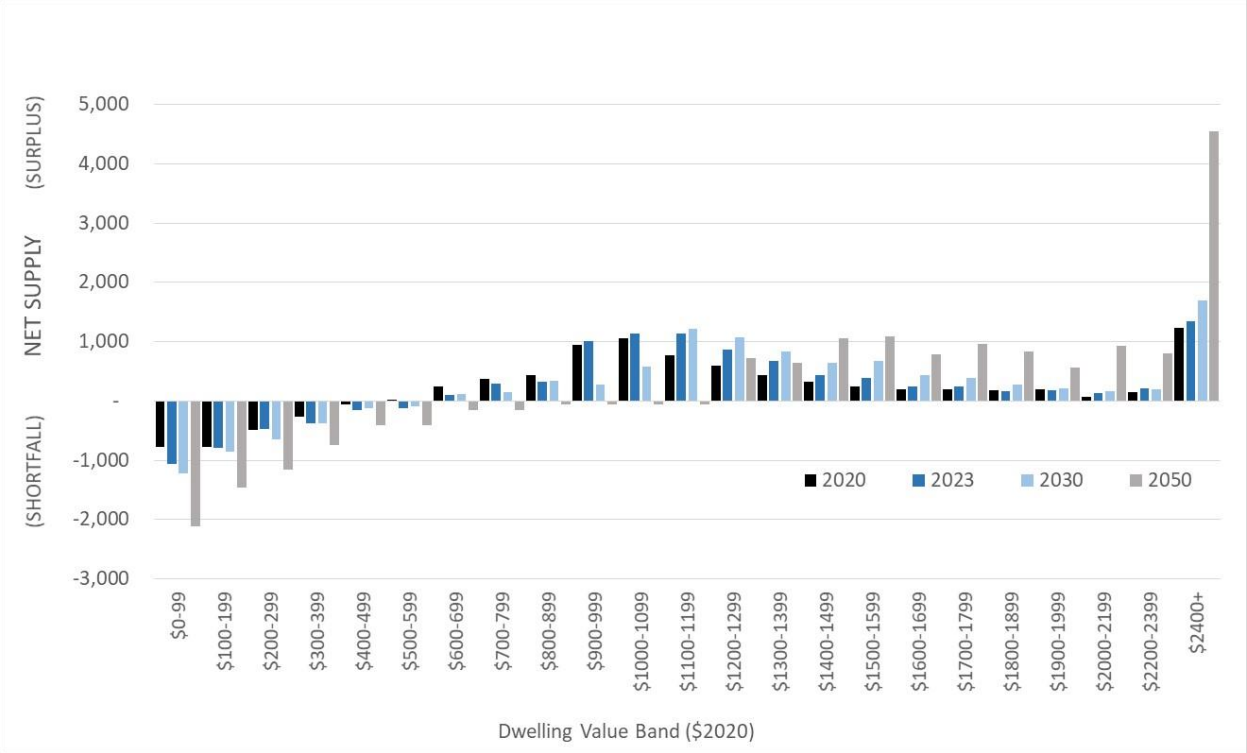
Importantly, the increase in estimated shortfalls of dwellings affordable to non-owner households in some price bands shown in Table 10.2, relative to the shortfall estimated in Table 10.1, is outside of the scope of influence of local planning and infrastructure provision, but is nonetheless the potential future situation facing the QLD resident community.

Table 10.2 – Indicated Total District Resident Housing Shortfall – Change the Path - Base Case Housing Price Growth

Dwelling value Band	2020	2023	2030	2050
$0-99	- 770	- 1,060	- 1,220	- 2,120
$100-199	- 770	- 790	- 860	- 1,470
$200-299	- 490	- 480	- 650	- 1,170
$300-399	- 270	- 370	- 380	- 760
$400-499	- 50	- 160	- 130	- 420
$500-599	10	- 130	- 90	- 420
$600-699	240	90	100	- 160
$700-799	370	300	150	- 160
$800-899	440	320	340	- 70
$900-999	920	980	280	- 70
$1000-1099	1,040	1,130	570	- 70
$1100-1199	780	1,140	1,220	- 70
$1200-1299	600	880	1,090	720
$1300-1399	440	670	850	650
$1400-1499	330	430	660	1,060
$1500-1599	260	390	690	1,110
$1600-1699	200	250	450	800
$1700-1799	190	240	400	990
$1800-1899	180	170	290	850
$1900-1999	210	190	200	580
$2000-2199	70	150	160	960
$2200-2399	150	220	200	830
$2400+	1,240	1,340	1,690	4,520
Net Outcome	5,326	5,893	6,002	6,128
Shortfall	- 2,350	- 2,990	- 3,330	- 6,960
Surplus	7,670	8,890	9,340	13,070

Source: ME Housing Demand Model 2021

Figure 10.3 - Indicated Total District Resident Housing Shortfall – Change the Path - Base Case Housing Price Growth



The urban dwelling sufficiency by price band results for resident households in Table 10.2 is further detailed in Figure 10.4 to Figure 10.7 for the current situation and the short, medium and long term respectively.[135]

The graphs relate to the total district and include demand (lines) for resident houses and total dwellings (inclusive of the competitiveness margin). The bars show the existing dwelling estate (supply) by price band and how this is projected to change over time, together with new dwellings that are RER and assumed to be built to meet district household growth in each period. The remaining RER (surplus) not required to meet that demand is assumed to be not built. Supply and potential supply are distributed by price band based on recent and expected supply trends (and value changes over time). The graphs show that the price band profile of expected future supply does not necessarily match the price band profile of expected future demand (based on what would be affordable for resident first time buyers). Hence any indicated capacity (built dwellings) below the 'lines' of demand represents a shortfall of dwellings that can be afforded in each time period.

In 2020, the shortfall of dwellings affordable for non-owner resident households is estimated at 2,350 dwellings. These lie within price bands of less than (and including) $500,000 in current (2020) prices. While there is some RER (feasible and infrastructure ready) capacity in these lower price bands, it has not been delivered by the development market. For those non-owner households that can afford dwellings in higher

[135] Note, similar graphs were produced for the 2017 HBA. These 2021 HBA graphs are similar in appearance but should not be compared directly as they relate to a different (larger) urban environment, are based on RER and not just commercially feasible capacity, are based on different growth assumptions and projections and are based on demand from the perspective of non-owner housing affordability only.

price bands, there is a surplus of dwellings potentially available in the market (estimated above in Table 10.2 at 7,670 dwellings over and above demand) (Figure 10.4).

Figure 10.4 – Current (2020) Shortfall of Dwellings Affordable to Resident Non-Owner Households – Total District

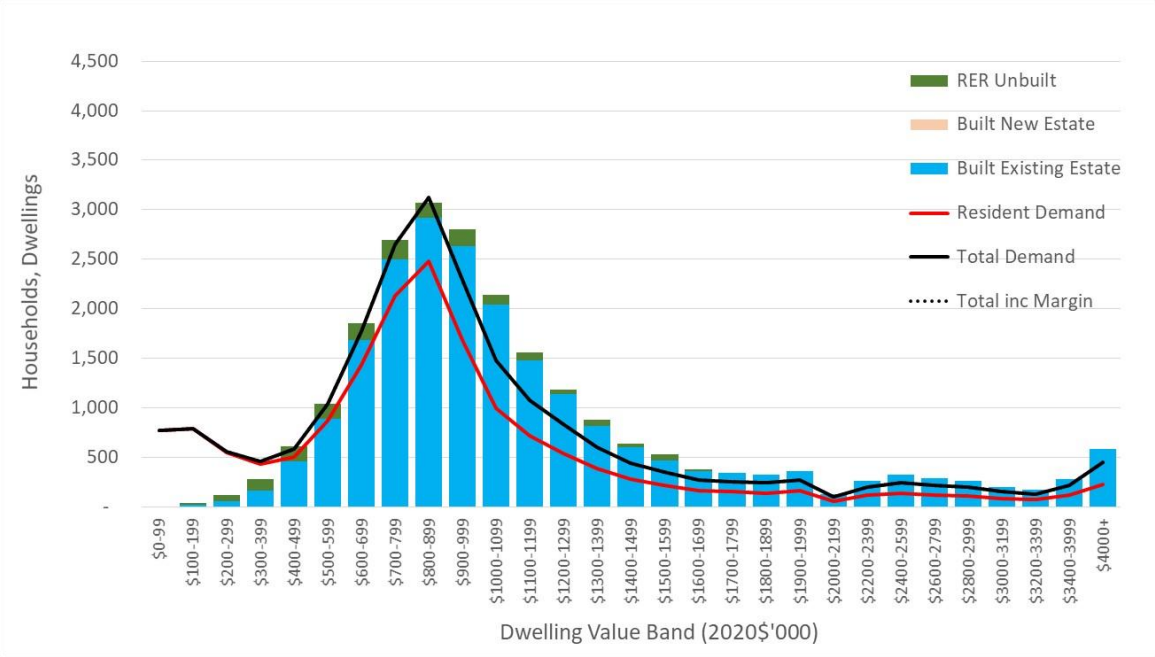
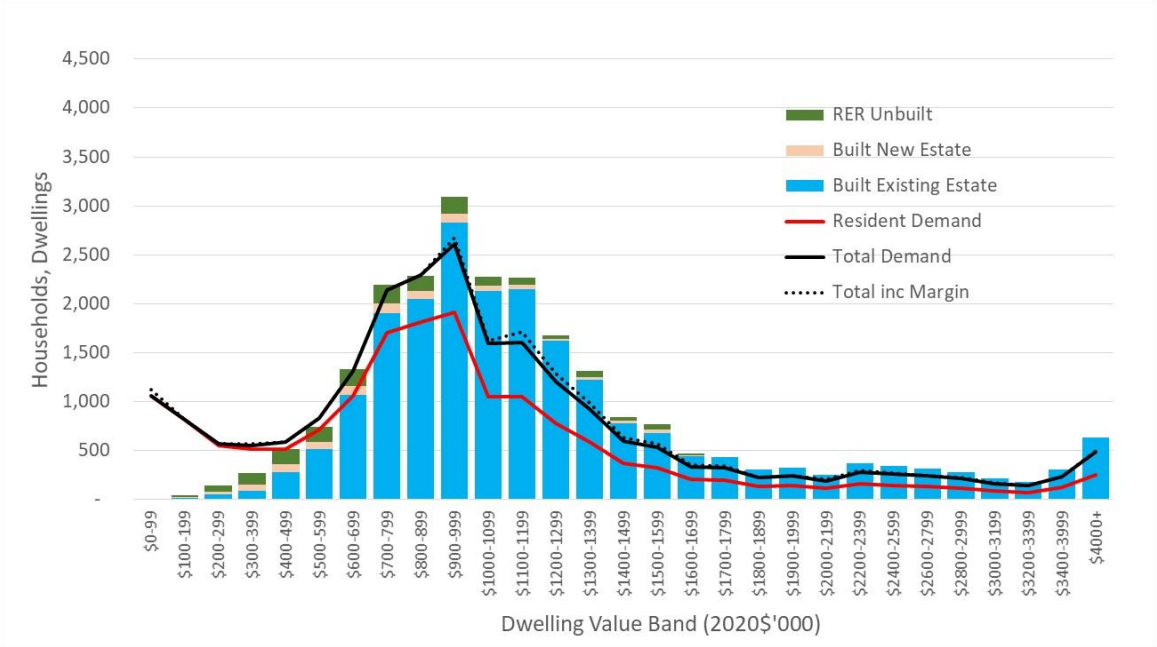


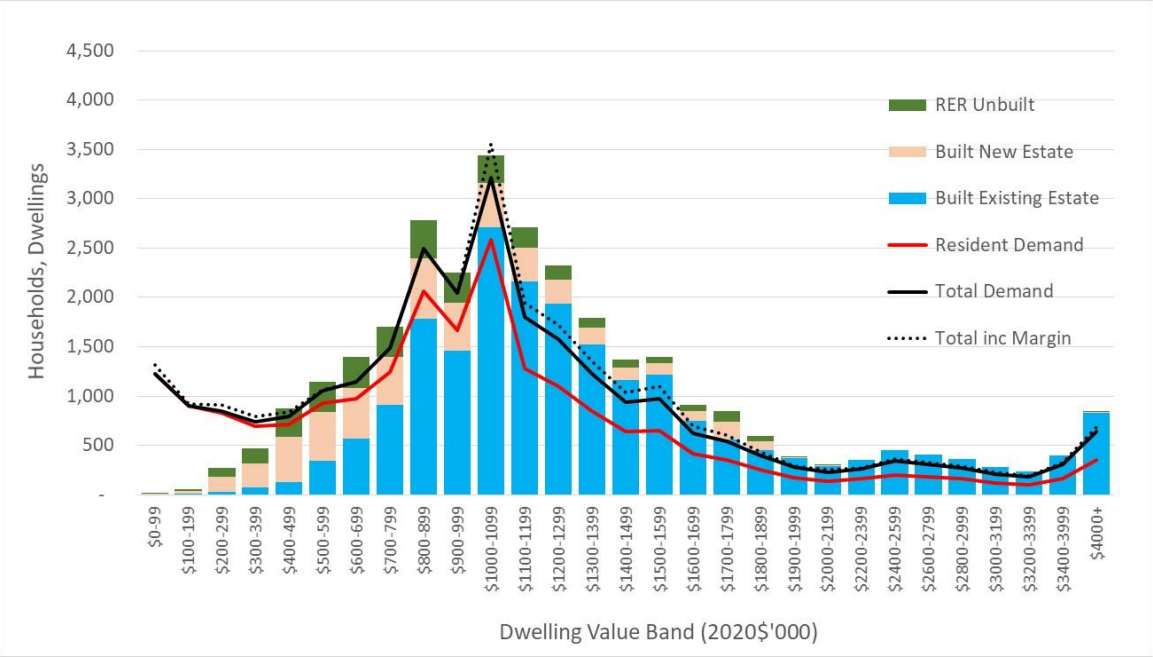
Figure 10.5 – Short Term (2050) Shortfall of Dwellings Affordable to Resident Non-Owner Households – Total District, Change the Path Future, Base Case Housing Price Growth



By 2023, the shortfall of affordable dwellings for non-owner resident households increases to 2,990 and includes dwellings priced up and including $600,000 (Table 10.2 and Figure 10.5). Again, while there is RER capacity estimated in these price bands, not all of it is expected to be delivered, with some supply instead targeted at dwellings in higher price bands (i.e., higher than non-owner residents could afford in 2023 but potentially affordable for existing homeowners (not graphed) and for holiday home/investor demand).[136]

In the medium term (to 2030), the shortfall increases to 3,330 also for dwellings priced up to and including $600,000 (Table 10.2 and Figure 10.6). This is despite a large share of expected new supply being built in price bands more affordable to non-owner resident households. There is, however, very little RER capacity in the lowest price bands, and the small amount that is not expected to be delivered would not be sufficient to offset the expected shortfall of affordable dwellings in any case.

Figure 10.6 – Medium Term (2050) Shortfall of Dwellings Affordable to Resident Non-Owner Households – Total District, Change the Path Future, Base Case Housing Price Growth

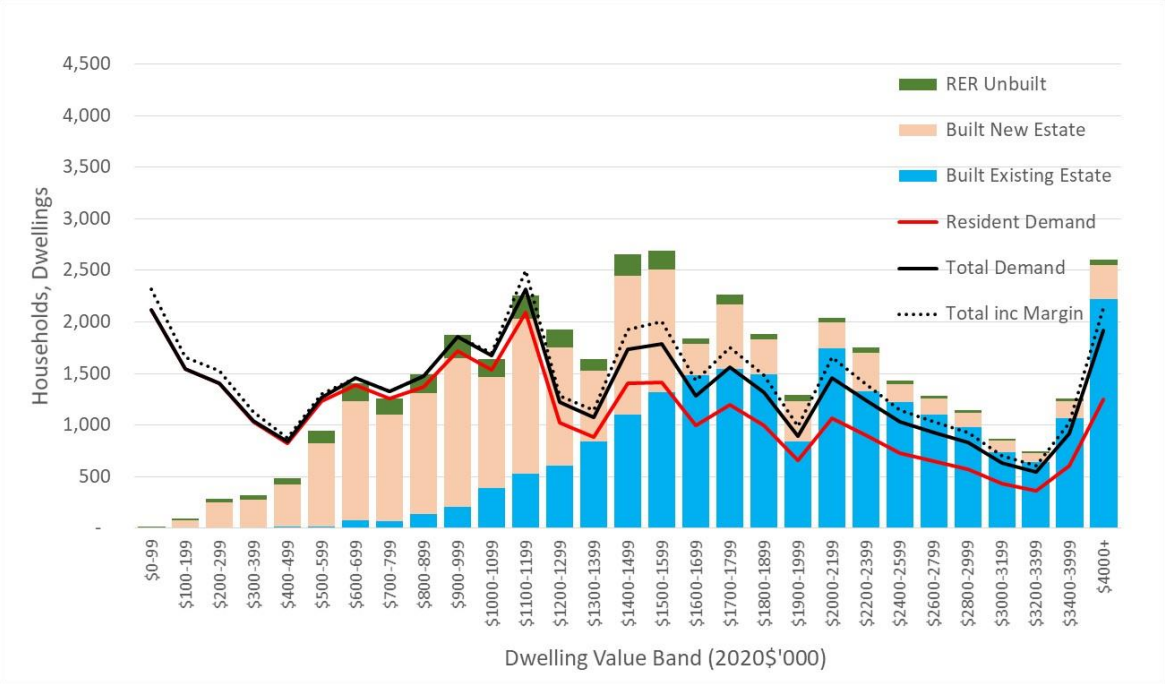


By 2050, the shortfall is larger (in keeping with growth in demand) and equates to an estimated shortfall of 6,960 affordable dwellings for non-owner resident households, and this includes small to moderate shortfalls of dwellings priced from $600,000 up to and including $1.2m (Table 10.2 and Figure 10.7). The more significant shortfalls again fall into the price bands less than $600,000. The effect of the increasing value of the existing estate is clear in the long term. Positively, the new estate expected to be built is concentrated in price bands more affordable to many non-owner residents, but again, there is insufficient RER in the lowest price bands (even if all was delivered) to cater for projected future demand. Across all

[136] The demand accounts for all district resident and total dwellings, but shows demand based on owning a dwelling, and that cost of owning is based on first home buyers across all income brackets. The graphs therefore represent the maximum / worst case gap between demand and supply and do not represent what is affordable to second home buyers, investors or what is affordable to rent.

time periods, there continues to be a net sufficiency of total dwellings relative to total resident non-owner household demand.

Figure 10.7 – Long Term (2050) Shortfall of Dwellings Affordable to Resident Non-Owner Households – Total District, Change the Path Future, Base Case Housing Price Growth



Based on the survey of QLD residential housing developers, only one respondent (the Queenstown Lakes Community Housing Trust) focussed on delivering affordable housing as their primary/target market. Other respondents ranked affordable housing after 8 to 10 other market segments (and including holiday home buyers and those wanting dwellings for visitor accommodation), and for 4 respondents, providing affordable (including forms of social housing) was not applicable to their development activities. While not necessarily representative of all developers in the QLD residential housing sector, the demand on services such as the Queenstown Lakes Community Housing Trust (and Kainga Ora if they enter the QLD market) can be expected to increase over time.

10.3.4 Affordability for Owner Households

It is also relevant to consider housing affordability for owner households (not represented in the affordability demand profiles above). Although the focus of affordability assessment is firmly on non-owners, owner households have a significant role in the housing market, and in development of the dwelling estate.

This is because households which do own a dwelling are generally able to afford that dwelling and, in many cases, could afford a higher value dwelling. A key reason is that with housing price rises, the value uplift accrues to the dwelling owner. With price inflation acting to increase their equity, many current dwelling owners are in a position where they could afford to shift to a more valuable dwelling. That includes new

dwellings. Since new dwellings are generally more expensive than existing dwellings on a like-for-like basis, upgrades by existing owners are an important driver of new housing.

This is supported by the survey of local residential developers, where more respondents ranked 'second home buyers' first as their most common/targeted buyer, and fewer ranking 'first home buyers' as their most comment buyer.

One consequence of housing price growth is the greater incentive for developers and builders to add to the estate, at the same time as there is greater ability for existing owners to be able to afford those new dwellings. This is evident in the graphs in Section 10.3.2, where some RER is expected to be supplied in price bands above that which could be afforded by many first home resident households, but which is affordable for other buyers, including those with home equity.

10.4 Impact of Planning and Infrastructure on Competitiveness in the Housing Market

In this section, the analysis above and the framework defined are drawn upon, to present findings about the impacts of planning and infrastructure on competitiveness in the QLD housing market.

As identified above (Section 10.2.3) the Randerson guidance has been drawn upon to identify the two arms of assessment of competitive urban land markets.

The first arm, whether there is "*..ample supply of alternative opportunities for development..*" is informed by the sufficiency assessment (Section 9). That shows QLD has adequate feasible capacity, with the Competitiveness Margin and the RER included. On that basis, it is concluded that the first arm is satisfied.

The second arm is the evidence to show *"..the price of land is not artificially inflated through scarcity."* The analysis detailed above shows that in QLD there is sufficient capacity. It also shows that within the overall sufficiency there is a range of choices as to location and to dwelling type and to dwelling value. Given the sufficiency and choice, there is no evidence that the QLD housing market is likely to see the price of land artificially inflated through scarcity which is attributable to council planning and infrastructure.

Further, within the sufficiency assessment, the feasibility analysis indicated that the QLD planning and infrastructure outcome on its own is not expected to contribute materially to price increases, since sufficient capacity would be feasible at current prices. On that basis, it is concluded that the second arm is satisfied.

10.5 Other Effects on the QLD Market

It is also important to consider the wider market conditions which are likely to have impacted on prices and competitiveness in QLD and will likely continue to do so. For this, the competitive situation in other parts of the housing sector have been examined, including the land development and housing construction industry where opportunity may have been affected by regulatory stringency; and the development patterns evident in housing construction, which may indicate the opportunity to develop a range of

dwelling typologies and dwelling sizes and dwelling values. It is also relevant to consider the overall volumes of dwelling sales in the district, given that new dwellings are one component of the market, a significant number of sales are of existing rather than new dwellings, and purchasers have the option to draw from either part of the market.

10.5.1 Residential Development Sector

The QLD residential construction sector is substantial (Table 10.3). There are some 1,598 entities engaged in construction, with 4,751 persons engaged (MECs). In residential construction specifically there are 557 entities (1,537 persons), in land development and subdivision 288 entities (743 persons) and in other housing construction and finishing some 663 entities (1,849 persons). The table shows the sector has been substantial throughout the last two decades at least, and the large number of entities indicates a highly competitive sector in the district.

This is especially the case because the average business size is small, which suggests that there has been extensive choice among providers of construction services. That said, some feedback has been received from stakeholders in the residential development sector that good quality trade services are spread over too many developments which can cause delays.

Table 10.3 – Residential Construction Sector QLD 2001-2020

	Entities (Geos)			Employment		
Activity	2001	2010	2020	2001	2010	2020
Water & Waste & Drainage	5	3	6	7	-	0
Waste Collection	7	7	10	32	55	80
Waste treatment	2	5	12	7	12	72
Residential building construction	149	447	557	335	728	1,533
Other Building	14	24	40	120	138	261
Roading & Civil	14	22	51	35	124	365
Land Development & Subdivision & Preparation	40	95	142	122	216	206
Concreting & Bricklaying & Roofing & Steelwork	27	73	111	65	137	275
Plumbing & Electrical & AirCon & Fire & Other	56	144	240	225	458	769
Plaster Carpentry Paint Tiling Glazing	85	184	311	165	374	805
Landscape and Other	18	76	146	52	205	536
Construction Total	402	1,064	1,598	1,119	2,381	4,751
Construction & Utilities	416	1,079	1,626	1,164	2,448	4,904
Residential construction	149	447	557	335	728	1,533
Land Development and Subdivision	58	171	288	174	421	743
Other Housing Construction and Finishing	167	400	663	455	970	1,849
Mainstream Housing and Development	374	1,018	1,507	964	2,119	4,125

Source: SNZ Business Frame 2021

10.5.2 Housing Price Trends

Housing prices are a critical aspect of affordability. The analysis of QLD housing prices (Section 3.2) identifies how the trends in the district adhered quite closely to the national patterns, indicating that QLD prices in the last two decades have been driven primarily by national-level influences, as distinct from local influences including planning and infrastructure.

10.5.3 Rent Price Trends

QLD rent trends have been examined in Section 4.1.2. The rental sector is substantial, however usually resident households seeking longer term accommodation must compete with holiday visitors seeking shorter term tenancies, and generally able to afford higher rentals as a consequence. QLD rental rates have been consistently higher than the New Zealand average, and reached a peak in 2019. The major downturn in tourism following the advent of the Covid-19 pandemic has seen rental rates fall significantly in the last 1-2 years, even while the number of tenancies increased. That fall indicates that there is substantial competition in the rental market, however as with other components of the market the extent of competition is only one aspect of how well the market is performing.

10.5.4 New Consents and Construction Activity

The consent and new dwelling data for the past 5 years (at least) shows that the QLD housing sector is delivering a range of values and typologies and has a value range which is quite close to the New Zealand pattern (as detailed in Section 3.3). That diversity and range over an extended period indicates that conditions are competitive, with the market able to serve a range of housing needs. The range of values and dwelling typologies is evident in every year, indicating that construction in each point of the market continues to be viable.

Importantly, there is no clear concentration of new dwellings into the middle and higher value bands, and away from the lower bands. One feature of housing markets where supply is planning constrained is for land prices to rise and due to planning constraints preventing intensification (to utilise the higher value land more efficiently), the construction sector instead focuses on delivering on fewer higher value dwellings, to justify the higher underlying land prices and maximise return for the consequently higher cost[137]. The data showing the wide spread of dwelling values indicates that in QLD the delivery of new dwellings in the past 5 years has not been materially constrained by shortfalls in supply of sites or flexibility of development on existing sites. That finding is also consistent with the decrease in average housing prices in the last two years, starting before the Covid-19 pandemic started to have effect.

10.5.5 Household Growth, Housing Growth, and Prices

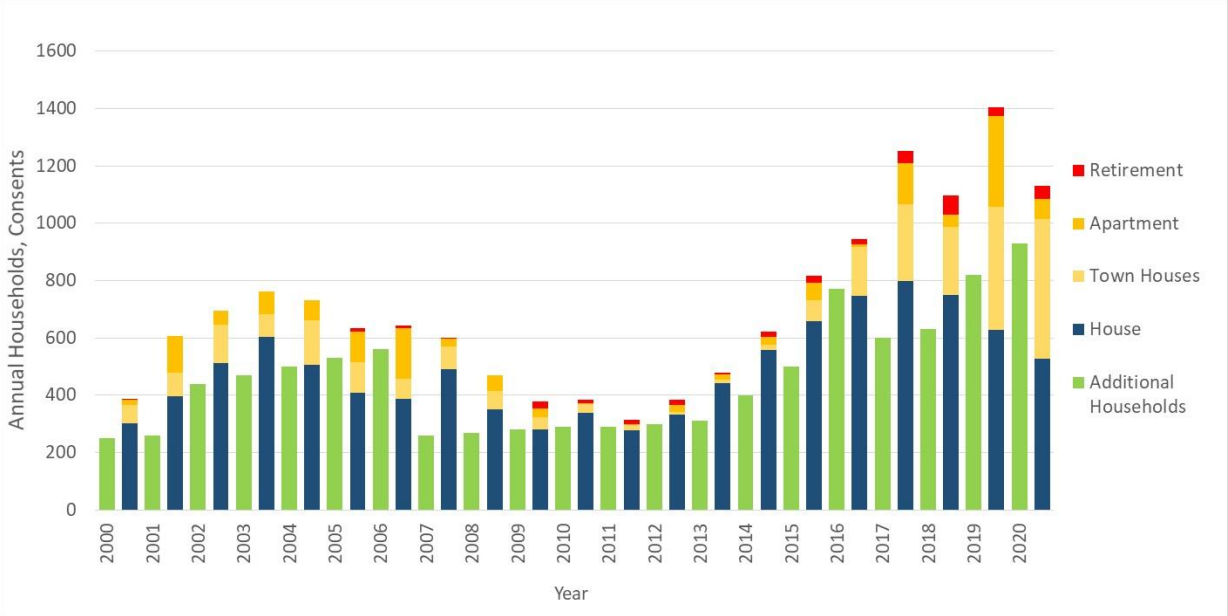
A further key indicator is the relationship between household growth and the changes in housing capacity over time. This helps inform the second arm of the competitiveness question, as to whether there is evidence of constraints in the supply of land and housing which may have led to "*..the price of land being*

[137] Such a pattern was evident in the Auckland market in the years leading up to the GFC, when high consumer confidence and easy access to finance combined to push property values significantly higher. When revaluations occurred, the value uplift was attributed predominantly to the land, as for the great majority of properties the dwelling (improvement value) had not changed since the previous valuation. Significantly higher land values, combined with high incidence of single house zoning, saw the house construction sector focus heavily on larger, more expensive new dwellings in order to make contracts of land plus dwelling packages viable. The number of small and medium sized new dwellings fell away dramatically after 2005. Even though the housing price inflation in Auckland was slower than for every other region in that period, the land values as a share of total value were already relatively high, a consequence of the greater value of lots in a large urban market. When the Unitary Plan became operative in 2016, its more permissive provisions enabled a wider range of dwelling sizes and values. That saw a substantial increase in smaller and lower value dwellings, generally additional to the existing trends in medium and large sized dwellings. It also saw a period of stability in Auckland housing prices.

artificially inflated.." The number of dwellings built is relevant, since dwelling construction depends on the availability of land/sites/opportunities to (re)develop.

Figure 10.8 shows the pattern of dwelling consents issued each year, and the indicated additional resident households in the district, over the 2000-2020 period. While the margin was tight over 2010-2012, throughout the period the number of consents issued has remained significantly ahead of household growth. That said, however, a significant share (some 25%) of the district's dwelling estate is identified as holiday dwellings, and ongoing growth in holiday dwelling numbers would mean that total consents remain ahead of growth in resident households in any case. Dwellings constructed for residential visitor accommodation (which may include residential flats) may also account for a portion of the difference between dwellings consented and resident household growth.

Figure 10.8 – QLD Household Growth and New Dwelling Consents by Type 2000-2020



The graph also shows the increasing diversity in dwelling typology over the period. Since 2015, the number of detached dwellings consented has decreased slowly, while the number of attached dwellings has risen substantially. In the last 4 years, the number of consents has been over 60% more than household growth[138].

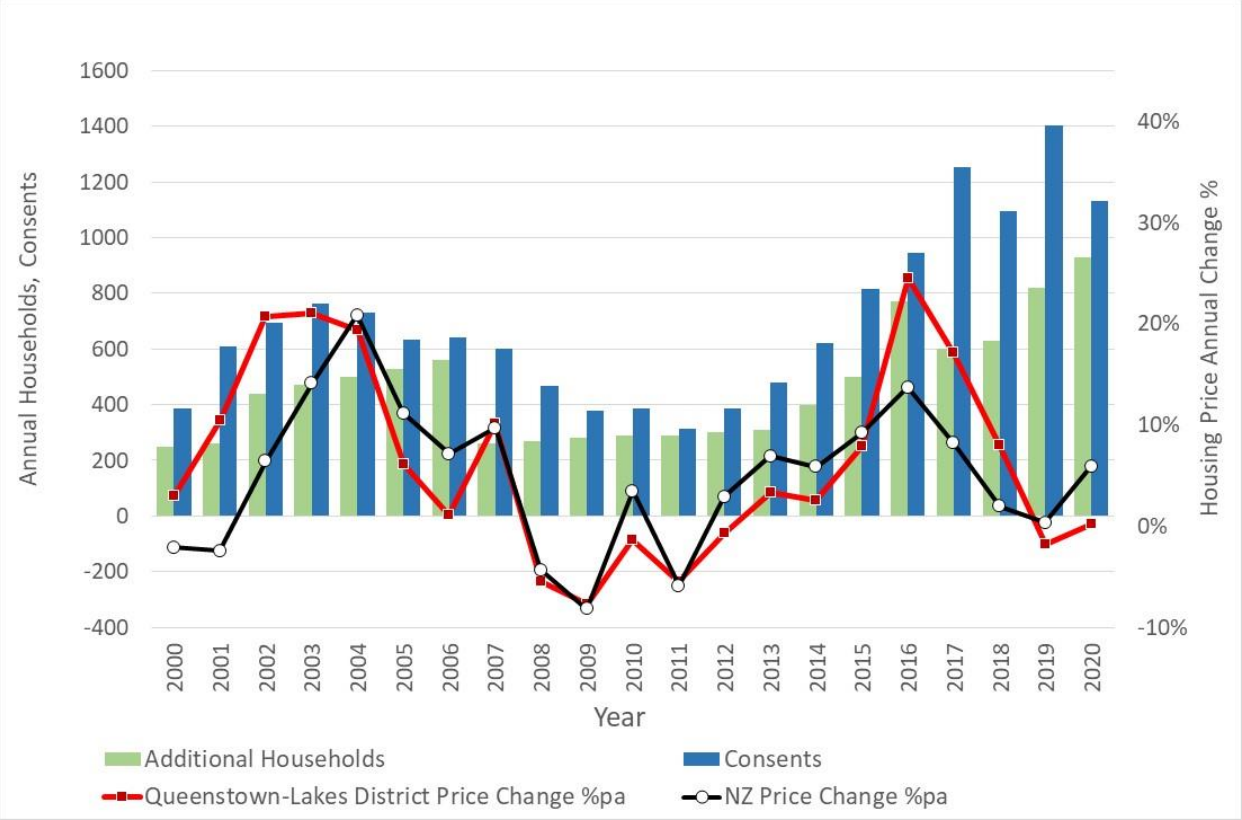
The pattern of annual household growth, dwelling growth and housing price inflation is shown in Figure 10.9. This graph draws together information on housing demand vs housing supply, and the changes in prices. The period 2000 to 2008 shows the lead up to the GFC, and the rapid increase in prices in QLD and nationally (discussed in Section 3.2). The key relationship there is how QLD prices shifted in a similar pattern to national prices. At the same time, the number of consents was around 50% of the growth in households, indicating that housing supply kept well ahead of population change.

[138] As noted, two main reasons that see consent numbers ahead of household growth are that some of the dwellings consented and built are as holiday dwellings, and other dwelling units are used as Visitor Accommodation (VA).

In the period to 2012, consent numbers dropped substantially, and at the same time there was negative growth in housing prices. This pattern is expected, as consenting and building activity is closely influenced by housing prices (rising prices generally stimulate increases in supply). Consent numbers were only 20% ahead of household growth. In the period to 2015, as QLD prices rose in parallel with but behind national price changes, consent numbers increased significantly, remaining well ahead (+52%) of the growth in households. The spike in QLD price growth is clear in the 2016-18 period. In 2017 and 2018 consent numbers continued to rise, even though the rate of growth slowed for resident households. In this period, possibly stimulated by the strong price growth, the number of consents stayed well ahead (+58%) of household growth.

On the 2019-20 period, consent numbers have been strong, and the rate of household growth has increased again, while at the same time housing prices in QLD fell. Consent numbers remain well ahead of (+39%) of household growth.

Figure 10.9 – QLD Household Growth, Consents and Price Changes 2000-2020



The patterns are as would be expected in the conditions:

a. The changes in QLD housing prices have remained fairly close to the national patterns, indicating that national-level influences have been the main driver of price growth (see also Figure 3.4).

b. The supply response across the 2009-13 period is consistent with the downturn following the GFC, where consent numbers throughout New Zealand remained subdued.

c. The increases in QLD housing prices after 2012 followed the national upturn.

d. QLD consent numbers recovered strongly after 2012 as the sector ramped up, especially in the construction of townhouses and apartments which are generally smaller and lower cost than standalone houses.

e. The slight downturn in prices to 2019 and 2020 is consistent with a settling after the strong growth in prices in 2015 and 2016 especially, as despite a small decline, dwelling and land prices remain high and are still acting to encourage dwelling construction.

10.5.6 Housing Market Sales Activity

The QLD housing market shows substantial activity. The Ministry of Housing and Urban Development ("MHUD") Housing Market Indicators Dashboard indicates 250-290 dwellings currently being sold per quarter, equating to a rate of around 5.1% per annum (dwellings sold per 100 dwellings) which is slightly higher than the national sales volume of around 4.5%.

This indicates clear competition in the housing market between owners offering existing dwellings, and the construction sector offering new dwellings to the market. The Dashboard indicates a steady stream of dwellings sold, suggesting the competition between existing and new dwellings is ongoing.

10.6 Price Efficiency Indicators

Finally, the Price Efficiency indicators on the MHUD Dashboard are considered, which is a requirement of clause 3.23(3)(b). The Dashboard offers three price efficiency indicators relevant to housing assessment (housing price cost ratio, rural-urban differential, and land concentration control).

10.6.1 Price Cost Ratio

The first indicator is the Price Cost Ratio ("PCR"). This is closely linked to the land value share indicator (discussed already in Section 3.4.1). The PCR for QLD in 2020 is 1.63, down from 1.948 in 2018. The rationale for the PCR is that land value should represent no more than $33^{1/3}$ % of total property value, which would produce a PCR of 1.50 (simply, PCR = 1/(1-LV%)). If a market has an average PCR of more than 1.50, then it is deemed according to the Dashboard to be not performing efficiently.

However, the PCR has significant limitations as an overall indicator of urban markets[139]. One key issue is the selection of $33^{1/3}$ % as some ideal or norm.

Further, as a measure of just the land value to total value relationship, its main utility is to assess new housing, to show the relative contributions of land and built improvements to the property estate. For new housing, that indicates whether the latest additions are more or less intensive (lower land value share) than for new developments in previous periods.

[139] Market Economics Ltd. Land Efficiency of Auckland's New Housing 2013-17. Report for Auckland Council, November 2018.

However, when the measure is applied across whole towns or cities, then the results are dominated by residential properties which were developed and improved many years ago. Even if a city is growing by 2% per annum, its current estate will have 78+% of properties developed more than a decade ago, and well over half the estate developed more than 20 years ago. The general trend has been for housing to become more intensive over time, as plan provisions and market preferences trended toward smaller lot sizes and larger dwelling sizes. This means that analysis of the whole estate includes a cross-section of older properties with higher PCR values, and newer properties with lower PCRs. The average PCR, even with CPI adjustments to estimate the replacement cost of existing dwellings, must reflect that city-wide average. Tracking the PCR value year to year must inevitably show very small change to the average, because in the course of a year or 5 years, the number of new dwellings is too small to indicate a material change. The study for Auckland Council (2018) found it could be used to compare the relative land efficiency of new dwellings added to the estate each year, though not the total estate.

Moreover, the PCR is dominated by overall shifts in the market, and not by the land efficiency of new dwellings. This is clear in the substantial changes in PCR values contained in the Dashboard. The shifts from year to year are much greater than could have been generated by new properties entering the market.

To illustrate, the PCR calculated for QLD was 1.948 in 2018, which means on average that land accounted for around 48.7% of total property value. By 2020, the value was 1.63, with land accounting for 38.6% of property value. In that time, the number of residential properties (dwellings) increased by 9.6%[140]. The QLD change could not have been due to the new properties, instead it arose from an estimated district-wide shift in the relative values of land and built improvements. This means that PCR changes over time reflect predominantly trends in valuation and revaluation, which are influenced by much more than current planning provisions.[141]

There are wider limitations to this PCR method. As well as the requirement to set some ideal or benchmark land value share, there are more fundamental issues because the PCR formula has built in assumptions that the current dwelling accounts for all of the value of land. The consequent assumption is that the current dwelling, irrespective of age of development, past planning constraints or changes in preferences and amenities must always represent the maximum development intensity possible on the land. If that were not the case, then other factors, including potential for intensification, would influence land value, and the land value could not be calculated as a fixed ratio of the dwelling value. The implication is that the method assumes that every residential lot in a city is already, and always developed to its maximum potential. The only potential for growth must then depend on greenfield development. However, the research experience in New Zealand including for HBA work shows instead that well over 80% of already developed sites have

[140] Based on the QLD projections.

[141] There are significant limitations to this PCR method, including its core assumption of some 'ideal' land value share, but more fundamentally from its built in assumptions that the current dwelling accounts for all of the value of land, and therefore that the current dwelling must represent the maximum development intensity possible on the land (otherwise there would be other factors, including potential for intensification which would influence land value. The consequent assumption that every residential lot in a city is already developed to its maximum potential causes substantial distortions, especially in relation to a city's growth potential if all growth must be greenfield. The research experience in New Zealand including for HBA work shows instead that well over 80% of already developed sites have potential for intensification.

potential for intensification. For these reasons it is considered that the PCR approach does not offer a robust basis for interpreting urban markets.

Even when applied to examine only new residential properties, the PCR indicator has to be applied with care. This is because market preferences (as opposed to planning constraints) may see new dwellings added which have relatively high PCR values, even though the Plan provisions often enable developments with much lower PCRs. For example, construction of standalone dwellings on larger lots sizes means the land value share may be around 40% of the final property value (PCR of 1.67). If standalone dwellings are being constructed on lots that are above the minimum size / implied density enabled in the Plan, and if a high share of the dwelling sales price is land (with the enabled densities adequately supported by local amenity/infrastructure), then this would indicate the land value share (and PCR) is higher as a result of factors outside of planning.

On the other hand, if new dwellings are being constructed at the highest densities enabled by the Plan, and the final land value share is deemed above the benchmark indicated by the PCR, and there is demand for smaller lots and/or higher built intensity, then this could indicate a planning constraint, which could in turn directly or indirectly affect dwelling prices.

Analysis of building patterns in the recent areas of greenfield expansion (see RER discussion in the supporting Technical Report) does not suggest that the existing planning provisions are constraining the density of standalone dwellings delivered by the market. This is because, in some locations, the average lot sizes being delivered are significantly above the minimum levels enabled by the Plan.

While standalone dwelling lot sizes have been delivered at above the Plan minimums across much of QLD's recent greenfield areas (which are significant in geographic extent and account for the significant share recent growth and future capacity), 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 Suburban Residential base zone, which generally does not include provision for the construction of higher density typologies (e.g. duplexes or terraced housing) that could be achieved on smaller site sizes. It is noted that the role of the greenfield areas in providing for growth in district dwellings combined with their density provisions is why detached housing continues to dominate the current housing estate (estimated at 84% of total urban dwellings and 83% of total district dwellings in 2020),[142] despite the recent trend for more attached dwellings being consented.

10.6.1 Rural Urban Differential

The MHUD Dashboard contains an indicator on the differential in land prices on either side of the rural-urban boundary. For this indicator, the Dashboard compares land prices of standalone dwellings within Queenstown's urban area[143] within 2 kilometres of the rural urban boundary (RUB) defined by MHUD[144] with those of rural residential (lifestyle) properties outside, but within 2 kilometres, of the RUB. The land

[142] In the 2017 HBA, it was estimated that 71% of resident households in the district were in standalone homes in 2013 (based on 2013 Census data). The 2020 estimate for the total district (83% in standalone dwelling) includes resident and holiday homes (i.e., total dwellings).

[143] Not necessarily the same as the urban environment defined for this HBA.

[144] The RUB defined by MHUD also differs from the defined Urban Growth Boundaries (UGBs) defined by QLDC.

values on a per m^2 basis of these two groups were compared to produce a differential between the land values. Some adjustment has been made for distance to amenity and the charged (development contributions) infrastructure costs.

The MHUD assessment (based on a sub-set of the district) has found that, on a per m^2 basis, land is 3.12 times more expensive on the inside (within 2 kilometres) of the RUB, than outside (within 2 kilometres) of the RUB. This equates to around $337 per m^2, which amounts to $202,485 for a 600$m^2$ section. This is at the higher end of the range across the other Tier 1 and 2 urban economies. Other Tier 1 and 2 economies range from $102 per m^2 (Napier) to $345 per m^2 (Auckland).

However, in an urban economy a substantial price differential is to be expected between urban land and non-urban land. Such a differential does not indicate any planning constraint. It arises because urban land is much more valuable on a per m^2 or per ha basis as it can be utilised much more intensively than non-urban land. That higher intensity of use and consequent higher land value is enabled by infrastructure. Its higher intensity of use means it may generate higher returns per hectare, with the higher land values reflect that higher return. The most obvious difference is in residential land, since urban land can carry many more dwellings per hectare than non-urban land.

The common pattern for cities and towns is for the highest land values to occur in the centre – the central place – with values decreasing as distance from the central place increases. Higher value uses – commerce and retail – typically command the most accessible – most central – locations. Housing generates lower returns per hectare than commerce, so it command the areas outside the centre. The infrastructure necessary for urban intensity levels has high scale economies, with networks focused on the centre (as the first location developed). This means that the urban intensity can generally be sustained only to the extent of the infrastructure, which is determined primarily by the size of the economy. Accordingly, there is a substantial decrease in intensity at the urban/infrastructure edge. There is a corresponding significant drop in land value at the urban edge, as evidenced in all of the land value profiles provided in the MHUD datasets.

This pattern is directly consistent with the dynamics of cities, where the benefits of co-location and concentration are greatest in the centre, and decrease with distance from that centre, while the intensity enabled by infrastructure is needed to best secure those benefits. One important implication is that a sharp differential in land value at the urban edge is indicative of an efficient urban form, where the maximum urban activity is sustained within the minimum urban land area, and the differential in intensity of land use is also sharp. In the urbanised area, a significant share of the developed land area (typically around 30% to 40%) is taken up for roads and reserves.

Outside of the urbanised area – usually coinciding with the end of the urban zoning and the edge of the infrastructure-serviced area – the land value profile would show a sharp drop but a further gradient, as the non-urban land closest to the edge has greater value than that further away because its potential for early urbanisation is greater.

Outside of the urban zoned area, land is most commonly in rural lifestyle properties, characterised by significantly larger land area per dwelling, limited infrastructure, and lower intensity of use. Land values per ha reflect this lower potential, even though individual lots are commonly of much higher total value than smaller urban lots. The average property size, development yields and infrastructure costs that arise from

these land use gradients account for a large share of any differential. The MHUD methodology controls for some effects, but it does not account for the major difference arising from intensity of use. Genuine rural production uses are more common as distance from the urban edge increases, with lower land values per ha than lifestyle lots, though commonly larger holdings.

Importantly, the relationship between parcel size and land value shows only a weak linearity. This is because much of the value of an urban lot arises simply from its ability to accommodate a dwelling. Larger lots are more valuable, but the key matter is whether a lot is large enough to accommodate a dwelling. This is evident from analysis of land price curves (from the Ratings Database) from the feasibility modelling assessment. Urban lots typically have much higher values per m^2 than lifestyle lots, hence the clear value differential between urban and lifestyle land.

Accordingly, a strong Rural Urban Differential would indicate that the QLD land market is performing relatively efficiently.

10.6.2 Residential Land Concentration

This MHUD Dashboard indicator of Land Concentration control shows both the potential supply of land for residential development, and the extent to which that development capacity may be in concentrated ownership, where a small number of owners may be in a position of exerting some degree of control over supply.

In relation to supply of residential land, the indicator shows there is substantial potential for residential development in the district. The Ministry's figures indicate that 28% of residential land is undeveloped (343 of 1,234 ha), and it identifies 24 holdings of 2.0 ha or larger as being potentially available for residential development. These largest 24 holdings account for 171ha of development potential. The other 76 identified have another 85-90ha potentially for development. The balance of the 343 ha of undeveloped potential is in holdings of less than 0.5ha.

The Land Concentration Index for QLD was 336 in 2017, according to the Dashboard. This indicates a moderate to lower level of concentration. Assessment of the scale of potentially developable land, and the wide spread of ownership (the largest 15 owners or consortia control 38% of the potential land), indicates that there is clear potential for competition among land holders, as well as variety of location, and development opportunity which extends beyond the medium term.

10.7 Summary of the Impact of Planning and Infrastructure

The foregoing analysis has provided comprehensive assessment of the housing and land markets in QLD, and demand for housing from the QLD population. It covers all of the key aspects which the NPS-UD sets out.

It shows that in the current and anticipated conditions for QLD that Council's proposed planning frameworks and integrated infrastructure programmes are expected to have no to very minor negative impact on housing affordability and competitive aspects of the market. The Plan provides for sufficient

capacity for growth across the urban environment, across a range of locations in the district, and that is expected to not place upward pressure on prices.

However, it is also clear that provision of the conditions for a well-regulated, competitive housing and land market is necessary but insufficient to deliver affordable housing for low income households and further targets and specific work will need to be undertaken to develop housing for these groups and others. Further, outside of the impact of planning and infrastructure specifically on affordability and competitiveness, the impact of infrastructure constraints (particularly land transport infrastructure associated with key bridges on the state highway network) has been shown to have a negative impact on realising sufficient development capacity in some locations of the urban environment that are zoned or identified for housing growth.

11 Conclusions and Recommendations

This section draws together key findings and conclusions from the whole HBA report, including the housing market analysis, capacity assessment, sufficiency assessment, and impact of planning and infrastructure. It includes several recommendations for QLDC to help guide future planning and decision making.

11.1 Key Findings and Conclusions

This HBA 2021 Report for QLD has addressed all of the aspects required under the NPS-UD. It shows:

1. Total district dwellings (including resident houses and holiday homes) is currently estimated at 21,750 (2020) based on Council data. This number is projected by Council (preferred High growth scenario) to increase to 22,550 dwellings by 2023, 27,120 by 2030, and 38,800 by 2050.

2. As well as projected growth in the resident population, important change is expected in the demographic makeup of the QLD community. Into the long term, this is expected to see smaller households – single persons and couples – account for an increasing share of the population.

3. QLD housing prices have been increasing over a long period. This increase has largely followed the national pattern, especially over the last two decades when most of the growth in housing prices took place. Mean (average) dwelling values are well above the national average. Median (middle) house prices in the district continue to be higher than all other Tier 2 territorial authorities and most Tier 1 territorial authorities, although is close to median house prices in Auckland according to housing indicator data provided by MHUD.[145]

4. The assessment of capacity for new dwellings, and the commercial feasibility analysis indicates that Council' planning framework can be expected to deliver enough feasible capacity to accommodate the needs of the QLD resident population over the long term. There is clear evidence that more attached housing is being consented and this trend is expected to continue, although is not evenly spread on the ground. Most residential developers surveyed indicated that they are likely to shift their supply over the short-medium term to deliver smaller sections (enabled by the PDP), smaller dwelling units and more attached dwellings to meet changing market demand.

5. The analysis indicates that the required additional feasible dwelling capacity may be delivered at or close to current costs and prices. That is, sales prices of new dwellings do not need to increase further in order to become commercially feasible to develop. Price increases would

[145] https://huddashboards.shinyapps.io/urban-development/

however further improve feasibility (profitability) for developers assuming they increase faster than costs.

6. On that basis, the current planning conditions are not expected by themselves to place upward pressure on housing prices in QLD. If the trend in household income growth continues, then taking into account only Council planning and infrastructure, and feasibility levels at current prices, housing could be expected to become relatively more affordable into the future for non-owner households, and at least not decline. The affordable dwelling shortfall (limited to the dwellings priced up to $\$_{2020}500,000$), would under these circumstances, show limited change over the long term and does not increase as fast as the resident population over time.

7. However, housing prices have been and will continue to be affected by a range of local and especially national-level factors which are expected to place upward pressure on housing prices in QLD. In the long term, that has been associated with the high popularity of the district as a place for holiday dwellings, which has meant additional demand for housing and sections beyond that from permanent residents. These pressures are expected to see affordability in QLD decline in the future for non-owner households, which are not attributable to QLDC planning and infrastructure. That shortfall is estimated at just under 7,000 affordable dwellings for non-owner households by 2050, compared with an estimated current shortfall of 2,350 affordable dwellings.

11.2 Recommendations

The HBA analysis indicates that QLDC has made sufficient provision for housing growth. As a consequence, Council planning and infrastructure is not likely to place upward pressure on prices. One important requirement for future planning and decision making is to focus on strategies which will help maintain these conditions and potentially improve them. That will include:

1. Monitor the adequacy of zoned and infrastructure-serviced land supply (as required in any case by the NPS-UD).

2. Refinement of the indicative long term urban expansion areas identified in the Draft Spatial Plan, including their extent and zoning mix

3. Further detailed investigation of realised (and unrealised) infill housing and redevelopment in the priority development areas identified in the draft Spatial Plan.

4. Alignment of all the key strategies (LTP, Spatial Plan and Infrastructure Strategy) to inform the next HBA (Housing) which will resolve or clarify some of the timing issues for Three Waters constraints.

5. Monitor cost efficiency in the provision of Three Waters and roading infrastructure. In theory, this will be more achievable because the district is not racing to provide for sufficient enabled capacity. That should allow more scope to fine-tune the delivery of Council and other roading infrastructure to support growth.

6. It should also allow more scope and time to fine tune the next additional capacity for the district, to cater for growth beyond the NPS-UD long term. Given the ongoing evolution of the QLD housing and property market over the next 30 years, this opportunity will include **options for intensification** of housing land. That will include any requirements under NPS-UD Policy 5 to enable heights and density of urban form commensurate with the greater of accessibility by public transport and active transport, and relative demand for housing and business use. While these provisions are considerably less than the Policy 3 requirements for Tier 1 cities, they nevertheless provide considerable scope to seek enablement of land intensification which could be based on broad and undefined "relative demand" in different locations, which may or may not be linked to existing CBD areas or existing or planned centres, such as areas of high relative land values.

   As well as these broad requirements, there are other specific matters which can be improved in the short term (including steps that would facilitate future HBAs):

7. **Waka Kotahi** - Waka Kotahi state highway bridges[146] in the urban environment (Shotover, Kawarau Falls and Albert Town),[147] show the potential to significantly impact on the ability to realise growth in the Eastern Corridor, Southern Corridor and Lake Hawea over the long term. However, that impact may not necessarily affect housing affordability or competitiveness in the housing market by virtue of the sufficient capacity which Council planning and infrastructure has provided across other urban locations. However, these potential growth areas have been shown to be commercially feasible and able to be serviced by Three Waters infrastructure (including through any reprioritisation of funding). If also serviced by land transport infrastructure, these growth areas could be realised in the future, and this would further expand opportunities for development and enhance competitiveness in the market.

8. Further work may be needed to **understand the current and projected land transport issues facing these housing catchments in more detail**, and what changes would be needed to effectively and efficiently cater for housing growth. Any future decision making on these areas will need to have specific regard to land transport constraints and opportunities.

9. **Investigate the use of alternative funding and financing tools** to accelerate infrastructure delivery in the priority development areas identified in the Draft Spatial Plan.

10. **Affordable housing** - Further supply of land or density provisions, where already expansively available, are unlikely in and of themselves to increase the rate of supply of housing by the development sector in the lower value bands. Therefore, increasing the supply of affordable dwellings is likely to take specific effort and initiatives to make development of such dwellings feasible. Encouraging and enabling initiatives that increase the uptake of enabled and serviced

[146] Whilst modelled as part of 'development infrastructure', these bridges do technically fall under 'additional infrastructure' as they sit outside the scope of Council control. However, this type of infrastructure may constrain the ability for supply to be realised in certain areas.

[147] As based on the approach and assumptions taken in this HBA, and in turn based on output from the Strategic Transport Model.

capacity in a more affordable price range will continue to be important to help ensure a comprehensive and balanced future dwelling estate. Such initiatives may include:

- Inclusionary zoning;
- further investment by Kāinga Ora to complement the broad-brush mechanisms like zoning and development controls in the District Plan; and
- Other measures to reduce building costs, complexity and time delays.

11. Current dwelling growth projections – the Change the Path (High Growth) future projects little household growth in the short term but strong holiday home growth in that period. While this HBA has taken total dwellings for the purpose of the sufficiency assessment (which is not sensitive to the mix of ownership types), the future affordability modelling (sufficiency by price band) is based on resident household growth, which in the short term is a small portion of total growth. It is recommended that regular monitoring of total dwellings (consents) and population/household estimates continues to evaluate the suitability of the projections for planning and decision making over the short term.

12. Update the Strategic Transport Model – This model has a 2016 base with some known discrepancies with current growth projections. Signalisation of Albert Town bridge for example, is also not built into the model. It is recommended that the Model is updated and covers the whole district (i.e., Kingston). If being redeveloped, alignment of boundaries with the urban environment boundary and commonly used Council reporting areas (whether that is those in this report, or further modification of that) would be beneficial to facilitate future HBA updates.

11.2.1 Other Minor Suggestions:

13. To adjust the way that Three Waters modelling and/or demand modelling is summarised to ensure a consistent approach for Five Mile to be part of either Frankton or Quail Rise reporting areas. This would help facilitate future HBA updates.

14. That for any future growth projection updates, that 'Kingston' is split from 'Kingston Other' in the same way as for Glenorchy. Whilst a very minor detail, it would be helpful given that Kingston Settlement and Special Zone are now recognised as part of the long term urban environment in the HBA.

Appendix A - Glossary of Terms

5 Year Lag Future	Queenstown Lakes District Council's medium growth projection scenario, released July 2020.
Additional Infrastructure	In accordance with the NPS-UD, additional infrastructure means public open space, community infrastructure, land transport not controlled by local authorities, social infrastructure such as schools and healthcare facilities, telecommunications networks, gas, and electricity networks.
Attached Housing	Where one or more dwellings are joined horizontally with a shared wall (i.e., duplexes or terrace housing) or vertically (i.e., apartments).
Capital Value	The value ($) of land value and improvement value combined. It is the total value of a property, as recorded in the Council's rating database.
Change the Path Future	Queenstown Lakes District Council's high growth projection scenario, released July 2020.
Commercially Feasible	Means commercially viable to a developer based on the relationship between costs and revenue (i.e., is profitable)
Commercially Feasible Capacity	The share of plan enabled capacity that would be commercially viable to a developer based on the relationship between costs and revenue.
Competitiveness Margin	A margin of development capacity, over and above the expected demand that tier 1 and 2 local authorities are required to provide, that is required in order to support choice and competitiveness in housing and business land markets. The margins are 20% for the short term, 20% for the medium term and 15% for the long term.
Detached Housing	Means standalone dwelling units, not attached to other dwelling units.
Development Infrastructure	In accordance with the NPS-UD, development infrastructure means network infrastructure for water supply, wastewater, or stormwater and land transport, both of which are controlled by a local authority or council controlled organisation.
Dwelling Estate / Built Estate	Total dwellings in the district (total dwelling stock)
Greenfield Capacity	The yield of large, yet to be subdivided parcels of zoned land, once allowance is made for required roading, access, open space, landscaping areas (set at 32% of the gross site area for QLD based on feedback from Council).
HBA	Housing and Business Development Capacity Assessment, as set out in the NPS-UD.
Improvement Value	The value ($) of any physical structures or features of a property, including buildings, fencing, landscaping, as recorded in the Council's rating database.
Infill Capacity	Development that can occur in the existing urban area on vacant subdivided lots or within existing developed lots that could be further subdivided to the meet the District Plan zone rules, without needing to remove or shift the existing dwelling. I.e., add one or more dwellings at the rear or front of the existing dwelling.
Infrastructure Ready	Refers to plan enabled capacity for housing or business development that is already serviced by infrastructure in the short term, has the necessary infrastructure planned for (with funding allocated) in the long term plan in the medium term, and has the necessary infrastructure identified in an infrastructure strategy in the long term.

Land Value	The value ($) of the land (section) excluding the value of any improvements or structures on that land, as recorded in the Council's rating database.
Long Term	Between 10 and 30 years.
Medium Term	Between 3 and 10 years.
Non-owner Households	Households that do not already own a residential dwelling and may be renting a dwelling.
NPS-UD	National Policy Statement for Urban Development (2020) – national direction under the Resource Management Act.
Owner Households	Households that already own a residential dwelling (with or without a mortgage).
Plan Enabled Capacity	The maximum count, type, density and location of development that can occur if the District Plan rules were applied. I.e., the yield if all lots were developed at the site minimums and all apartment buildings were developed at the building height maximums etc.
Reasonably expected to be realised (RER)	The amount, type, density, and location of housing that can be expected to be developed based on recent trends and within the bounds of what is plan enabled. This may include a tendency to deliver larger sections that the zone minimums, a particular type of dwelling where choices are enabled, a different height of apartment buildings than the maximum building height etc.
Redevelopment Capacity	The net additional yield of a subdivided lot in the existing urban environment if existing dwellings were removed and the site was redeveloped using the site minimums for the zone. Implies further subdivision of the existing lot to smaller lots sizes enabled by the Plan.
Reporting Area	Aggregations of geographic areas across Queenstown Lakes District, used to summarise and report results in this HBA. The reporting areas align with the spatial framework used in other council planning and reporting including the Draft Spatial Plan.
Rural Environment	Means the rest of the district, excluding the urban environment.
Short Term	Within the next 3 years.
Sufficiency	In the context of this HBA, refers to the comparison between the demand for dwelling and the capacity to provide for dwellings. Can result in a surplus or a shortfall.
Three Waters Infrastructure	A collective term for water supply, wastewater, and stormwater infrastructure.
Urban Environment	In accordance with the NPS-UD, means any area of land (regardless of size and irrespective of local authority or statistical boundaries) that is, or is intended to be, predominantly urban in character and is, or is intended to be, part of a housing and labour market of at least 10,000 people. In QLD, regard is also given to urban growth boundaries, 'urban' zoning and the location and role of that zoning.
V/C Ratio	Volume to capacity ratio – a transport modelling term that relates to the number of vehicles using a piece of the roading network relative to the maximum number of vehicles that that piece of roading network can cater for effectively and safely. Applies over a period of time (i.e., the evening peak). Can also apply to passengers using a service.