NPS-UD Housing Development Capacity Assessment

Future Proof Partners

30 July 2021 – final

m.e consulting

NPS-UD Housing Development Capacity Assessment

Future Proof Partners

Prepared for

Future Proof Partners (Hamilton City Council, Waikato District Council and Waipā District Council)

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Executive Summary

Context

This report is the Housing Development Capacity Assessment 2021 ("the HBA") for the Future Proof Partners Area ("FPP area"). The FPP area is formed by Hamilton City as the main urban area, together with the surrounding Waikato and Waipā districts. The requirement for this three yearly report is set out in the National Policy Statement for Urban Development 2020[1] ("NPS-UD"). The report complies with the requirement for Tier 1 territorial 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.

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, 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[2] 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 following tables (Table 8-1 to Table 8-3) provide a summary of the key quantitative sections of the HBA technical assessment. A conceptual overview of each of the areas of assessment and their key conclusions is contained within the sub-sections below. Further detail on the technical assessment and the levels of demand, capacity and sufficiency by urban location and dwelling value band is contained within the full report.

[1] Ministry for the Environment, 2020 *National Policy Statement on Urban Development,* July 2020.

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

Table 8-1: Future Proof Area Summary of Demand, Capacity and Sufficiency Assessment: Short-Term

SHORT-TERM (2020-2023)				Current Prices Scenario			
AREA	Additional Demand + Margin[1]	Plan Enabled Capacity[2]	Infrastructure Served Capacity[3]	Commercially Feasible Capacity[4]	Reasonably Realised Capacity[5]	Sufficiency[6] Net	Sufficiency[6] %
HAMILTON CITY							
Greenfield	4,200	22,300	3,100	2,600	2,500	90	100%
Infill/Intensification		108,300	<108,300	16,300	1,800		
Total[7]	**4,200**	**130,600**	**<115,500**	**18,800**	**4,300**	**90**	**100%**
WAIKATO DISTRICT							
Tuakau	200	3,200	2,000	700	70	-500	83%
Pokeno	400						
Te Kauwhata	200	700	500	100	10	-600	91%
Huntly	300	2,400	1,400	200	20		
Ngaruawahia	300	1,900	1,500	500	50		
Taupiri	-	500	400	300	30		
Raglan	300	2,900	1,400	700	70	-200	89%
Smaller settlements							
Horotiu	30	700	500				
Meremere	20						
Ohinewai	-						
Te Kowhai	-						
Rest of District - Non-Urban	500						
Total[7]	**2,200**	**12,300**	**7,700**	**2,600**	**300**	**-1,400**	**88%**
WAIPA DISTRICT							
Cambridge	700	10,600	5,700	3,400	2,400	1,700	121%
Te Awamutu	400	7,800	5,400	2,800	2,000	1,400	122%
Kihikihi	200	600	600	300	70		
Minor Urban							
Karapiro	- 10	1,400	1,400				
Ngahinapouri	-						
Ohaupo	-						
Pirongia	40						
Rukuhia	-						
Rest of District - Non-Urban	60						
Total[7]	**1,300**	**20,400**	**13,100**	**6,500**	**4,400**	**3,200**	**122%**
TOTAL FUTURE PROOF[7]	**7,800**	**163,300**	**<132,300**	**28,000**	**9,000**	**1,900**	**102%**

Source: M.E NPS-UD Housing Demand and Capacity Assessment: Future Proof Area, 2021.

[1]'Demand + margin' refers to demand based on the University of Waikato April 2021 projection (high-series) and an additional margin of feasible capacity, over and above the projected demand, of at least 20% in the short and medium term, and 15% in the long term.

[2]'Plan enabled capacity' refers to the total capacity enabled by zoning within the relevent district plan (operative (short to long-term) or proposed (medium to long-term)) or spatial strategy planning document (long-term).

[3]'Infrastructure serviced capacity' refers to capacity that is served by infrastructure at each assessment point in time. For brownfield development, this includes 'infill' and 'redevelopment' capacity. Refer to Section 4.1.3 for more detail.

[4]'Commercially feasible capacity' refers to whether (plan enabled and infrastructure served) capacity is commercially feasible for profit-driven commercial developers to construct.

[5]'Reasonably realised capacity' refers to capacity that is reasonably expected to be realised – an estimation of the share of commercially feasible, infrastructure served capacity that is reasonably expected to be realised – the amount of feasible capacity is reduced to reflect the level and scale of development which is more likely to be delivered by the market. The assessment recognises that the nature and type of development delivered may not achieve the densities (and therefore capacity) that are enabled by the Plan.

[6]'Sufficiency' compares total capacity with demand plus margin. Red text indicates insufficient capacity.

[7]Totals of commercially feasible and reasonably realised capacity include only the assessed urban areas. The sufficiency assessment totals reflect the assessment across the urban areas where the commercial feasibility of capacity has been assessed.

Table 8-2: Future Proof Area Summary of Demand, Capacity and Sufficiency Assessment: Medium-Term

MEDIUM-TERM (2020-2030)				Current Prices Scenario			
AREA	Additional Demand + Margin[1]	Plan Enabled Capacity[2]	Infrastructure Served Capacity[3]	Commercially Feasible Capacity[4]	Reasonably Realised Capacity[5]	Sufficiency[6] Net	Sufficiency[6] %
HAMILTON CITY							
Greenfield	14,300	22,300	8,700	7,400	7,600	3,700	105%
Infill/Intensification		108,300	<108,300	16,300	10,500		
Total[7]	**14,300**	**130,600**	**<117,100**	**23,600**	**18,000**	**3,700**	**105%**
WAIKATO DISTRICT							
Tuakau	600	11,300	7,900	5,800	4,800	3,100	171%
Pokeno	1,100						
Te Kauwhata	600	5,200	4,500	3,400	2,900	1,900	124%
Huntly	1,000	2,900	1,500	300	60		
Ngaruawahia	500	3,200	2,300	1,300	800		
Taupiri	50	700	700	600	300		
Raglan	800	3,000	2,300	1,600	1,000	200	108%
Smaller settlements							
Horotiu	90	1,200	1,000				
Meremere	30						
Ohinewai	10						
Te Kowhai	60						
Rest of District - Non-Urban	2,000						
Total[7]	**6,900**	**27,600**	**20,200**	**13,100**	**9,900**	**5,200**	**135%**
WAIPA DISTRICT							
Cambridge	2,300	10,600	6,100	3,800	2,900	600	106%
Te Awamutu	900	7,800	5,400	2,800	2,100	800	112%
Kihikihi	400	600	600	300	80		
Minor Urban							
Karapiro	- 10	1,400	1,400				
Ngahinapouri	10						
Ohaupo	20						
Pirongia	80						
Rukuhia	10						
Rest of District - Non-Urban	400						
Total[7]	**4,100**	**20,400**	**13,600**	**6,900**	**5,100**	**1,400**	**109%**
TOTAL FUTURE PROOF[7]	**25,300**	**178,600**	**<150,900**	**43,600**	**33,000**	**10,300**	**110%**

Source: M.E NPS-UD Housing Demand and Capacity Assessment: Future Proof Area, 2021.

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[2]'Plan enabled capacity' refers to the total capacity enabled by zoning within the relevent district plan (operative (short to long-term) or proposed (medium to long-term)) or spatial strategy planning document (long-term).

[3]'Infrastructure serviced capacity' refers to capacity that is served by infrastructure at each assessment point in time. For brownfield development, this includes 'infill' and 'redevelopment' capacity. Refer to Section 4.1.3 for more detail.

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[6]'Sufficiency' compares total capacity with demand plus margin. Red text indicates insufficient capacity.

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Table 8-3: Future Proof Area Summary of Demand, Capacity and Sufficiency Assessment: Long-Term

LONG-TERM (2020-2050)				Current Prices Scenario				Growth Scenario 1				Growth Scenario 2			
AREA	Additional Demand + Margin[1]	Plan Enabled Capacity[2]	Infrastructure Served Capacity[3]	Commercially Feasible Capacity[4]	Reasonably Realised Capacity[5]	Sufficiency[6] Net	Sufficiency[6] %	Commercially Feasible Capacity[4]	Reasonably Realised Capacity[5]	Sufficiency[6] Net	Sufficiency[6] %	Commercially Feasible Capacity[4]	Reasonably Realised Capacity[5]	Sufficiency[6] Net	Sufficiency[6] %
HAMILTON CITY															
Greenfield	43,100	22,300	21,000	14,100	14,600	-12,300	88%	14,900	15,200	1,800	102%	15,500	15,700	3,100	103%
Infill/Intensification		108,300	<108,300	16,300	16,300			42,800	29,600			74,000	30,500		
Total[7]	**43,100**	**130,600**	**<129,300**	**30,400**	**30,800**	**-12,300**	**88%**	**57,700**	**44,900**	**1,800**	**102%**	**89,600**	**46,200**	**3,100**	**103%**
WAIKATO DISTRICT															
Tuakau	900	18,800	14,800	11,500	9,900	6,800	219%	13,600	11,800	8,600	251%	14,200	12,100	9,000	257%
Pokeno	2,200														
Te Kauwhata	2,000	6,900	6,700	6,000	5,300	4,400	141%	6,400	5,600	8,300	176%	6,600	5,700	8,900	181%
Huntly	1,900	6,900	5,600	600	200			3,700	3,100			4,300	3,400		
Ngaruawahia	700	4,800	4,200	2,500	1,900			3,400	2,500			3,800	2,700		
Taupiri	500	2,700	2,700	2,600	2,100			2,700	2,200			2,700	2,200		
Raglan	2,000	6,300	3,900	3,300	2,700	700	118%	3,400	2,700	700	119%	3,600	2,800	800	121%
Smaller settlements															
Horotiu	100	5,300	5,100												
Meremere	40														
Ohinewai	700														
Te Kowhai	90														
Rest of District - Non-Urban	7,000														
Total[7]	**18,100**	**51,800**	**43,100**	**26,400**	**22,100**	**11,900**	**158%**	**33,100**	**27,800**	**17,600**	**186%**	**35,300**	**28,900**	**18,700**	**191%**
WAIPA DISTRICT															
Cambridge	6,000	10,600	8,900	6,400	5,900	-100	99%	6,900	6,300	300	102%	7,500	6,800	800	106%
Te Awamutu	2,800	7,800	7,800	4,000	3,700	500	105%	6,300	5,700	2,600	128%	6,700	6,100	3,000	132%
Kihikihi	600	600	600	300	100			400	200			500	200		
Minor Urban		1,400	1,400												
Karapiro	10														
Ngahinapouri	20														
Ohaupo	40														
Pirongia	100														
Rukuhia	50														
Rest of District - Non-Urban	1,300														
Total[7]	**10,900**	**20,400**	**18,700**	**10,800**	**9,700**	**300**	**101%**	**13,600**	**12,200**	**2,800**	**113%**	**14,800**	**13,100**	**3,700**	**117%**
TOTAL FUTURE PROOF[7]	**72,200**	**202,800**	**<191,200**	**67,600**	**62,600**	**-50**	**-100%**	**104,400**	**84,900**	**22,200**	**115%**	**139,700**	**88,200**	**25,500**	**117%**

Source: M.E NPS-UD Housing Demand and Capacity Assessment: Future Proof Area, 2021.

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Demand for Urban Dwellings

The FPP area is expected to experience high levels of growth. The number of households across the total FPP area are projected to increase by 57% in the long-term. Greater urbanisation is anticipated across the area, with the largest share of urban growth occurring in Hamilton City as the main urban centre. Substantial increases in the size of a number of the other main urban centres within the surrounding districts are also expected to occur, resulting in faster growth in these areas and greater rates of urbanisation. Overall, the demand for urban dwellings is projected to increase by around two-thirds in the long-term. This equates to demand for an additional 55,600 urban dwellings across the FPP area (+63,900 urban dwellings with a margin).

The largest growth in demand for urban dwellings is projected to occur within Hamilton City, the FPP area's main urban centre. There is a projected demand for an additional 3,500 urban dwellings in the short-term (to 2023), or an additional 4,200 dwellings once a margin is applied. In the medium-term there is a demand for an additional 11,900 dwellings (+14,300 dwellings with a margin), and an additional 37,500 dwellings in the long-term (+43,100 dwellings with a margin).

Significant growth in the demand for urban dwellings is projected to occur within the Waikato district, with sizeable expansion of its main urban centres. In the short-term, there is projected demand for an addition 1,400 urban dwellings (+1,700 with a margin), in the medium-term, an additional 4,000 dwellings (+4,800 with a margin), and an additional 9,700 urban dwellings (+11,200 with a margin).

A high share of the projected growth within Waipā District is for urban dwellings, with significant expansion of the main urban centres of Cambridge and Te Awamutu/Kihikihi. In the short-term, there is projected demand for an addition 1,100 urban dwellings (+1,300 with a margin), in the medium-term, an additional 3,100 dwellings (+3,700 with a margin), and an additional 8,400 urban dwellings (+9,600 with a margin).

Council's will play a key role in responding to these growth challenges to provide for growth in a way that achieves a well-functioning urban environment. The NPS-UD assessment is undertaken to understand whether planning and infrastructure decisions by local authorities provide for sufficient capacity for the anticipated growth and their effect on the operation of the local housing market. A detailed assessment on the housing market capacity and demand of the FPP area has been undertaken within this report.

Urban Residential Capacity and Sufficiency Assessment

The capacity assessment has found there are some capacity shortfalls projected to occur within the short-term across the Waikato District's main urban areas. While there are feasible development options of intensification within the existing urban areas, there are no areas where infrastructure is currently in place to enable greenfield development, which forms the dominant pattern of urban development across the district. Hamilton City has a small projected capacity surplus in the short-term, but has a large range of feasible development options, beyond those projected to be taken up, for intensification within the existing urban area[3]. All other urban areas have projected surpluses of capacity within the short-term.

Substantial infrastructure will be supplied in the medium-term across much of the greenfield zoned land both within Hamilton City and around the main urban centres of the surrounding districts. The Waikato District PDP also provides for significant geographic expansions of the zoned greenfield area. Hamilton City also contains a large number of feasible development options within the existing urban area[4]. There are projected capacity surpluses in the medium-term across all main urban areas.

In the long-term, there are only projected shortfalls in capacity, at the total level, under the current prices scenario where it is assumed that no further development options will become feasible over the next 30 years. At the total level, there are projected capacity surpluses across all urban areas in the long-term within the growth scenario where further development options are modelled to become feasible through time. The assessment finds that there is a very large planned expansion of greenfield infrastructure within the Waikato District's urban areas relative to demand in the long-term. This results in sizeable capacity surpluses. Additional greenfield infrastructure is also planned for Hamilton City and Waipā District's urban areas providing for large areas of feasible development options, together with a large amount of feasible development options within the existing urban area[5]. In most locations, there are large amounts of feasible development options beyond the amount of development that is likely to be taken up by demand.

[3] Refer to Section 4.1.3 for more detail.

[4] Ibid.

[5] Ibid.

Although there are capacity surpluses projected at the total market level, the assessment has found that there are projected shortfalls in capacity within different parts (value bands) of the market. Shortfalls typically occur within the lower to mid value bands of the market as the feasible development options tend to be concentrated into the mid to higher dwelling value bands. This is partly offset by movement within the housing market where a large share of the new dwelling capacity is likely to be occupied by existing households moving upward within the market, consequently freeing up capacity within the lower value parts of the existing stock.

The shortfalls in capacity within the lower dwelling value bands are generally projected to increase through time. This occurs as a result of gradual rises in price through time, but is partly offset by corresponding increases in household incomes. This results in some decreases in housing affordability, within household income bands, across the FPP area within the long-term, beyond the medium-term.

Impact of Planning

The assessment has found that the FPP area planning decisions may have some impact on affordability within the local housing market, but that there are large impacts from non-planning factors. The capacity feasibility assessment shows that only small increases in price (relative to actual trends observed within the market) are required for an increased range of zoned areas and development options to become feasible. It has also found that there are a large amount of zoned *feasible* development options available beyond the scale of demand within most urban areas. This suggests that there is unlikely to be a constraint, in the long-term, associated with the level of zoned (and infrastructure-served) opportunity available to the market. It is noted, however, that the FPPs will need to make ongoing, sustained investment in infrastructure capacity to support demand growth in infill areas[6].

The assessment has found that the adverse planning effects on the market may instead be related to a combination of specific provisions around the type and location of development options. There are likely to be some limitations on the range of development options provided by the market as a result of the types of development provided by the planning provisions together with the propensity of the market to take up the range of development options provided.

Within Waikato District, there is only limited opportunity for higher density developments provided for by the planning provisions. Although there are some decreases in the minimum site size requirements in the long-term, most of the planning provisions are focussed around providing for standalone dwellings on individual sites. There are very limited provisions for the development of higher density typologies (by way of smaller per dwelling land area requirements with the construction of a different typology) across much of the general urban residential area. We understand there are some options for Medium Density Residential Zone development (beyond the smaller areas in Waikato 2070) considered during the PDP process, however, these are not included within this assessment.

There are significant opportunities for urban intensification through higher density development within Hamilton City, particularly within the existing urban area. The ODP provides for smaller per dwelling site size requirements for higher density typologies across nearly all of the suburban residential area, and has large plan-enabled potential for higher density apartment development across the City Centre. However, the assessment has applied limited uptake of these higher density typologies within the greenfield areas

[6] Refer to Section 4.1.3 for more detail.

based on the supplied development yield information. The assessment has found that although there is large plan enabled capacity within the City Centre, there is limited projected market take-up of this capacity due to market preference factors.

There is some indication that the market may provide smaller lot sizes for standalone dwellings at the urban edge if planning requirements for minimum lot sizes were removed. The predominant existing requirement for 400m^2 per dwelling is currently being achieved in some greenfield areas, with smaller lot sizes being delivered in other similar urban economies for standalone dwellings. However, although removal of this requirement may reduce the standalone dwelling costs, it may reduce the incentive to instead construct higher density (cheaper) typologies which currently have a smaller minimum lot size requirement. This may impact upon the overall value profile of dwellings delivered by the market.

The assessment finds that there is no indication of a constraint for greenfield development within Hamilton City. There is a sizeable amount of infrastructure-served zoned opportunity relative to long-term demand, taking into account the geographic patterns of development across Hamilton City. Most of the greenfield areas are projected to be feasible to develop and are likely to form reasonably expected to be realised capacity.

Within Waipā District's urban areas, there are very limited options for higher density dwelling typologies. The planning framework provides for only very limited opportunity to develop higher density typologies with smaller per unit site area requirements. The assessment finds that these planning provisions have some impact on the affordability of dwellings within Waipā as it is focused on standalone dwellings on larger sites, which are concentrated into the mid to higher dwelling value bands. However, standalone dwellings on larger sites still form a large market preference for developers as they reflect strong patterns of demand within the market, including the exogenous retirement market demand.

The findings from the sufficiency assessment are also reflected in the information obtained from the developer survey. There was a mixed response from developers on the effect of local planning decisions in relation to the zoned land and infrastructure provision. Most developers recognised these as necessary and fundamental components provided by Council's that enabled development to occur. However, only a sub-set of developers, mainly within the Waikato District, considered that there were currently constraints within the market in relation to their supply. This reflects the capacity assessment where there is currently no infrastructure supplied for further development of greenfield areas. However, other developers considered that an oversupply of zoned opportunity and infrastructure could adversely affect the feasibility of development options through the inability to achieve sufficient prices. Many developers considered that current planning provisions did not adequately reflect emerging trends within the market for higher density development options, particularly within the Waikato and Waipā districts.

Other aspects of the planning process, beyond zoned land and infrastructure provision, were reported by developers to impact on the feasibility of development. These related to the transaction costs, resource consenting timeframes and uncertainty of planning decision outcomes. The latter aspects were particularly identified within the Waikato District.

Developers also identified the effects of non-planning factors on the feasible of development and dwelling prices. These included the wider national and global financial and market conditions, construction sector costs and the patterns of demand. These were reported to have a direct and substantial influence on the feasibility of development.

The impact of wider economic conditions is also suggested by the analysis of the urban development dashboard indicators. These showed the alignment of the greater Hamilton area with housing price movements on a national scale. The assessment also found the changes to the ratio of costs to prices occurring through time within Hamilton, which is an important driver of the feasibility of urban intensification processes.

Our approach has highlighted the importance of disentangling the planning effects on the market from this wider set of influences. We consider whether the local planning decisions provide for sufficient capacity, and then the additional level of scope available to the market to operate within these parameters. It then assesses the changes in the market within the context of a wider set of indicators.

There are important aspects of the FPP area's housing market to consider in relation to how well the demand for housing from different groups within the market is met. Māori are an important group to consider within the FPP area that may face different outcomes in the local housing market. The HBA has found that Māori have lower rates of home ownership within the FPP area than households overall, and these are projected to continue into the future. The underlying patterns of Māori household demand suggest they are likely to experience lower levels of housing affordability. On average, Māori households have larger household sizes and lower income profiles. These patterns are likely to translate into demand for larger dwellings in the lower dwelling value bands, which differ to the positive correlations generally between dwelling price and size.

Contents

Figures

Tables

1 Introduction

1.1 Context and Objectives

This report is the Housing Development Capacity Assessment 2021 ("the HBA") for the Future Proof Partners Area ("FPP area"). The FPP area is formed by Hamilton City as the main urban area, together with the surrounding Waikato and Waipā districts. The requirement for this three yearly report is set out in the National Policy Statement for Urban Development 2020[7] ("NPS-UD"). The report complies with the requirement for Tier 1 territorial 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.

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, 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[8] 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.

Hamilton City forms the main urban centre within the FPP urban area. The surrounding districts also contain a number of other smaller urban areas that together form the FPP urban area. Most of the FPP urban area is located within New Zealand's 'golden triangle' – bound by Auckland, Tauranga and Hamilton – and is currently experiencing significant growth, including growth pressures from surrounding regions. The FPPs need to respond to the growth challenges to ensure there is sufficient capacity that is well located and configured to manage the growth and achieve a well-functioning urban environment.

The objectives of this report[9] are to:

- Provide robust information on the demand and supply and capacity of housing land;
- Quantify the development capacity that is sufficient to meet expected demand for housing land in the short, medium and long term;
- Provide information on the impact of planning and infrastructure decisions on that demand and supply; and
- Provide information to inform RMA planning documents, future development strategies and long-term plans.

[7] Ministry for the Environment, 2020 *National Policy Statement on Urban Development,* July 2020.

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

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

1.2 Scope and Structure

This report has been prepared to meet the NPS-UD requirements of the HBA for the FPP area as a tier 1 urban environment. It contains an assessment of the demand and capacity for dwellings and across the different parts of the FPP urban area. These are then compared together within a sufficiency assessment to determine the sufficiency of planning capacity to meet future dwelling demand growth across the FPP urban area. As a further requirement under the NPS-UD, an analysis on the impact of the planning decisions and the provision of infrastructure on the affordability and competitiveness of the local housing market has been undertaken.

The following is a list of the key areas of assessment and where they are contained within the report:

- Section 2 sets out the spatial framework for analysis across the FPP area. It establishes the urban area within the FPP area and identifies the key locations for assessment.
- The analysis of current and future dwelling demand across each of the main urban areas is contained in Section 3.
- Section 4 contains the residential dwelling capacity assessment across each of the FPP urban areas.
- The sufficiency of capacity is assessed in Section 5.
- Section 6 contains an assessment of the impact of planning. It includes an overview of our approach to understanding the effects of local planning decisions on the housing market (Section 6.2), an analysis of changes in future housing affordability (Section 6.3), the findings from the developer sector survey (Section 6.4), an analysis of the Māori housing market (Section 6.5) and an analysis of the Ministry for the Environment Urban Development Dashboard Indicators (Section 6.6).

2 Spatial Framework

Establishing a spatial framework for analysis is an important initial stage of the assessment. It establishes the appropriate areas for modelling capacity under each approach based on the predominant mechanisms of dwelling growth in each area. The framework forms the basis for the initial allocation of demand for different development pathways, and therefore assessment. The capacity within each type of location is also correspondingly assessed against the share of demand within each location identified within the framework.

This section sets out the spatial classification approach and the types of assessment that are applied to different parts of the spatial classification. It then identifies the spatial classifications applied to each of the Future Proof Partners jurisdictional areas.

2.1 Development Approach

Figure 2-1 contains a framework that categorises the broad divisions by type of location within a territorial jurisdictional area. The relative size of each component will differ by each city or district, with the intent of the framework to identify the presence of different location types.

An urban economy containing a main urban centre such as Hamilton City is likely to comprise nearly all major urban area, with a small share of demand for peri-urban areas. The NPS-UD, in many areas, also requires assessment across contiguous surrounding districts where these are defined as part of the urban environment of a major urban location (refer NPS-UD section 1.4). In contrast, these surrounding districts typically contain a range of urban areas at different urban scales (e.g. major urban vs. minor urban), smaller urban settlements and localities, and a substantial portion of land as rural or peri-urban where it abuts a major urban area.

Figure 2-1: Spatial Framework Classification of Locations

Broad Location Type	NON-URBAN		URBAN	

Location Type, Description, Zone Types	RURAL
	• Agricultural/horticultural land uses.
	• Demand for dwellings to support agricultural/horticultural land uses.
	• Some rural lifestyle dwelling demand.
	• Mainly rural zones.
	• Some rural residential/lifestyle zones.
		SEMI-RURAL/ PERI-URBAN
		• Some agricultural/horticulturalland uses.
		• Mainly lifestyle dwelling demand.
		• Some demand for dwellings to support agricultural/horticultural land uses.
		• Mainly rural residential/lifestyle zones.
		• Some rural zones.
			MINOR URBAN
			• Smaller urban settlements and localities.
			• Typically smaller service centres for surrounding rural areas.
			• Predominantly endogenous dwelling demand due to community ties.
			• Only minor operation of profit-driven commercial developer sector in delivery of dwellings.
			• Urban residential and village zones (current and future).
			• Rural residential/lifestyle zones (current and future).
				MAJOR URBAN
				• Larger urban areas: larger urban settlements up to major cities.
				• Higher urban amenity. Households seeking an urban location due to social and economic factors and the amenity and function of the urban environment.
				• Significant operation of profit-driven commercial developer sector in delivery of dwellings – may account for dominant share of dwelling delivery.
				  • Greenfield subdivisions.
				  • Infill development/redevelopment.
				  • House and land packages.
				  • House only packages (land bought by occupier households separately).
				• Predominantly main urban residential zones (current and future).
				• Commercial zones with residential provisions (current and future).
				• Some lifestyle zones (current and future).

Assessment Approach	Outside Scope of Assessment		Focus on Plan Enabled and Infrastructure Serviced Capacity	Plan Enabled, Infrastructure Serviced and Commercial Feasibility Assessment

The first part of our assessment delineates the districts into the types of location in Figure 2-1. This is predominantly based on the nature of the land use, any existing or future zoning, and the overall scale and function of the urban area and its location relative to other major urban locations that influence the dwelling market in the area.

As the outset, rural and peri-urban land that contains no current or future urban zoning is excluded from the assessment. These non-urban uses fall outside the scope of the NPS-UD. This includes land that is used for dwellings that support agricultural land uses, other rural-based dwellings, and non-urban rural lifestyle properties. It is important however that this classification, in relation to lifestyle properties, is not undertaken only on a zoning basis. This is because the zoning structure in some districts is relatively narrow, with zones that allow lifestyle properties also forming parts of the urban area of different centres. Consequently, the delineation between rural and rural lifestyle and urban uses needs to allow for the inclusion of lifestyle zones into urban areas where they function together with the main urban zone as an urban settlement. This classification of urban centres in the FPP districts is set out later in this section.

It is also important to correspondingly exclude the share of future demand that is associated with dwelling growth in the non-urban areas (including peri-urban areas). This is estimated through a combination of approaches, which are set out in the demand section methodology.

Once non-urban capacity and demand have been excluded from the assessment, the remaining areas include the urban locations. The spatial assessment firstly identifies areas classified as major urban locations. These are urban areas that are typically substantive and function as the main urban centres for the surrounding areas. Households often seek a location in these centres due to a combination of social ties, and economic reasons together with the amenity and urban function provided by a main urban location.

The profit-driven dwelling development sector is able to operate at a significant scale within these main urban locations and is likely to account for the dominant share of dwelling stock delivery within these markets. This often includes the delivery of house and land packages, particularly in greenfield areas, as well as the delivery of dwelling only options (where the household purchases a section then commissions a developer to construct a dwelling). These areas form the appropriate locations to apply the commercial feasibility modelling.

Main urban areas are disaggregated into *types* of location as appropriate. Different parts of the urban area are classified in relation to the characteristics of their dwelling market, accessibility and amenity of their location. This is particularly important within the larger urban cities, such as Hamilton, which contain significant variation in the dwelling market across their urban structure. The modelling approach enables flexibility for the dwelling market where households are able to seek a dwelling across multiple similar areas within the urban market. The 2020 assessment predominantly applies the same spatial categorisations for Hamilton that were established within the 2017/2018 assessment.

The spatial framework also identifies other, smaller urban locations that occur across the districts. These include minor urban settlements, and smaller localities where growth predominantly occurs in these locations due to demand for a particular location (e.g. community ties) or the availability of space, with only a minor share of dwellings likely to be delivered by the profit-driven commercial developer sector.

The minor role of the commercial developer pathway in these smaller urban locations mean that feasibility modelling does not form an appropriate assessment tool in these areas. However, it is still important to understand the ability of these minor urban locations to cater for future demand growth. Therefore, the analysis will assess the sufficiency of plan enabled capacity (including the required level of infrastructure servicing) in these locations.

The following section shows the spatial classification of locations for each of the jurisdictional areas of the Future Proof Partners.

2.2 Waikato District Spatial Framework

A spatial framework was developed for Waikato District to identify and classify the district's urban areas into locations for assessment. The spatial framework is summarised in Table 2-1 where nodes of urban activity have been classified as either main urban areas or settlements. The main urban centres are listed in the upper section of the table and form the areas where both plan enabled and commercially feasible capacity is modelled.

Table 2-1: Waikato District Spatial Framework and Existing Household Structure

LOCATION	2018 Households			Assessment Approach
MAIN URBAN	**Urban Zone**	**Non-Urban/Other**	**Total**	
Huntly	2,600	70	**2,700**	Commercial Feasibility Modelling + Plan Enabled and Infrastructure Capacity
Ngaruawahia	1,900	30	**1,900**	
Pokeno	760	50	**820**	
Raglan	1,300	10	**1,300**	
Taupiri	220	10	**230**	
Te Kauwhata	630	-	**630**	
Tuakau	1,500	-	**1,500**	
TOTAL	**8,900**	**180**	**9,000**	
SETTLEMENTS	**Urban Zone**	**Non-Urban/Other**	**Total**	
Horotiu	140	-	**140**	Plan Enabled, Infrastructure Capacity
Meremere	170	-	**170**	
Ohinewai	10	30	**40**	
Te Kowhai	160	50	**200**	
Eureka	-	40	**40**	Rural-based settlements - no capacity assessment, allocation of share of demand.
Glen Afton-Pukemiro	140	-	**140**	
Glen Massey	70	30	**100**	
Gordonton	30	10	**40**	
Mangatangi	-	20	**20**	
Maramarua	-	20	**20**	
Matangi	70	20	**90**	
Mercer	-	50	**50**	
Naike	-	20	**20**	
Ngarunui Beach	60	120	**180**	
Onewhero	-	80	**80**	
Orini	10	10	**20**	
Otaua	-	30	**30**	
Port Waikato	-	210	**210**	
Pukekawa	-	40	**40**	
Rangiriri	20	-	**20**	
Tauwhare	-	100	**100**	
Te Akau	30	-	**30**	
Waikowai	40	20	**60**	
Whatawhata	60	20	**80**	
Whitikahu	20	20	**30**	
TOTAL	**1,000**	**910**	**1,900**	
Non-Urban	**Urban Zone**	**Non-Urban/Other**	**Total**	
Non-Urban Total	**-**	**14,800**	**14,800**	Rural demand - no capacity assessment, allocation of share of demand.
TOTAL DISTRICT	**Urban Zone**	**Non-Urban/Other**	**Total**	
TOTAL	**9,900**	**15,900**	**25,800**	

Source: M.E 2021 Future Proof Partner's NPS-UD Housing Capacity and Demand Assessment.

The remaining areas are classified as settlements. The largest of these that are urban (Horotiu, Meremere, Te Kowhai, and Ohinewai – included, as requested) will be assessed for plan-enabled capacity. The remaining settlements are typically smaller rural settlements that fall outside the scope of the NPS-UD. No capacity assessment is undertaken across these smaller settlements.

Table 2-1 also shows the existing structure of the district's (2018) households by location. It shows the number of households in each area that fall within the existing urban extent of the settlement vs. those on non-urban zones[10] within the location area[11]. This allocation forms the base structure in the model to take account of urban vs. non-urban demand.

The spatial extent of each location is defined by the existing and future District Plan zoning structures[12]. The residential urban zoned area in each location forms the area of assessment. The assessment has been undertaken on the main urban residential zones where properties are intended to have an urban character[13] of development. These zones typically have minimum site sizes of up to 1,000m^2 and are served by main infrastructure. Rural lifestyle or countryside living zones excluded from the assessment as they are not urban in nature and their development does not form part of the demand for an urban location within the district's main urban areas.

Table 2-2 displays the zones assessed for capacity in the short (2020-2023), medium (2024-2030) and long-terms (2031-2050). The Operative District Plan (ODP) forms the zoning framework for the short-term. The Residential, New Residential and Living zones define the spatial extent of the capacity assessment in the ODP. The assessed areas expand outward in some locations in the medium and long-terms as the zoned residential area is expanded. The Proposed District Plan (PDP) is used to assess medium-term capacity. The Residential and Rangitahi Peninsula zones form the areas for assessment.

In the long-term, the assessed area is defined by a combination of the PDP zoning structure and the urban expansion and zoned areas contained within the Waikato 2070 strategy document (W2070)[14]. The W2070 zoning layer (Residential, Medium Density Residential and Low Density Residential) is applied in the first instance. Any residential areas that are zoned under the PDP, and are not covered by the W2070, are also included. The PDP zoning rules are applied to the PDP areas where W2070 is absent.

[10] For example, lifestyle zone properties within the existing urban edge, or residential properties on industrial land, etc.

[11] Lifestyle properties surrounding the main urban areas are included within the 'Non-Urban' row of the table.

[12] Zoning files were supplied by Waikato District Council.

[13] Urban character is determined either through zone objectives or minimum lot sizes that reflect an urban density of development.

[14] Waikato District Council, 2020. *Waikato 2070 Waikato District Council Growth & Economic Development Strategy,* adopted by Waikato District Council 19 May 2020.

Table 2-2: Waikato District Residential Capacity Assessment Zones

AREA TYPE	AREA NAME	ASSESSMENT APPROACH	PLANNING ZONE FRAMEWORK AND ZONES ASSESSED		
			Operative District Plan	Proposed District Plan	Waikato 2070
MAIN URBAN	Huntly Ngaruawahia Pokeno Raglan Taupiri Te Kauwhata Tuakau	Commercial Feasibility Modelling + Plan Enabled and Infrastructure Capacity	Residential, Residential 2, New Residential, Living, Living - Rangitahi, Living Te Kauwhata West, Living Te Kauwhata Ecological	Residential, Rangitahi Peninsula	Residential, Medium Density Residential, Low Density Residential
SETTLEMENTS	Horotiu Meremere Ohinewai Te Kowhai	Plan Enabled, Infrastructure Capacity	New Residential, Living	Residential	Residential, Low Density Residential
	Eureka Glen Afton-Pukemiro Glen Massey Gordonton Mangatangi Maramarua Matangi Mercer Naike Ngarunui Beach Onewhero Orini Otaua Port Waikato Pukekawa Rangiriri Tauwhare Te Akau Waikowai Whatawhata Whitikahu	Rural-base settlements - no capacity assessment, allocation of share of demand	New Residential, Living, Village, Country Living	Residential, Village, Country Living	
Non-Urban		Non-Urban demand - no capacity assessment, allocation of share of demand	Village, Country Living, Rural Residential, Rural, Other	Village, Country Living, Rural, Other	

Source: M.E 2020 FPP NPS-UD HBA.

2.3 Hamilton City Spatial Framework

The full extent of the Hamilton City territorial area has been included within the urban capacity assessment due to the comprehensive coverage of current and future urban areas. The territorial area has been assessed using a two-tiered spatial framework. The spatial framework is displayed geographically in Figure 2-2.

The first stage of the framework classifies the area to form either part of the existing urban area or greenfield areas of future urban expansion. The existing urban area has been defined through the current location of the urban edge. This has expanded outward in some areas (particularly Rototuna) since the 2017/2018 NPS-UDC assessment. The remainder of the area has been classified as greenfield areas.

The residential component of the existing urban area has then been classified into five types of areas – Level 1 to Level 5. These largely correspond with the value and type of development in the area, with Level 1 containing the lowest value areas, and Level 5, the highest value areas. The spatial classification uses the

same areas as in the 2017/2018 assessment, with new areas of urban expansion classified consistently with the framework.

The greenfield areas are divided by broad location. The four structure plan areas (Rotokauri, Rototuna, Ruakura and Peacocke) identified in the ODP are included, with Ruakura further disaggregated into Ruakura North and Ruakura South. In addition, greenfield areas in Te Rapa North and Temple View have been added. Although the Te Rapa North area does not contain residential zoning, future residential greenfield capacity has been identified through a private plan change.

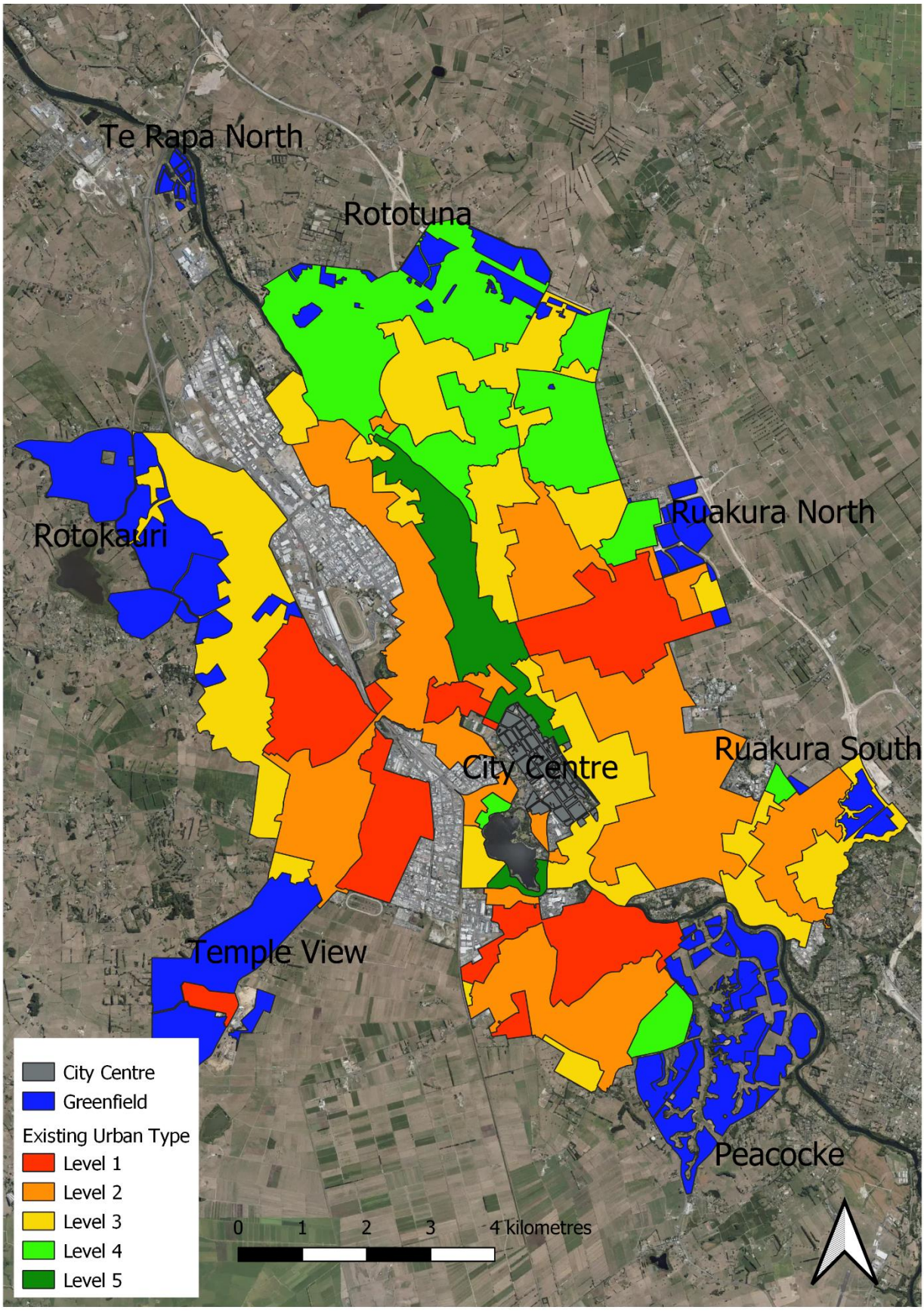
The spatial framework forms the areas of capacity reporting for Hamilton City. This is an improvement from the 2017/2018 NPS-UDC assessment. Reporting by type of location within the city provides an overview of the capacity levels by type of location. This is more relevant to assess the sufficiency of capacity where households typically seek to locate within a certain *type* of area within the city (which generally corresponds with dwelling value profiles). It enables the assessment to examine the sufficiency of development options for dwelling demand for types of location.

Within the greenfield areas, the capacity assessment has been undertaken across all of the residential areas included within the greenfield areas in Figure 2-2. The plan enabled capacity for these areas uses the underlying ODP zones, while the developer information and structure plan yields are captured within the reasonably expected to be realised (RER) capacity calculations.

The following zones are assessed for residential capacity within the existing urban area:

- General Residential Zone
- Residential Intensification Zone
- Special Residential Zone
- Special Heritage Zone
- City Centre Zone

Figure 2-2: Hamilton City Spatial Framework for Residential Capacity Assessment



2.4 Waipā District Spatial Framework

A spatial framework was developed for Waipā District to identify and classify the district's urban areas into locations for assessment. The spatial framework is summarised in Table 2-3 where nodes of urban activity have been classified as either main urban areas or minor urban areas/settlements. The main urban centres are listed in the upper half of the table and form the areas where both plan enabled and commercially feasible capacity is modelled. These include the district's largest urban centres of Cambridge, Te Awamutu and Kihikihi. They are the predominant areas within the district that have any significant operation of the commercial profit-driven residential development sector.

Table 2-3: Waipā District Spatial Framework and Existing Household Structure

LOCATION	2018 Households by Zone						Assessment Approach
MAJOR URBAN	**Residential**	**Deferred Residential**			**Other Zone**	**TOTAL**	
Cambridge	6,800	160	-	-	-	**7,000**	Commercial Feasibility Modelling + Plan Enabled and Infrastructure Capacity
Kihikihi	810	-	-	-	-	**810**	
Te Awamutu	4,700	40	-	-	70	**4,800**	
TOTAL	**12,300**	**200**	**-**	**-**	**70**	**12,600**	
MINOR URBAN/SETTLEMENTS	**Residential**	**Deferred Residential**	**Large Lot**	**Deferred Large Lot**	**Other Zone**	**TOTAL**	
Karapiro	60	-	90	10	-	**160**	Plan Enabled, Infrastructure Capacity
Ngahinapouri	-	-	70	10	-	**80**	
Ohaupo	-	-	170	40	40	**250**	
Pirongia	-	-	450	-	-	**450**	
Rukuhia	-	-	50	10	10	**70**	
Maungakawa	-	-	70	-	-	**70**	Rural demand - no capacity assessment, allocation of share of demand.
Hautapu	-	-	-	-	-	**-**	
Rotongata Settlements	-	-	30	-	-	**30**	
Te Pahu	-	-	10	-	20	**30**	
Tokanui	-	-	20	-	-	**20**	
Te Miro	-	-	30	-	-	**30**	
TOTAL	**60**	**-**	**990**	**80**	**70**	**1,200**	
NON-URBAN			**Large Lot**	**Deferred Large Lot**	**Rural**	**TOTAL**	
Non-Urban Total	0	0	590	60	5,700	**6,400**	Rural demand - no capacity assessment, allocation of share of demand.
TOTAL DISTRICT	**Residential**	**Deferred Residential**	**Large Lot**	**Deferred Large Lot**	**Other Zone/Rural**	**TOTAL**	
TOTAL	**12,400**	**200**	**1,600**	**130**	**5,900**	**20,200**	

Source: M.E 2021 Future Proof Partner's NPS-UD Housing Capacity and Demand Assessment.

The remaining urban areas are classified as minor urban areas or urban settlements. The largest of these (Karāpiro, Ngāhinapōuri, Ōhaupō, Pirongia and Rukuhia) will be assessed for plan-enabled capacity. The remaining settlements are typically smaller rural settlements, largely in the more remote southern parts of the district, that fall outside the scope of the NPS-UD. No capacity assessment is undertaken across these smaller settlements.

Table 2-3 also shows the existing structure of the district's (2018) households by location and zone type. It shows the number of households in each area that fall within the existing urban extent of the settlement vs. those on non-urban zones[15] within the location area[16]. This forms the base structure in the model to take account of urban vs. non-urban demand.

[15] For example, lifestyle zone properties within the existing urban edge, or residential properties on industrial land, etc.

[16] Lifestyle properties surrounding the main urban areas are included within the 'Non-Urban' row of the table.

The spatial extent of each location is defined by the existing District Plan zoning structures[17]. The residential urban zoned area in each location forms the area of assessment. Within the main urban areas, the assessment has been undertaken on the main urban residential zones where properties are intended to have an urban character of development. These include the Residential and Deferred Residential Zones.

Lifestyle properties around the edges of these main urban areas have been excluded from the assessment as they are not urban in nature and their development does not form part of the demand for an urban location within the district's main urban areas. Many of these typically occur on the Large Lot and Deferred Large Lot Residential Zones, which result in a distinct difference in the density and nature of development around the edges of these main urban areas where the Residential Zone defines the urbanised area.

In contrast, the minor urban areas/settlements do not contain any Residential zoning and are instead typically made up of concentrations of dwellings within the Large Lot Residential Zone. As such, the plan enabled assessment across these smaller areas includes capacity within these centres on the Large Lot Residential and Deferred Large Lot Residential zones.

The existing ODP forms the zoning layer that is used to assess the district's capacity across the short, medium and long-term. Waipā District Council does not have a PDP or long-term spatial plan, so the assessment consequently applies the ODP as the spatial zoning framework across all three time periods.

The ODP includes the additional urban growth cells around the edges of the district's main urban centres (Cambridge, Te Awamutu and Kihikihi). These were part of Plan Change 7, that became operative on 14 March 2019, and provided significant areas of additional greenfield capacity to the ODP. This is an important update to the 2017 NPS-UDC capacity assessment where the growth cells were not included due to the timing of the plan change in relation to the NPS-UDC policy requirements.

[17] Zoning files were supplied by Waipā District Council.

3 Urban Residential Dwelling Demand

3.1 Introduction

The demand for urban dwellings has been established for each of the FPP areas in the short, medium and long-term. The total FPP area dwelling demand is projected to grow by 57% over the long-term. Greater urbanisation is projected to occur across the main urban areas of the Waipā and, particularly, Waikato districts, meaning the total FPP urban dwelling demand is projected to increase by nearly two-thirds (65%) over the long-term. This equates to demand for an additional 55,600 urban dwellings across the FPP area (+63,900 urban dwellings with a margin).

This section contains our assessment of future demand for urban dwellings for each of the FPP areas. It begins with a brief summary of our approach to identifying urban demand as this process is an important improvement on the previous NPS-UDC assessment and therefore produces different results. The urban dwelling demand in the short, medium and long-term is then provided for each of the FPP areas.

3.2 Approach

The demand assessment estimates the demand for urban dwellings in the short, medium and long-term. The Waikato and Waipā districts contain a mixture of urban and non-urban demand, with a number of key urban settlements in otherwise largely rural districts. In an improvement on the 2017 NPS-UDC Housing Capacity and Demand Assessment (HCDA), it specifically estimates the urban component of the Waikato and Waipā district's demand. This is defined by the demand for an urban location within the main urban zones as set out in the spatial framework. Non-urban demand includes demand for a rural or lifestyle property location as these areas do not form part of the urban environment.

As an initial input, Waikato and Waipā District council's have provided M.E with household growth projections by sub-area[18] across each of the districts. These are the NIDEA projections prepared by WISE at the University of Waikato. The NIDEA projections are a newer projection series than the Statistics New Zealand projection series, which are based on 2013 Census data. M.E have been requested by Future Proof to use the NIDEA High Series household projections as an agreed input to the HBA.

The Demand Model converts the household growth projections within each spatial area to dwelling demand. Many of these areas contain both core urban zoned (current and future) areas, as well as large tracts of non-urban land. The model allocates the demand for each of these areas (which is provided as a total) into the urban vs. non-urban components. The process is set out in the following paragraphs.

The spatial framework GIS analysis establishes the base structure of existing dwellings across urban, lifestyle and rural areas within each location. This provides the existing split between urban and non-urban households. The model then assumes that the non-urban component will grow at a slower rate than the urban component. This reflects the increased urban growth within the districts, and ensures a conservative

[18] These have been supplied at the Statistical Area 2 (SA2) level for total households.

analysis when the sufficiency of capacity is assessed in each location. The balance of growth (i.e. the component not allocated to non-urban demand) in each area then gets allocated to urban demand.

The effect of this process is to allow some growth in the existing non-urban (rural and lifestyle) dwelling base, while allowing the growth projections to reflect the faster growth of the main urban centres. It allocates the growth to reflect the anticipated increase in size of these centres.

The resulting urban growth outputs are then used within the dwelling demand model for each district to calculate the type of dwelling demand by location. Further technical information on the dwelling demand modelling process is contained in the previous NPS-UDC HDCA. The dwelling demand outputs of this process for each FPP area are contained in the following sections.

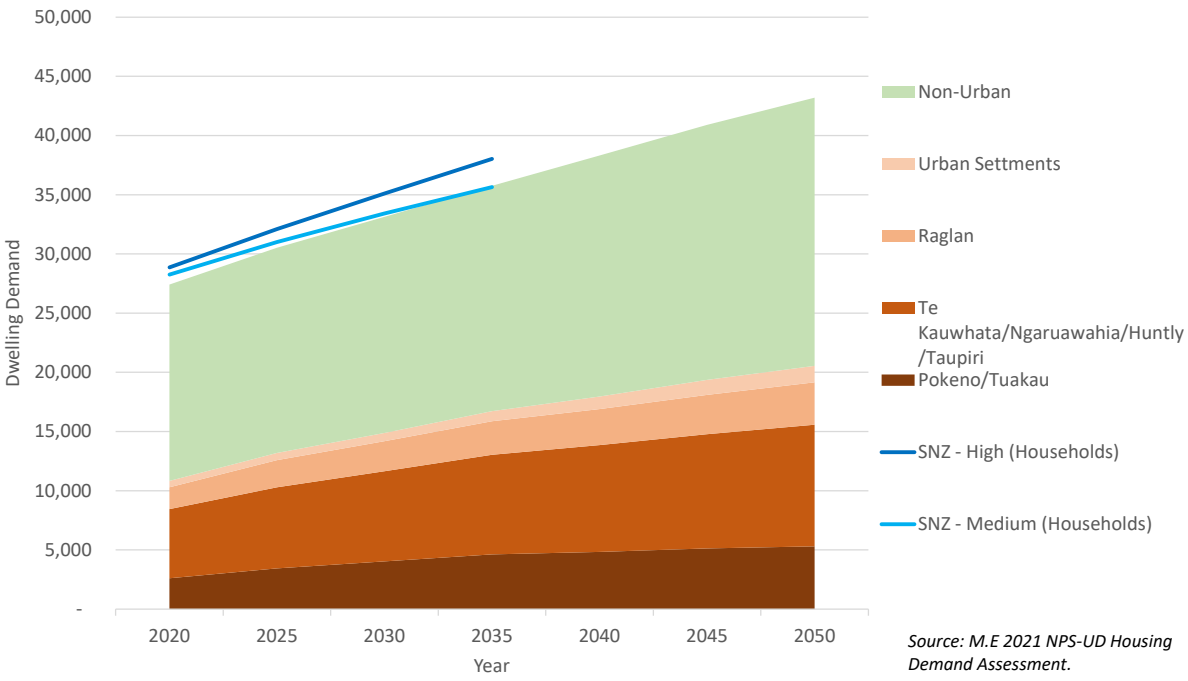
3.3 Waikato District Dwelling Demand

Waikato District has an estimated total demand (i.e. urban and non-urban) for 27,400 dwellings in 2020. The district is projected to experience strong growth, particularly in the main urban areas. This includes growth pressure from Auckland as Auckland's southern urban edge expands outward, increasing dwelling demand in the northern Waikato District urban areas.

The projected growth in dwelling demand within the district is shown in Figure 3-1. Demand is projected to increase by between half and two-thirds – an additional 15,800 dwellings over the long-term, to reach an estimated 43,200 dwellings. The district is projected to become increasingly urbanised, with nearly two-thirds (62%) of the long-term growth occurring within the urban areas. In total, the district is projected to have demand for an additional 9,700 urban dwellings over the long-term. This growth is spread across several of the main urban areas within the district.

M.E have been requested by Future Proof to use the High Series household projections as an agreed input to the HBA. The FPP-supplied NIDEA Waikato District projected households are below the medium-series Statistics New Zealand projected households in the short-term and around the medium-series projected households in the medium-term. However, the projected net change in households is between that of the medium and high series Statistics New Zealand as the FPP projections are from a lower starting point (with a growth rate between that of the Statistics New Zealand medium and high series projections).

Figure 3-1: Waikato District Projected Dwelling Demand, 2020-2050



Source: M.E 2021 NPS-UD Housing Demand Assessment.

Table 3-1 shows the dwelling demand across the district across the short, medium and long-term. It shows the urban component of demand[19] by location across the time periods. The locations include the main urban areas established within the spatial framework, as well as the settlements. A row for non-urban dwelling demand is also included which captures demand for rural and lifestyle dwellings.

The first part of the table provides an estimate of the projected total dwelling demand, including for existing households at each assessment point in time. The middle section of the table shows the net change in dwelling demand in the short, medium and long-term, calculated from the total projected demand in the first part of the table. The final section of the table shows the net change in dwelling demand with the relevant (15%-20%) margin[20] added. The following sub-sections summarise the key aspects of the dwelling demand projections.

[19] Lifestyle dwelling demand surrounding the urban areas is captured in the 'Non-Urban' row of the table.

[20] The NPS-UD requires a margin of 20% to be applied to the net increase in dwelling demand in the short and medium-term, and a 15% margin applied to the net increase in demand in the long-term. Capacity is compared to the demand plus the margin during the sufficiency assessment.

Table 3-1: Waikato District Projected Urban Dwelling Demand by Location: 2020-2050

AREA	Dwelling Demand				Change in Demand			Change in Demand + Margin		
	2020	2023	2030	2050	Short-Term: 2020-2023	Medium-Term: 2020-2030	Long-Term: 2020-2050	Short-Term: 2020-2023 (20% margin)	Medium-Term: 2020-2030 (20% margin)	Long-Term: 2020-2050 (15% margin)
Main Urban Areas										
Pokeno	990	1,300	1,900	2,900	310	960	1,900	380	1,100	2,200
Tuakau	1,600	1,800	2,100	2,400	190	470	790	230	570	900
Te Kauwhata	720	850	1,200	2,400	130	500	1,700	160	600	2,000
Ngaruawahia	2,100	2,300	2,500	2,700	210	420	630	250	500	720
Huntly	2,800	3,100	3,600	4,500	260	800	1,700	310	960	1,900
Taupiri	250	250	290	650	-	40	400	-	50	460
Raglan	1,800	2,100	2,500	3,600	260	690	1,700	310	830	2,000
Total Main Urban Areas	*10,300*	*11,700*	*14,200*	*19,200*	*1,400*	*3,900*	*8,900*	*1,600*	*4,700*	*10,200*
Settlements	-	-	-	-	0	0	0	-	-	-
Meremere	180	200	200	220	10	20	30	20	30	40
Ohinewai	40	40	40	680	-	10	640	-	10	740
Te Kowhai	160	160	210	240	-	50	80	-	60	90
Horotiu	160	190	230	260	30	70	100	30	90	110
Total Settlements	*540*	*580*	*690*	*1,400*	*40*	*150*	*850*	*50*	*180*	*980*
TOTAL URBAN	**10,800**	**12,200**	**14,900**	**20,600**	**1,400**	**4,000**	**9,700**	**1,700**	**4,800**	**11,200**
Non-Urban	16,600	17,000	18,300	22,600	440	1,700	6,100	530	2,000	7,000
TOTAL	**27,400**	**29,300**	**33,100**	**43,200**	**1,900**	**5,700**	**15,800**	**2,200**	**6,900**	**18,100**

Source: M.E 2021 NPS-UD Housing Demand Assessment.

Household composition and income are key household characteristics that have an important effect on the value and types of dwellings demanded. The current (2020) and projected future (2050) household characteristics are shown in Table 3-2 and Table 3-3 for the urban households in Waikato District. The top third of the table shows the current distribution of households by household type and income. The middle third shows the percentage distribution across each category. The lower third of the table shows the relative concentration within each income band across the different household composition groups. Values greater than 1 indicate a higher share of households within that group fall into a particular income category than dwellings overall.

The tables show that around half (52%) of Waikato District's urban households are 1-2 person households. This is projected to increase to over half (57%) of household by 2050, accounting for nearly two-thirds 63% of the growth in households. A share of this will occur as retirement demand, with existing households decreasing in size as children leave home and form new households.

Higher relative proportions of the lower income households are smaller (1 person) households or single parent families. Larger family households and couples tend to be over-represented in the mid to higher household income bands.

Table 3-2: Waikato District Urban Households by Household Composition and Income, 2020

Household Type	Household Income							
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person household	1,100	400	300	200	50	20	30	**2,200**
Couple household	200	600	500	600	500	400	700	**3,400**
2 Parents 1-2 children	50	100	200	500	400	400	800	**2,400**
2 Parents 3+ children	20	40	90	200	100	100	300	**800**
1 Parent Family	400	300	200	200	100	40	50	**1,400**
Multi-family household	-	10	30	50	40	60	200	**400**
Non-family household	20	40	50	50	30	10	20	**200**
Total Households	**1,800**	**1,600**	**1,400**	**1,800**	**1,200**	**1,000**	**2,100**	**10,800**
One Person household	10.2%	4.1%	3.1%	1.9%	0.5%	0.2%	0.3%	**20.2%**
Couple household	1.8%	5.1%	4.2%	5.8%	4.4%	3.7%	6.4%	**31.4%**
2 Parents 1-2 children	0.4%	1.1%	1.9%	4.2%	3.2%	3.3%	7.5%	**21.7%**
2 Parents 3+ children	0.2%	0.3%	0.8%	1.5%	1.2%	1.1%	2.5%	**7.7%**
1 Parent Family	3.9%	3.2%	2.2%	2.1%	0.9%	0.4%	0.5%	**13.1%**
Multi-family household	0.0%	0.1%	0.2%	0.4%	0.4%	0.5%	2.1%	**3.7%**
Non-family household	0.2%	0.4%	0.5%	0.5%	0.3%	0.1%	0.2%	**2.2%**
Total Households	**16.7%**	**14.3%**	**12.9%**	**16.3%**	**10.9%**	**9.3%**	**19.5%**	**100.0%**
Relative Concentration								
One Person household	**3.02**	**1.42**	**1.17**	0.57	0.21	0.09	0.08	
Couple household	0.34	**1.14**	**1.04**	**1.13**	**1.29**	**1.27**	**1.04**	
2 Parents 1-2 children	0.12	0.35	0.68	**1.18**	**1.37**	**1.64**	**1.78**	
2 Parents 3+ children	0.14	0.31	0.84	**1.20**	**1.43**	**1.53**	**1.69**	
1 Parent Family	**1.77**	**1.71**	**1.28**	0.98	0.65	0.30	0.18	
Multi-family household	0.03	0.12	0.49	0.71	0.90	**1.57**	**2.84**	
Non-family household	0.57	**1.28**	**1.78**	**1.28**	**1.15**	0.62	0.51	

Source: ME Housing Demand Model 2021.

Table 3-3: Waikato District Urban Households by Household Composition and Income, 2050

Household Type	Household Income							
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person household	2,900	900	600	300	80	30	50	**4,800**
Couple household	500	1,500	1,000	1,200	800	700	1,200	**6,900**
2 Parents 1-2 children	70	200	300	800	600	600	1,300	**3,800**
2 Parents 3+ children	30	60	200	300	200	200	400	**1,400**
1 Parent Family	700	600	400	400	200	60	80	**2,500**
Multi-family household	-	10	50	90	70	100	400	**700**
Non-family household	40	90	100	80	50	20	30	**400**
Total Households	**4,200**	**3,400**	**2,600**	**3,100**	**2,000**	**1,700**	**3,500**	**20,600**
One Person household	13.9%	4.4%	2.8%	1.7%	0.4%	0.1%	0.2%	**23.6%**
Couple household	2.2%	7.3%	4.8%	5.7%	4.1%	3.5%	5.9%	**33.6%**
2 Parents 1-2 children	0.3%	0.9%	1.6%	3.8%	2.8%	2.8%	6.3%	**18.7%**
2 Parents 3+ children	0.1%	0.3%	0.7%	1.3%	1.0%	0.9%	2.1%	**6.6%**
1 Parent Family	3.5%	3.1%	2.0%	1.8%	0.9%	0.3%	0.4%	**12.1%**
Multi-family household	0.0%	0.0%	0.2%	0.4%	0.3%	0.5%	1.8%	**3.4%**
Non-family household	0.2%	0.4%	0.5%	0.4%	0.2%	0.1%	0.1%	**2.0%**
Total Households	**20.4%**	**16.6%**	**12.7%**	**15.2%**	**9.8%**	**8.3%**	**17.1%**	**100.0%**
Relative Concentration								
One Person household	**2.89**	**1.13**	0.93	0.47	0.17	0.08	0.06	
Couple household	0.33	**1.32**	**1.13**	**1.12**	**1.24**	**1.25**	**1.03**	
2 Parents 1-2 children	0.09	0.31	0.69	**1.33**	**1.53**	**1.83**	**1.98**	
2 Parents 3+ children	0.11	0.27	0.89	**1.28**	**1.61**	**1.72**	**1.89**	
1 Parent Family	**1.44**	**1.55**	**1.30**	**1.00**	0.76	0.30	0.19	
Multi-family household	-	0.09	0.58	0.87	**1.05**	**1.78**	**3.10**	
Non-family household	-	**1.33**	**1.92**	**1.28**	**1.25**	0.59	0.43	

Source: ME Housing Demand Model 2021.

3.3.1 Current Dwelling Demand: 2020

The district currently has an estimated demand for around 27,400 dwellings. Approximately 40% of the demand is for urban dwellings. This equates to an estimated demand for around 10,800 urban dwellings across the main urban areas and settlements. Nearly all (95%) of the urban demand occurs within the main urban areas (that are subject to the feasibility assessment), with a smaller share (540 dwellings) in the smaller urban settlements.

With an estimated demand for approximately 2,800 urban dwellings, Huntly is currently the district's largest urban area, account for around one-quarter (26%) of the district's urban dwelling demand. Together with Te Kauwhata, Ngāruawāhia and Taupiri, over half of the district's urban dwelling demand occurs within the mid section of the district. Within this area, Ngāruawāhia also accounts for a significant share (19%) of the district's urban demand.

A significant share of demand also occurs within the northern area, spread across the townships of Pōkeno and Tuakau. Together, these areas account for 24% of the district's demand. The remainder of the urban dwelling demand is spread across Raglan (17%) and the smaller urban settlements (5%)[21].

3.3.2 Short-Term Dwelling Demand: 2020-2023

The Waikato District is projected to experience relatively fast urban growth in the short-term. Demand in the district overall, is projected to increase by 1,900 additional dwellings (+7%), which equates to an annual growth rate of 2.2% - above the Statistics New Zealand national high growth rate (1.7%) and between the Auckland medium and high growth rates (2.1% to 2.4%).

The district is projected to experience relatively high rates of urban expansion in the short-term across the main urban centres. Three-quarters (76%) of the district's demand growth is for urban dwellings, amounting to demand for an additional 1,400 urban dwellings (1,700 dwellings with a 20% margin). This equates to a rapid urban growth rate of 4.2% p.a. – an increase of 13%.

Urban growth is spread across the main urban centres within the district. Over one-third (36%) growth is projected to occur within the northern towns of Pōkeno and Tuakau (combined demand for an additional 500 dwellings, or 600 dwellings with a margin). Part of this is likely to be driven by growth pressures from the Auckland region and the zoned opportunity for urban expansion.

A further 42% of the growth is projected to occur across the main urban centres within the mid parts of the district (Huntly, Ngāruawāhia, Te Kauwhata and Taupiri). Together, these areas have demand for a further 600 urban dwellings in the short-term (730 dwellings with a margin). Of these, Te Kauwhata is projected to grow at a faster rate (5.8% p.a.) than the urban component of the district overall.

A significant share (18%) of growth is also projected for Raglan. There is a projected demand for an additional 260 urban dwellings within the short-term (310 dwellings with a margin). A share of the dwelling demand arises from the holiday homes market.

[21] Urban dwelling demand in Te Kowhai includes demand only on the main urban zones as set out in the spatial framework. Lifestyle properties on the area forming the Te Kowhai locality are included within the 'Non-Urban' component of the table.

3.3.3 Medium-Term Dwelling Demand: 2020-2030

Relatively high dwelling demand growth, albeit at a slower rate, is also projected to continue into the medium-term in Waikato District. There is a projected net increase of an additional 5,700 dwellings (+21%) across the district as a whole, equating to an average annual growth rate of 1.9%. This is slightly slower than the Statistics New Zealand high growth household projections for Auckland, at 2.0% p.a..

High growth is driven by the projected urban expansion, where nearly three-quarters (71%) of the increase in demand is for urban dwellings. In the medium-term, there is a projected increase in demand for an additional 4,000 urban dwellings, or 4,800 additional dwellings with a 20% margin applied. This equates to a 37% increase in the district's demand for urban dwellings across a ten-year period.

Urban dwelling demand growth is also spread across the main urban centres of the district in the medium-term. Over one-third (35%) of the urban dwelling demand growth is projected to occur in the northern part of the district across Pōkeno and Tuakau. They have a combined projected net dwelling demand increase of 1,400 dwellings (or 1,700 dwellings with a 20% margin applied).

Approximately 44% (1,800 dwellings; 2,100 dwellings with a 20% margin applied) of the demand growth is projected to occur within the middle section of the district across Te Kauwhata, Ngāruawāhia, Huntly and Taupiri.

3.3.4 Long-Term Dwelling Demand: 2020-2050

The district's total demand for dwellings is projected to increase by between half and two-thirds (+58%) in the long-term, with the demand for urban dwellings nearly doubling across this period (+90%). There is a projected demand for an additional 15,800 dwellings in the district overall across the long-term (2020-2050). Nearly two-thirds of this demand is for additional urban dwellings. This amounts to a projected demand for an additional 9,700 urban dwellings, or 11,200 with a 15% margin applied.

Projected urban dwelling demand growth continues to be spread across the main urban centres of the district. A lesser share (28%) of the urban dwelling demand growth (than the medium-term) is projected to occur within the northern part of the district in Pōkeno and Tuakau. This amounts to an additional 1,900 urban dwellings within the northern part of the district (+2,200 urban dwellings with a margin).

Nearly half (46%) of the dwelling demand growth is projected to occur across the mid parts of the district. Within this, an increasing share of growth is projected to occur within Te Kauwhata and Taupiri, and a decreasing share in Ngāruawāhia. This amounts to demand for an additional 4,400 urban dwellings across the long-term (+5,100 urban dwellings with a margin). If the dwelling demand growth is realised, then the urban size of Te Kauwhata would be over double its current size.

Nearly one-fifth of the urban dwelling demand growth is projected to occur within Raglan over the long-term. The urban dwelling demand is projected to nearly double (+93%). This amounts to demand for an additional 1,700 urban dwellings (or 2,000 urban dwellings with a margin).

3.3.5 Dwelling Demand by Dwelling Type

The projected urban demand by dwelling type (detached and attached dwellings[22]) for Waikato District is shown in Figure 3-2 and Figure 3-3. Figure 3-2 projects the demand under the base case scenario where only a minor preference shift toward attached dwellings occurs through time as a function of projected changes in the underlying household composition. Figure 3-3 projects the demand under a preference shift scenario where a gradual shift in household preference towards attached dwellings is modelled through time. This reflects the gradual shift in preference toward higher density dwelling types that typically occur gradually through time in growing urban economies.

The scenarios provide a range of outputs to capture the potential dwelling preference outcomes through time. While past patterns of development across Waikato District have been characterised by standalone dwellings on full sites, future zone changes together with greater rates of urbanisation may provide for opportunities for future intensification with more intensive dwelling types.

A shift to higher density dwellings reflects the trade-off's that households make between location, space and price. Higher density dwellings are often located in areas of higher amenity, with higher land costs (on a per m^2 basis) associated with the location. These gradual shifts in dwelling typologies are reflected in the building consent data and urban dwelling development patterns of many urban economies, including Hamilton City, through time.

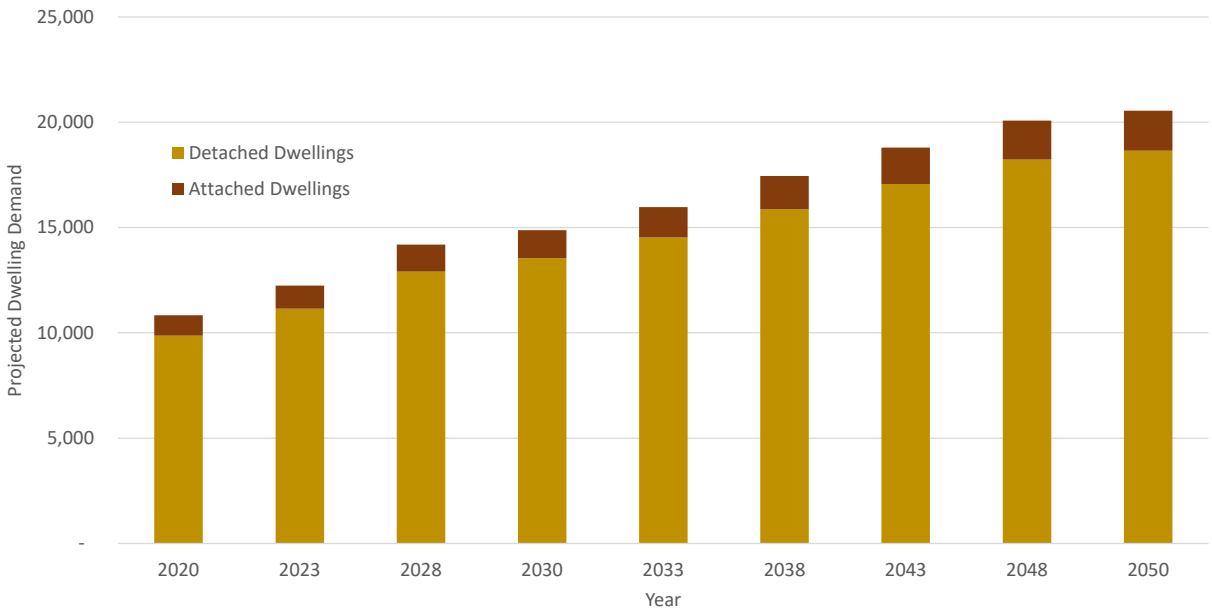
Currently very high shares (around 95%) of the demand is for detached dwellings. Under the base case scenario around 90% of the future additional dwelling demand is for detached dwellings. This amounts to around 8,800 additional detached dwellings (excluding a margin) out to 2050. There is a smaller demand (+800 dwellings) for attached dwellings.

The projected patterns of demand by dwelling type differ under a preference shift scenario. A small modelled preference shift[23] toward attached dwellings shows demand for attached dwellings increasing to around an additional 1,200 dwellings by 2050 (with demand for an additional 8,300 detached dwellings). This would result in a small shift in the overall share of dwellings as detached dwellings to 91% by 2050.

[22] Detached dwellings refer to standalone dwellings on individual sites. Attached dwellings refer to dwellings that are attached and share a site (with minimum site requirements per dwelling). Dwellings could be attached through a shared dwelling/garage wall, or attached vertically as apartments. Attached dwellings range from duplex pairs up to vertical apartment buildings. Different attached dwelling types (e.g. duplex pairs vs. walk-up apartments vs. higher apartment buildings) are modelled in the capacity section and reflect the planning parameters and housing market situation within each area.

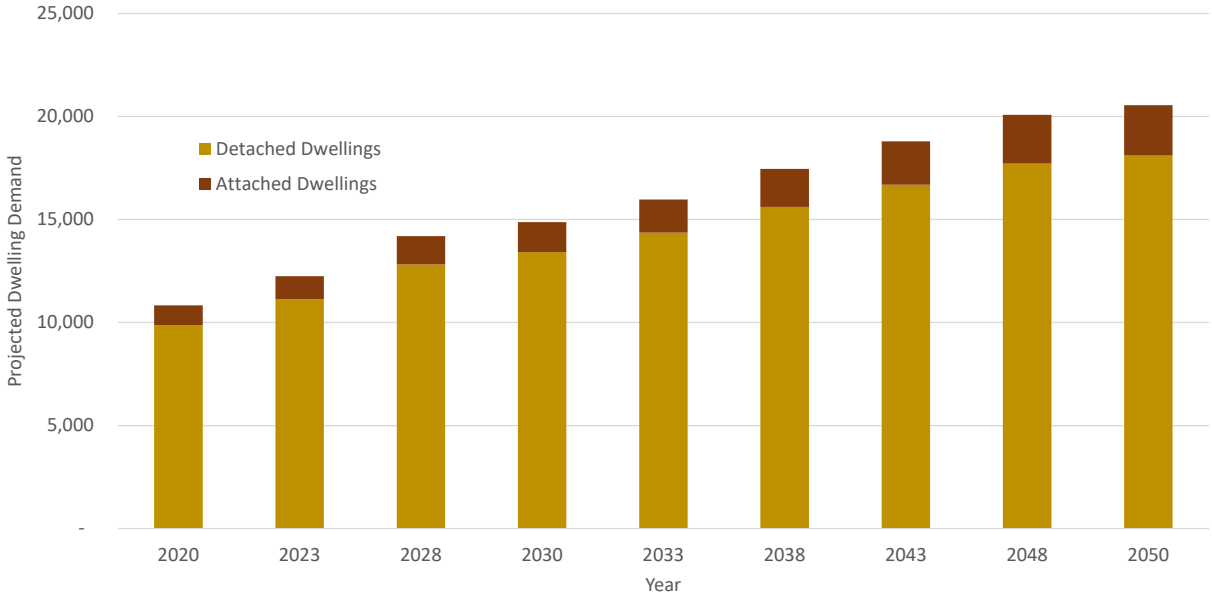
[23] This modelled scenario includes a 1.0% p.a. preference shift towards attached dwellings.

Figure 3-2: Demand by Dwelling Type in Urban Waikato District: 2020-2050 – Base Case Scenario



Source: M.E Dwelling Demand Model, 2021.

Figure 3-3: Demand by Dwelling Type in Urban Waikato District: 2020-2050 – Preference Shift Scenario



Source: M.E Dwelling Demand Model, 2021.

The projected urban demand by dwelling type is disaggregated by tenure for Waikato District in Table 3-4 and Table 3-5. Table 3-4 shows the demand under the base case scenario where only a minor preference shift toward attached dwellings occurs through time as a function of projected changes in the underlying household composition. Table 3-5 shows the preference shift scenario where a gradual change in preference toward attached dwellings is modelled.

The tables show that currently nearly three-quarters (71%) of urban Waikato's dwelling stock is owned (including within a trust). Dwelling ownership rates are substantially higher for detached dwellings where around 72% of dwellings are owned, compared to only 40% of attached dwellings.

The modelling shows projects forward the current dwelling ownership structures by dwelling type as a function of the underlying projected household composition. It is beyond the scope of the assessment to model changes in ownership patterns by dwelling typology with preference shifts through time. It shows similar future levels of dwelling ownership projected for 2050 under both scenarios.

Table 3-4: Urban Demand by Dwelling Type and Tenure in Waikato District: 2020-2050 – Base Case Scenario

Dwelling Tenure : NIDEA Future	2020			2050			2020-50		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*0.1%pa*			
Owned with mortgage	3,400	80	**3,500**	5,800	200	**6,000**	2,400	100	**2,600**
Owned without mortgage	2,500	100	**2,600**	5,300	400	**5,600**	2,800	200	**3,000**
Owned by Trust	1,500	40	**1,600**	2,800	100	**3,000**	1,300	80	**1,400**
Total Owned or in Trust	**7,400**	**200**	**7,700**	**13,900**	**700**	**14,600**	**6,500**	**500**	**7,000**
Not Owned	2,900	300	**3,200**	5,100	600	**5,900**	2,300	400	**2,800**
Total Housing	**10,300**	**500**	**10,800**	**19,000**	**1,300**	**20,600**	**8,800**	**800**	**9,700**
Shares %									
Owned with mortgage	31%	1%	**32%**	28%	1%	**29%**	-3.1%	0.3%	**-2.8%**
Owned without mortgage	23%	1%	**24%**	26%	2%	**27%**	2.5%	0.7%	**3.1%**
Owned by Trust	14%	0%	**14%**	14%	1%	**14%**	-0.3%	0.2%	**0.0%**
Total Owned or in Trust	**68%**	**2%**	**71%**	**68%**	**3%**	**71%**	**-0.9%**	**1.2%**	**0.4%**
Not Owned	26%	2%	**29%**	25%	3%	**29%**	-1.4%	0.7%	**-0.4%**
Total Housing	**95%**	**5%**	**100%**	**93%**	**6%**	**100%**	**-2.3%**	**1.9%**	**0.0%**

Source: ME Housing Demand Model 2021.

Table 3-5: Urban Demand by Dwelling Type and Tenure in Waikato District: 2020-2050 – Preference Shift Scenario

Dwelling Tenure : NIDEA Future	2020			2050			2020-50		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*1%pa*			
Owned with mortgage	3,400	80	**3,500**	5,700	300	**6,000**	2,300	200	**2,500**
Owned without mortgage	2,500	100	**2,600**	5,100	500	**5,600**	2,600	400	**3,000**
Owned by Trust	1,500	40	**1,600**	2,700	200	**2,900**	1,200	100	**1,400**
Total Owned or in Trust	**7,400**	**200**	**7,700**	**13,600**	**900**	**14,500**	**6,100**	**700**	**6,800**
Not Owned	2,900	300	**3,200**	5,000	800	**6,000**	2,200	600	**2,800**
Total Housing	**10,300**	**500**	**10,800**	**18,600**	**1,700**	**20,500**	**8,300**	**1,200**	**9,700**
Shares %									
Owned with mortgage	31%	1%	**32%**	28%	1%	**29%**	-3.7%	0.6%	**-3.0%**
Owned without mortgage	23%	1%	**24%**	25%	2%	**27%**	1.9%	1.2%	**3.1%**
Owned by Trust	14%	0%	**14%**	13%	1%	**14%**	-0.6%	0.4%	**-0.1%**
Total Owned or in Trust	**68%**	**2%**	**71%**	**66%**	**4%**	**71%**	**-2.3%**	**2.2%**	**0.0%**
Not Owned	26%	2%	**29%**	25%	4%	**29%**	-1.9%	1.6%	**0.0%**
Total Housing	**95%**	**5%**	**100%**	**91%**	**8%**	**100%**	**-4.2%**	**3.9%**	**0.0%**

Source: ME Housing Demand Model 2021.

The current composition of demand for dwellings by tenure and dwelling type is shown in Table 3-6. The top third of the table shows the current distribution of households by income, dwelling type and tenure. The middle third shows the percentage distribution across each category. The lower third of the table

shows the relative concentration within each ownership/dwelling typology combination across the different household income groups. Values greater than 1 indicate a higher share of households within that group fall into a particular income category than dwellings overall.

The table shows that owned dwellings tend to be occupied by higher shares of higher income households, and dwellings that are not owned, occupied by higher shares of lower income households. It also shows that the household income profile of detached dwellings is higher than that of attached dwellings.

Table 3-6: Urban Demand by Household Income, Dwelling Type and Tenure in Waikato District: 2020

Household Income	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Under $30,000	900	60	**900**	800	100	**900**	1,600	200	**1,800**
$30-50,000	900	40	**1,000**	500	60	**600**	1,500	100	**1,600**
$50-70,000	900	20	**900**	500	30	**500**	1,300	60	**1,400**
$70-100,000	1,200	20	**1,300**	500	40	**500**	1,700	60	**1,800**
$100-120,000	900	30	**900**	200	20	**200**	1,100	50	**1,200**
$120-150,000	800	30	**800**	200	10	**200**	1,000	40	**1,000**
$150,000+	1,800	50	**1,800**	200	30	**300**	2,000	80	**2,100**
Total Households	**7,400**	**300**	**7,700**	**2,900**	**300**	**3,200**	**10,300**	**600**	**10,800**
Under $30,000	8%	1%	**8%**	7%	1%	**8%**	15%	2%	**16%**
$30-50,000	9%	0%	**9%**	5%	1%	**5%**	13%	1%	**14%**
$50-70,000	8%	0%	**8%**	4%	0%	**4%**	12%	1%	**13%**
$70-100,000	12%	0%	**12%**	4%	0%	**5%**	16%	1%	**16%**
$100-120,000	8%	0%	**9%**	2%	0%	**2%**	10%	0%	**11%**
$120-150,000	7%	0%	**8%**	2%	0%	**2%**	9%	0%	**9%**
$150,000+	17%	0%	**17%**	2%	0%	**2%**	19%	1%	**20%**
Total Households	**68%**	**2%**	**71%**	**26%**	**3%**	**29%**	**95%**	**5%**	**100%**
Relative Concentration									
Under $30,000	0.70	**1.46**	0.72	**1.61**	**2.29**	**1.68**	0.95	**1.91**	
$30-50,000	0.87	**1.12**	0.88	**1.30**	**1.30**	**1.30**	**0.99**	**1.22**	
$50-70,000	0.93	0.74	0.92	**1.22**	0.89	**1.19**	**1.01**	0.82	
$70-100,000	**1.02**	0.56	**1.01**	**1.01**	0.72	**0.98**	**1.02**	0.65	
$100-120,000	**1.13**	**1.02**	**1.12**	0.71	0.63	0.70	**1.01**	0.81	
$120-150,000	**1.15**	**1.07**	**1.15**	0.65	0.46	0.63	**1.01**	0.74	
$150,000+	**1.24**	**1.02**	**1.23**	0.43	0.47	0.43	**1.01**	0.72	

1 Not Owned includes NEI

Source: ME Housing Demand Model 2021.

3.4 Hamilton City Dwelling Demand

Hamilton City has an estimated demand for 60,800 dwellings in 2020. Hamilton City Council's growth projections[24] indicate the city is projected to experience strong growth in dwelling demand. M.E have been requested by Future Proof to use the High Series household projections as an agreed input to the HBA.

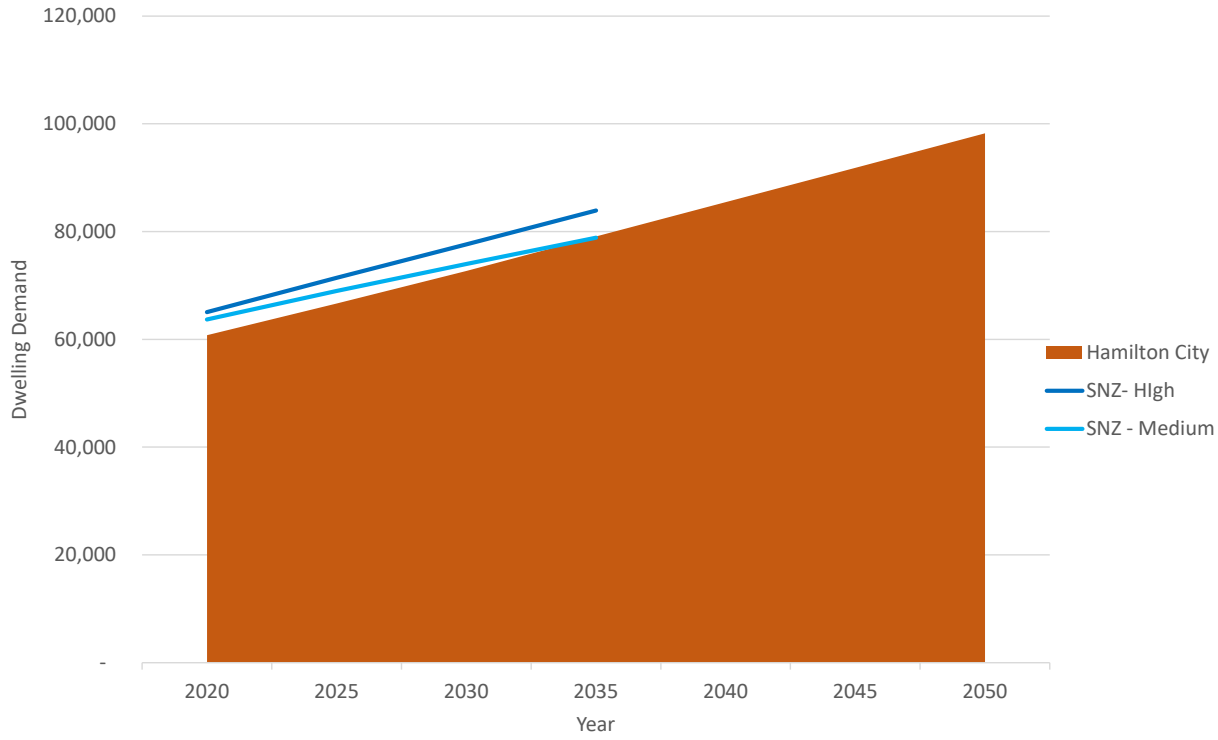
The projected growth in dwelling demand within the city is shown in Figure 3-4. The total demand for dwellings in Hamilton City is projected to increase by nearly two-thirds (62%) over the long-term (2020-2050). This equates to demand for an additional 37,500 over dwellings in the long-term.

[24] As prepared by the University of Waikato and supplied by Future Proof Partners at April 2021.

Hamilton City is projected to grow faster than the Waikato and Waipā districts overall, across the short, medium and long-term. It is projected to account for over 60 per cent (61%) of the total FPP long-term household growth. However, the main urban areas within the Waikato and Waipā districts significantly exceed the projected growth rates for Hamilton City.

Hamilton City's projected growth is between the growth in the Statistics New Zealand medium and high series projections. The Future Proof 2035 total estimated household base of Hamilton City, at 70,100 is slightly above the Statistics New Zealand medium projection series estimate of 78,900 households. The projected total size is closer to the medium series projection (despite higher growth) as the Statistics New Zealand projections occur off a 2020 estimated higher base (63,700 to 65,000 households, compared to 60,800 households in the Future Proof projections.

Figure 3-4: Hamilton City Projected Dwelling Demand, 2020-2050



Source: M.E 2021 NPS-UD Housing Demand Assessment.

The total dwelling demand by dwelling value band for Hamilton City is shown in Table 3-7 for the short, medium and long-term. The overall urban scale of Hamilton City means that a relatively large share of the total urban area of Hamilton is accessible (via a short drive) from most locations within the urban area. This means that demand for dwellings in Hamilton is likely to arise at the city level, with a range of (appropriate types of) locations within the urban area to meet demand. It is appropriate for a modelling approach at the urban scale to allow the market sufficient flexibility for demand (within each part of the market) to be met across a range of similar types of locations across the urban area[25]. As such, demand by value band has

[25] i.e. the model quantifies demand with each sub-market (broadly, by value band), then allows households the flexibility to choose different locations across the urban area that correspond with their relative market position.

been provided for Hamilton City as these help to inform the type of location within which demand could be met across the urban area.

The table shows the demand by broad dwelling value band under each of the modelled scenarios (Current Prices Scenario, Growth Scenario 1 and Growth Scenario 2). The first part of the table provides an estimate of the projected total dwelling demand, including for existing households at each assessment point in time. The middle section of the table shows the net change in dwelling demand in the short, medium and long-term, calculated from the total projected demand in the first part of the table. The final section of the table shows the net change in dwelling demand with the relevant (15%-20%) margin[26] added. The following sub-sections summarise the key aspects of the dwelling demand projections.

Table 3-7: Hamilton City Projected Urban Dwelling Demand: 2020-2050

Growth Scenario and Dwelling Value Band	Dwelling Demand				Change in Demand			Change in Demand + Margin		
	2020	2023	2030	2050	Short-Term: 2020-2023	Medium-Term: 2020-2030	Long-Term: 2020-2050	Short-Term: 2020-2023 (20% margin)	Medium-Term: 2020-2030 (20% margin)	Long-Term: 2020-2050 (15% margin)
Current Prices Scenario										
Up to $500k	19,300	21,300	25,700	39,000	2,000	6,500	19,700	2,400	7,800	22,700
$500k to $1m	38,600	40,000	43,700	55,100	1,400	5,000	16,500	1,600	6,100	18,900
$1m+	2,800	3,000	3,300	4,200	200	400	1,300	200	500	1,500
TOTAL	**60,800**	**64,300**	**72,700**	**98,300**	**3,500**	**11,900**	**37,500**	**4,200**	**14,300**	**43,100**
Growth Scenario 1										
Up to $500k	19,300	17,800	14,600	9,900	-1,500	-4,600	-9,400	-1,800	-5,600	-10,800
$500k to $1m	38,600	43,000	51,600	60,000	4,400	13,000	21,400	5,300	15,600	24,600
$1m+	2,800	3,500	6,400	28,300	600	3,600	25,500	700	4,300	29,300
TOTAL	**60,800**	**64,300**	**72,700**	**98,300**	**3,500**	**11,900**	**37,500**	**4,200**	**14,300**	**43,100**
Growth Scenario 2										
Up to $500k	19,300	17,600	11,100	3,300	-1,700	-8,200	-16,000	-2,100	-9,800	-18,300
$500k to $1m	38,600	42,800	52,300	40,400	4,200	13,600	1,800	5,100	16,400	2,100
$1m+	2,800	3,900	9,400	54,500	1,000	6,500	51,600	1,200	7,800	59,400
TOTAL	**60,800**	**64,300**	**72,700**	**98,300**	**3,500**	**11,900**	**37,500**	**4,200**	**14,300**	**43,100**

Source: M.E 2021 NPS-UD Housing Demand Assessment.

Household composition and income are key household characteristics that have an important effect on the value and types of dwellings demanded. The current (2020) and projected future (2050) household characteristics are shown in Table 3-8 and Table 3-9. The top third of the table shows the current distribution of households by household type and income. The middle third shows the percentage distribution across each category. The lower third of the table shows the relative concentration within each income band across the different household composition groups. Values greater than 1 indicate a higher share of households within that group fall into a particular income category than dwellings overall.

The tables show that around half (49%) of Hamilton's households are 1-2 person households. This is projected to increase to just over half (53%) of household by 2050, accounting for 59% of the growth in households. A share of this will occur as retirement demand, with existing households decreasing in size as children leave home and form new households.

[26] The NPS-UD requires a margin of 20% to be applied to the net increase in dwelling demand in the short and medium-term, and a 15% margin applied to the net increase in demand in the long-term. Capacity is compared to the dwelling demand plus the margin during the sufficiency assessment.

Higher relative proportions of the lower income households are smaller (1 person) households or single parent families. Larger family households and couples tend to be over-represented in the mid to higher household income bands.

Table 3-8: Hamilton City Households by Household Composition and Income, 2020

Household Type	Household Income							
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person household	7,100	2,600	1,900	1,300	300	80	200	**13,600**
Couple household	1,000	2,700	2,300	2,900	2,200	1,900	2,900	**16,000**
2 Parents 1-2 children	500	900	1,500	2,600	2,000	2,100	3,200	**12,700**
2 Parents 3+ children	200	300	400	700	500	500	900	**3,500**
1 Parent Family	2,600	2,100	1,700	1,500	700	200	300	**9,100**
Multi-family household	60	80	200	300	300	300	900	**2,100**
Non-family household	500	600	600	600	400	300	500	**3,600**
Total Households	**12,100**	**9,200**	**8,600**	**10,000**	**6,500**	**5,500**	**8,900**	**60,800**
One Person household	11.7%	4.3%	3.2%	2.2%	0.6%	0.1%	0.3%	**22.4%**
Couple household	1.7%	4.5%	3.8%	4.8%	3.7%	3.2%	4.7%	**26.4%**
2 Parents 1-2 children	0.9%	1.4%	2.4%	4.2%	3.3%	3.4%	5.3%	**20.9%**
2 Parents 3+ children	0.3%	0.4%	0.7%	1.1%	0.9%	0.8%	1.5%	**5.8%**
1 Parent Family	4.4%	3.4%	2.7%	2.5%	1.2%	0.4%	0.5%	**15.1%**
Multi-family household	0.1%	0.1%	0.3%	0.5%	0.5%	0.6%	1.5%	**3.5%**
Non-family household	0.9%	1.0%	1.1%	1.1%	0.7%	0.5%	0.8%	**5.9%**
Total Households	**19.8%**	**15.1%**	**14.2%**	**16.4%**	**10.7%**	**9.0%**	**14.6%**	**100.0%**
Relative Concentration								
One Person household	**2.64**	**1.27**	**0.99**	0.59	0.23	0.06	0.11	
Couple household	0.32	**1.12**	**1.02**	**1.11**	**1.30**	**1.34**	**1.23**	
2 Parents 1-2 children	0.21	0.44	0.82	**1.23**	**1.48**	**1.79**	**1.73**	
2 Parents 3+ children	0.22	0.51	0.85	**1.20**	**1.41**	**1.59**	**1.81**	
1 Parent Family	**1.46**	**1.50**	**1.28**	**1.01**	0.73	0.29	0.22	
Multi-family household	0.14	0.24	0.59	0.86	**1.19**	**1.80**	**2.88**	
Non-family household	0.74	**1.08**	**1.25**	**1.08**	**1.08**	**0.99**	0.88	

Source: ME Housing Demand Model 2021.

Table 3-9: Hamilton City Households by Household Composition and Income, 2050

Household Type	Household Income							
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person household	13,900	4,500	3,000	2,000	500	100	300	**24,400**
Couple household	1,800	5,700	4,200	4,800	3,500	3,000	4,400	**27,400**
2 Parents 1-2 children	700	1,300	2,200	3,900	3,000	3,100	4,900	**19,100**
2 Parents 3+ children	200	400	600	1,000	800	700	1,400	**5,100**
1 Parent Family	3,800	3,200	2,600	2,300	1,100	400	400	**13,800**
Multi-family household	90	100	300	500	400	500	1,400	**3,300**
Non-family household	700	900	900	900	600	400	600	**5,100**
Total Households	**21,300**	**16,100**	**13,800**	**15,400**	**9,900**	**8,300**	**13,500**	**98,300**
One Person household	14.2%	4.6%	3.0%	2.1%	0.5%	0.1%	0.3%	**24.8%**
Couple household	1.9%	5.8%	4.3%	4.8%	3.5%	3.0%	4.5%	**27.9%**
2 Parents 1-2 children	0.8%	1.3%	2.2%	3.9%	3.0%	3.2%	5.0%	**19.4%**
2 Parents 3+ children	0.2%	0.4%	0.6%	1.0%	0.8%	0.8%	1.4%	**5.2%**
1 Parent Family	3.8%	3.3%	2.6%	2.4%	1.1%	0.4%	0.5%	**14.1%**
Multi-family household	0.1%	0.1%	0.3%	0.5%	0.4%	0.5%	1.4%	**3.3%**
Non-family household	0.7%	0.9%	1.0%	0.9%	0.6%	0.4%	0.6%	**5.2%**
Total Households	**21.7%**	**16.4%**	**14.0%**	**15.7%**	**10.0%**	**8.4%**	**13.8%**	**100.0%**
Relative Concentration								
One Person household	**2.63**	**1.12**	0.86	0.54	0.22	0.06	0.10	
Couple household	0.31	**1.27**	**1.10**	**1.11**	**1.26**	**1.28**	**1.17**	
2 Parents 1-2 children	0.18	0.41	0.82	**1.29**	**1.55**	**1.94**	**1.87**	
2 Parents 3+ children	0.20	0.46	0.85	**1.24**	**1.49**	**1.73**	**1.98**	
1 Parent Family	**1.25**	**1.42**	**1.33**	**1.08**	0.80	0.32	0.24	
Multi-family household	0.13	0.21	0.61	0.90	**1.28**	**1.92**	**3.06**	
Non-family household	0.65	**1.08**	**1.32**	**1.13**	**1.14**	**0.99**	0.88	

Source: ME Housing Demand Model 2021.

3.4.1 Current Dwelling Demand: 2020

There is currently demand for an estimated 60,800 urban dwellings[27] across Hamilton City's urban area. Hamilton City is the main urban area within the Future Proof area. It accounts for nearly three-quarters (71%) of the current demand for urban dwellings across the Future Proof area, and over half (56%) of the total demand for dwellings.

Around two-thirds of the demand (64%) is for dwellings in the value bands of $500k to $1m. Around one-third (32%) of Hamilton's current dwelling demand is for dwellings in the lower value bands up to $500k. A large share of these dwellings are older housing stock and located within multi-unit developments. The remaining 5% of demand is for dwellings in the higher value bands over $1m.

3.4.2 Short-Term Dwelling Demand: 2020-2023

There is a projected net increase in demand for an additional 3,500 urban dwellings within Hamilton City in the short-term to 2023, bringing the total dwelling demand to 64,300 dwellings. When a 20% margin is applied, the net increase becomes 4,200 dwellings.

[27] It has been assumed that all demand within Hamilton represents urban dwelling demand. Although there are a minor share of lifestyle properties, the allocation as urban demand will contribute toward a conservative sufficiency assessment.

Hamilton City is projected to account for over half (59%) of the Future Proof areas short-term urban dwelling demand. However, the net increase equates to an annual growth rate of 1.9%, which is below the urban dwelling demand growth rate of 2.3% p.a. for the FPP area overall. This is projected to result in a slight decrease in Hamilton's share of the FPPs urban dwelling demand from 71% to 70% in the short-term. Urban growth in the rest of the FPP area is projected to be higher due to the relatively fast urban growth of the main urban settlements, particularly within the Waikato District.

Under the current prices scenario, a high share of the increase in dwelling demand occurs within the lower dwelling value bands up to $500k.

3.4.3 Medium-Term Dwelling Demand: 2020-2030

Hamilton City has a projected net increase for an additional 11,900 urban dwellings across the medium-term (2020-2030). This equates to an annual average increase of 1.8%, which is slightly below the FPP area urban dwelling growth rate of 2.0%. When a margin is applied, the net increase becomes an additional 14,300 urban dwellings.

The projected urban dwelling demand growth within Hamilton City accounts for nearly two-thirds (63%) of the FPPs urban dwelling demand growth overall. However, faster urbanisation around the FPP district's other urban areas means that Hamilton's share of total urban dwelling demand is projected to decrease slightly to 69% (from 71% currently).

3.4.4 Long-Term Dwelling Demand: 2020-2050

Over the long-term, Hamilton's urban dwelling demand is projected to increase by nearly two-thirds (+62%). There is a projected net increase for an additional 37,500 urban dwellings, or 43,100 dwellings when a margin is applied. This brings the total urban dwelling demand to 98,300 dwellings in the long-term in Hamilton City.

Hamilton City is projected to account for two-thirds of the FPP area growth in urban dwelling demand over the long-term. A slow-down in urban growth in the district's in the long-term means that Hamilton's share of the FPP area urban dwelling demand remains at 69% in the long-term (from 69% in the medium-term, but down slightly from 71% currently).

Under the current prices scenario, dwelling demand remains distributed across the mid and lower value bands. However, under the growth scenarios, growth in household incomes means that higher shares of the total long-term demand are projected to occur within the mid to higher dwelling value bands.

3.4.5 Dwelling Demand by Dwelling Type

The projected demand by dwelling type (detached and attached dwellings) for Hamilton City is shown in Figure 3-5 and Figure 3-6. Figure 3-5 projects the demand under the base case scenario where only a minor preference shift toward attached dwellings occurs through time as a function of projected changes in the underlying household composition. Figure 3-6 instead projects the demand under a preference shift scenario where a gradual shift in household preference towards attached dwellings is modelled through time. This reflects the gradual shift in preference toward higher density dwelling types that typically occur

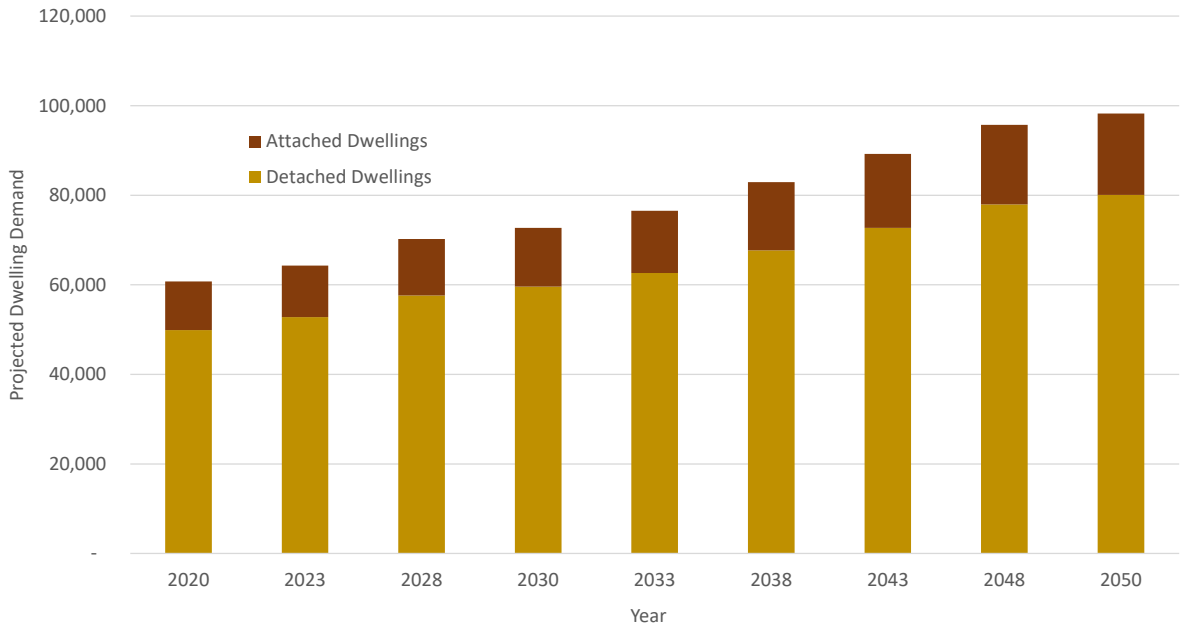
gradually through time in growing urban economies. The scenarios provide a range of outputs to capture the potential dwelling preference outcomes through time.

A shift to higher density dwellings reflects the trade-offs that households make between location, space and price. Higher density dwellings are often located in areas of higher amenity, with higher land costs (on a per m^2 basis) associated with the location. These gradual shifts in dwelling typologies are reflected in Hamilton building consent data patterns through time, as well as the development patterns across other growing urban economies.

Currently around four-fifths (83%) of the demand is for detached dwellings. Under the base case scenario a similar share of demand for detached dwellings is projected forward, equating to a demand for around 30,200 additional detached dwellings out to 2050 (excluding a margin). Correspondingly there is a projected demand for an additional 7,300 attached dwellings.

The projected patterns of demand by dwelling type differ under a preference shift scenario. If a moderate to high preference shift[28] toward attached dwellings were to occur where around half of the future demand was for attached dwellings, then this would amount to demand for around an additional 19,300 detached dwellings and around 18,100 additional attached dwellings. The total dwelling stock share of detached dwellings would decrease from around 83% to around 71% by 2050.

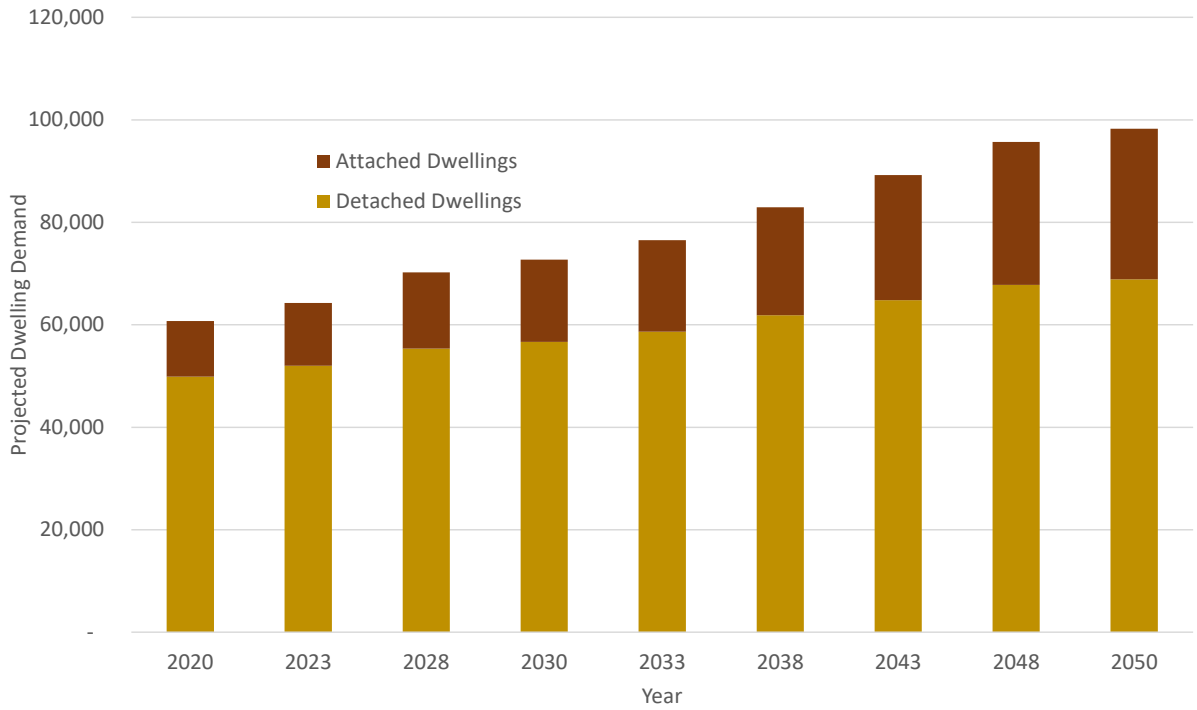
Figure 3-5: Demand by Dwelling Type in Hamilton City: 2020-2050 – Base Case Scenario



Source: M.E Dwelling Demand Model, 2021.

[28] This modelled scenario includes a 1.7% p.a. preference shift towards attached dwellings.

Figure 3-6: Demand by Dwelling Type in Hamilton City: 2020-2050 – Preference Shift Scenario



Source: M.E Dwelling Demand Model, 2021.

The projected demand by dwelling type is disaggregated by tenure for Hamilton City in Table 3-10 and Table 3-11. Table 3-10 shows the demand under the base case scenario where only a minor preference shift toward attached dwellings occurs through time as a function of projected changes in the underlying household composition. Table 3-11 shows the preference shift scenario where a gradual change in preference toward attached dwellings is modelled.

The tables show that currently over half (56%) of Hamilton's dwelling stock is owned (including within a trust). Dwelling ownership rates are substantially higher for detached dwellings where around 61% of dwellings are owned, compared to only 32% of attached dwellings.

The modelling shows projects forward the current dwelling ownership structures by dwelling type as a function of the underlying projected household composition. It is beyond the scope of the assessment to model changes in ownership patterns by dwelling typology with preference shifts through time. As such, it shows a slight increase in dwelling ownership under the base case scenario (58%) projected for 2050. In comparison, the preference shift scenario shows a slight overall decrease to 55%. If further modelling on the changes in ownership patterns were undertaken, then the modelling may show changes in dwelling ownership rates as attached dwellings are often cheaper.

Table 3-10: Demand by Dwelling Type and Tenure in Hamilton City: 2020-2050 – Base Case Scenario

Dwelling Tenure : NIDEA Future	2020			2050			2020-50		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*0.1%pa*			
Owned with mortgage	14,700	1,000	**15,600**	22,400	1,600	**24,000**	7,800	700	**8,400**
Owned without mortgage	10,400	1,700	**12,100**	19,100	3,400	**22,500**	8,700	1,800	**10,400**
Owned by Trust	5,600	600	**6,200**	9,500	1,100	**10,700**	3,900	500	**4,500**
Total Owned or in Trust	**30,700**	**3,200**	**33,900**	**51,000**	**6,200**	**57,200**	**20,400**	**3,000**	**23,400**
Not Owned	20,000	6,800	**26,900**	29,900	11,200	**41,200**	9,900	4,300	**14,300**
Total Housing	**50,700**	**10,000**	**60,800**	**80,900**	**17,300**	**98,400**	**30,200**	**7,300**	**37,600**
Shares %									
Owned with mortgage	24%	2%	**26%**	23%	2%	**24%**	-1.4%	0.1%	**-1.3%**
Owned without mortgage	17%	3%	**20%**	19%	3%	**23%**	2.3%	0.8%	**3.0%**
Owned by Trust	9%	1%	**10%**	10%	1%	**11%**	0.5%	0.2%	**0.7%**
Total Owned or in Trust	**50%**	**5%**	**56%**	**52%**	**6%**	**58%**	**1.4%**	**1.0%**	**2.4%**
Not Owned	33%	11%	**44%**	30%	11%	**42%**	-2.6%	0.1%	**-2.4%**
Total Housing	**83%**	**16%**	**100%**	**82%**	**18%**	**100%**	**-1.2%**	**1.1%**	**0.0%**

Source: ME Housing Demand Model 2021.

Table 3-11: Demand by Dwelling Type and Tenure in Hamilton City: 2020-2050 – Preference Shift Scenario

Dwelling Tenure : NIDEA Future	2020			2050			2020-50		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*1.7%pa*			
Owned with mortgage	14,700	1,000	**15,600**	19,400	2,600	**22,000**	4,700	1,700	**6,400**
Owned without mortgage	10,400	1,700	**12,100**	16,500	5,600	**22,100**	6,100	3,900	**10,000**
Owned by Trust	5,600	600	**6,200**	8,300	1,800	**10,100**	2,700	1,300	**3,900**
Total Owned or in Trust	**30,700**	**3,200**	**33,900**	**44,200**	**10,000**	**54,200**	**13,500**	**6,800**	**20,300**
Not Owned	20,000	6,800	**26,900**	25,900	18,200	**44,100**	5,800	11,300	**17,200**
Total Housing	**50,700**	**10,000**	**60,800**	**70,000**	**28,200**	**98,300**	**19,300**	**18,100**	**37,500**
Shares %									
Owned with mortgage	24%	2%	**26%**	20%	3%	**22%**	-4.4%	1.1%	**-3.3%**
Owned without mortgage	17%	3%	**20%**	17%	6%	**22%**	-0.3%	2.9%	**2.6%**
Owned by Trust	9%	1%	**10%**	8%	2%	**10%**	-0.8%	0.9%	**0.1%**
Total Owned or in Trust	**50%**	**5%**	**56%**	**45%**	**10%**	**55%**	**-5.5%**	**4.9%**	**-0.6%**
Not Owned	33%	11%	**44%**	26%	18%	**45%**	-6.6%	7.2%	**0.6%**
Total Housing	**83%**	**16%**	**100%**	**71%**	**29%**	**100%**	**-12.2%**	**12.2%**	**0.0%**

Source: ME Housing Demand Model 2021.

The current composition of demand for dwellings by tenure and dwelling type is shown in Table 3-12. The top third of the table shows the current distribution of households by income, dwelling type and tenure. The middle third shows the percentage distribution across each category. The lower third of the table shows the relative concentration within each ownership/dwelling typology combination across the different household income groups. Values greater than 1 indicate a higher share of households within that group fall into a particular income category than dwellings overall.

The table shows that owned dwellings tend to be occupied by higher shares of higher income households, and dwellings that are not owned, occupied by higher shares of lower income households. It also shows that the household income profile of detached dwellings is higher than that of attached dwellings.

Table 3-12: Demand by Household Income, Dwelling Type and Tenure in Hamilton City: 2020

Household Income	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Under $30,000	3,600	900	**4,500**	4,900	2,600	**7,500**	8,500	3,500	**12,000**
$30-50,000	3,900	600	**4,500**	3,400	1,300	**4,700**	7,300	1,900	**9,200**
$50-70,000	3,900	400	**4,400**	3,300	1,000	**4,300**	7,200	1,500	**8,600**
$70-100,000	5,200	300	**5,600**	3,500	900	**4,400**	8,700	1,200	**10,000**
$100-120,000	4,100	200	**4,300**	1,800	400	**2,200**	5,900	600	**6,500**
$120-150,000	3,600	200	**3,800**	1,500	300	**1,800**	5,000	500	**5,500**
$150,000+	6,400	400	**6,800**	1,700	400	**2,100**	8,000	800	**8,900**
Total Households	**30,700**	**3,200**	**33,900**	**20,000**	**6,900**	**26,900**	**50,700**	**10,100**	**60,800**
Under $30,000	6%	2%	**7%**	8%	4%	**12%**	14%	6%	**20%**
$30-50,000	6%	1%	**7%**	6%	2%	**8%**	12%	3%	**15%**
$50-70,000	6%	1%	**7%**	5%	2%	**7%**	12%	2%	**14%**
$70-100,000	9%	1%	**9%**	6%	1%	**7%**	14%	2%	**16%**
$100-120,000	7%	0%	**7%**	3%	1%	**4%**	10%	1%	**11%**
$120-150,000	6%	0%	**6%**	2%	0%	**3%**	8%	1%	**9%**
$150,000+	10%	1%	**11%**	3%	1%	**3%**	13%	1%	**15%**
Total Households	**50%**	**5%**	**56%**	**33%**	**11%**	**44%**	**83%**	**17%**	**100%**
Relative Concentration									
Under $30,000	0.59	**1.45**	0.67	**1.25**	**1.89**	**1.41**	0.85	**1.75**	
$30-50,000	0.84	**1.34**	0.88	**1.12**	**1.23**	**1.15**	0.95	**1.26**	
$50-70,000	0.90	0.96	0.91	**1.14**	**1.04**	**1.12**	**1.00**	**1.01**	
$70-100,000	**1.04**	0.66	**1.00**	**1.07**	0.80	**1.00**	**1.05**	0.75	
$100-120,000	**1.24**	0.72	**1.19**	0.84	0.54	0.76	**1.08**	0.59	
$120-150,000	**1.29**	0.61	**1.22**	0.80	0.49	0.72	**1.09**	0.53	
$150,000+	**1.42**	0.90	**1.37**	0.57	0.41	0.53	**1.09**	0.57	

1 Not Owned includes NEI

Source: ME Housing Demand Model 2021.

3.5 Waipā District Dwelling Demand

Waipā District has an estimated demand for 20,900 dwellings in 2020. Waipā District Council's growth projections[29] indicate the district is projected to experience strong growth, particularly in the main urban areas. M.E have been requested by Future Proof to use the High Series household projections as an agreed input to the HBA.

The projected growth in demand within the district is shown in Figure 3-7. Total district demand is projected to increase by nearly half (+45%) over the long-term (2020-2050). This equates to demand for an additional 9,500 dwellings, to reach a total demand for around 30,400 dwellings in the long-term.

The level of urbanisation is likely to gradually increase within the district, with dwelling demand in the urban areas projected to grow at a faster rate than the district overall. Almost all (88%) of the long-term dwelling demand growth is for urban dwellings, amounting to an additional 8,400 dwellings (or 9,600 dwellings with a 15% margin). Within this, almost all of the urban demand growth is projected to occur within the main urban areas. It is concentrated around the main urban centre of Cambridge, which has recent substantive

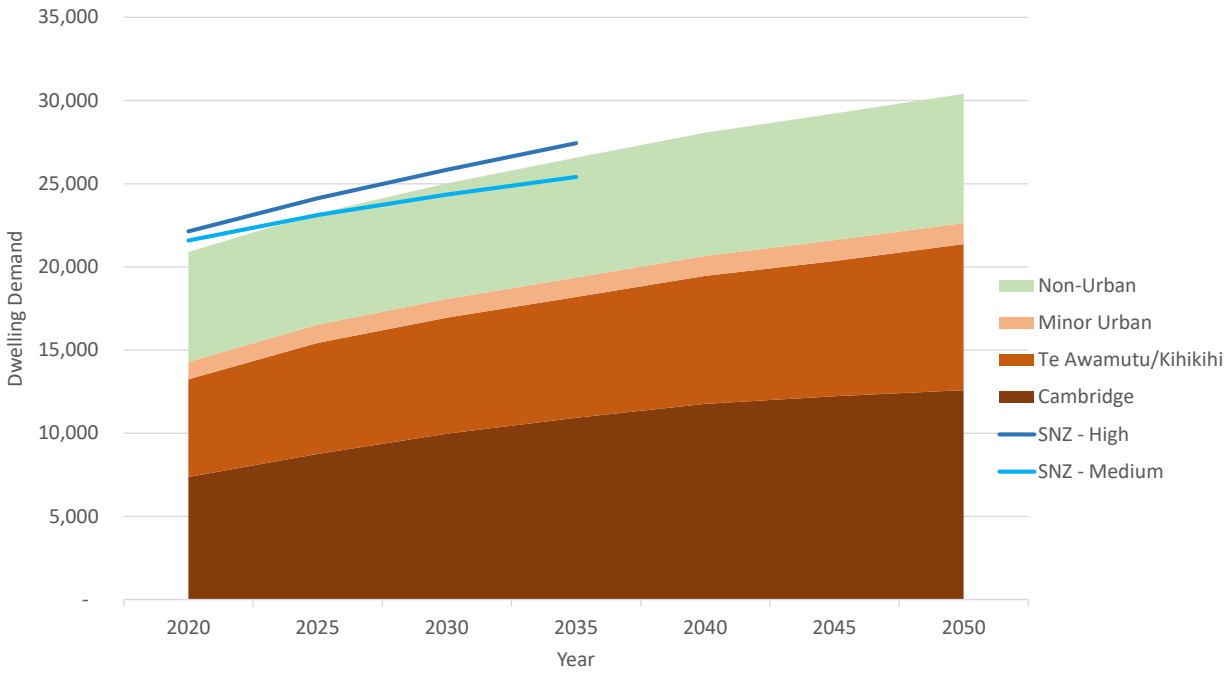
[29] As prepared by the University of Waikato and supplied by Future Proof Partners at April 2021.

additional capacity through the addition of the Plan Change 7 growth cells. Sizeable demand growth also projected for Te Awamutu.

The Waipā District's projected dwelling demand exceeds the Statistics New Zealand medium and high series household projections for the district. The projected dwelling demand reflects the household demand projections supplied by Waipā District Council, which also exceed the Statistics New Zealand projections to the same extent. At the district level, the projection series has an additional 200 to 500 household growth in the short-term, and 400 to 1,400 in the medium-term in comparison to the Statistics New Zealand medium and high series projections.

The total households in the FPP supplied projection series are between the SNZ low and medium series at the start of the projection period. By the end of the projection series (2038), the FPP supplied Waipā District household projections are between the SNZ medium and high series projections.

Figure 3-7: Waipā District Projected Dwelling Demand, 2020-2050



Source: M.E 2021 NPS-UD Housing Demand Assessment.

Table 3-13 shows the dwelling demand across the district across the short, medium and long-term. It shows the urban component of demand[30] by location across the time periods. The locations include the main urban areas established within the spatial framework, as well as the minor urban areas and settlements. A row for non-urban demand is also included which captures demand for rural and lifestyle dwellings.

[30] Lifestyle dwelling demand surrounding the urban areas is captured in the 'Non-Urban' row of the table.

The first part of the table provides an estimate of the projected total dwelling demand, including for existing households at each assessment point in time. The middle section of the table shows the net change in dwelling demand in the short, medium and long-term, calculated from the total projected demand in the first part of the table. The final section of the table shows the net change in dwelling demand with the relevant (15%-20%) margin[31] added. The following sub-sections summarise the key aspects of the dwelling demand projections.

Table 3-13: Waipā District Projected Urban Dwelling Demand by Location: 2020-2050

AREA	Dwelling Demand				Change in Demand			Change in Demand + Margin		
	2020	2023	2030	2050	Short-Term: 2020-2023	Medium-Term: 2020-2030	Long-Term: 2020-2050	Short-Term: 2020-2023 (20% margin)	Medium-Term: 2020-2030 (20% margin)	Long-Term: 2020-2050 (15% margin)
Main Urban Areas										
Cambridge	7,400	7,900	9,300	12,600	550	1,900	5,200	660	2,300	6,000
Te Awamutu	4,900	5,200	5,700	7,300	310	760	2,400	370	920	2,800
Kihikihi	930	1,100	1,300	1,400	170	330	500	200	400	570
Total Main Urban Areas	*13,200*	*14,300*	*16,300*	*21,400*	*1,000*	*3,000*	*8,100*	*1,200*	*3,600*	*9,400*
Minor Urban Areas/Settlements										
Ohaupo	250	250	260	290	-	10	40	-	10	40
Karapiro	160	150	160	170	-	-	10	-	-	10
Rukuhia	80	80	80	120	-	10	40	-	10	50
Ngahinapouri	80	80	90	100	-	-	10	-	-	20
Pirongia	470	500	540	600	30	70	130	40	80	150
Total Minor Urban Areas/Se	*1,000*	*1,100*	*1,100*	*1,300*	*30*	*90*	*230*	*40*	*100*	*260*
TOTAL URBAN	**14,300**	**15,300**	**17,400**	**22,600**	**1,100**	**3,100**	**8,400**	**1,300**	**3,700**	**9,600**
Non-Urban	6,600	6,700	7,000	7,800	50	350	1,100	60	420	1,300
TOTAL	**20,900**	**22,000**	**24,300**	**30,400**	**1,100**	**3,500**	**9,500**	**1,300**	**4,100**	**10,900**

Source: M.E 2021 NPS-UD Housing Demand Assessment.

Household composition and income are key household characteristics that have an important effect on the value and types of dwellings demanded. The current (2020) and projected future (2050) household characteristics are shown in Table 3-14 and Table 3-15. The top third of the table shows the current distribution of households by household type and income. The middle third shows the percentage distribution across each category. The lower third of the table shows the relative concentration within each income band across the different household composition groups. Values greater than 1 indicate a higher share of households within that group fall into a particular income category than dwellings overall.

The tables show that between half and two-thirds (58%) of Waipā District's urban households are 1-2 person households. This is projected to increase to 63% of household by 2050, accounting for nearly three-quarters 71% of the growth in households. A relatively substantial share of this will occur as retirement demand, with existing households decreasing in size as children leave home and form new households together with new households moving into the district to retire.

Higher relative proportions of the lower income households are smaller (1 person) households or single parent families. Larger family households and couples tend to be over-represented in the mid to higher household income bands.

[31] The NPS-UD requires a margin of 20% to be applied to the net increase in dwelling demand in the short and medium-term, and a 15% margin applied to the net increase in demand in the long-term. Capacity is compared to the dwelling demand plus the margin during the sufficiency assessment.

Table 3-14: Waipā District Urban Households by Household Composition and Income, 2020

Household Type	Household Income							
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person household	1,800	700	500	300	70	10	30	**3,400**
Couple household	300	900	800	900	700	500	800	**4,900**
2 Parents 1-2 children	40	100	300	600	500	600	900	**3,000**
2 Parents 3+ children	-	40	90	200	100	100	300	**900**
1 Parent Family	400	400	300	200	100	40	70	**1,500**
Multi-family household	-	10	20	40	20	60	200	**300**
Non-family household	30	70	60	70	40	30	40	**300**
Total Households	**2,400**	**2,200**	**2,100**	**2,300**	**1,500**	**1,300**	**2,300**	**14,300**
One Person household	12.4%	4.9%	3.6%	2.1%	0.5%	0.0%	0.2%	**23.7%**
Couple household	1.8%	6.2%	5.4%	6.4%	4.6%	3.8%	5.9%	**34.0%**
2 Parents 1-2 children	0.2%	0.8%	2.3%	4.2%	3.3%	3.9%	6.4%	**21.1%**
2 Parents 3+ children	0.0%	0.3%	0.6%	1.4%	1.0%	0.9%	1.8%	**6.0%**
1 Parent Family	2.5%	2.6%	2.3%	1.7%	0.9%	0.2%	0.5%	**10.7%**
Multi-family household	0.0%	0.1%	0.1%	0.3%	0.2%	0.4%	1.2%	**2.2%**
Non-family household	0.2%	0.5%	0.4%	0.5%	0.3%	0.2%	0.3%	**2.3%**
Total Households	**17.1%**	**15.3%**	**14.8%**	**16.4%**	**10.7%**	**9.4%**	**16.3%**	**100.0%**
Relative Concentration								
One Person household	**3.05**	**1.34**	**1.03**	0.54	0.20	0.02	0.06	
Couple household	0.30	**1.18**	**1.08**	**1.14**	**1.26**	**1.18**	**1.07**	
2 Parents 1-2 children	0.07	0.25	0.73	**1.20**	**1.47**	**1.96**	**1.86**	
2 Parents 3+ children	0.01	0.32	0.69	**1.40**	**1.54**	**1.60**	**1.86**	
1 Parent Family	**1.39**	**1.60**	**1.45**	0.96	0.75	0.24	0.27	
Multi-family household	0.02	0.19	0.37	0.75	0.72	**1.90**	**3.28**	
Non-family household	0.49	**1.39**	**1.25**	**1.24**	**1.09**	0.82	0.76	

Source: ME Housing Demand Model 2021.

Table 3-15: Waipā District Urban Households by Household Composition and Income, 2050

Household Type	Household Income							
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
One Person household	3,500	1,200	800	400	100	10	50	**6,100**
Couple household	500	1,900	1,400	1,400	900	800	1,200	**8,100**
2 Parents 1-2 children	50	200	500	800	700	800	1,300	**4,200**
2 Parents 3+ children	-	60	100	300	200	200	400	**1,200**
1 Parent Family	500	600	500	300	200	50	90	**2,200**
Multi-family household	-	10	20	50	40	80	200	**400**
Non-family household	30	100	80	80	50	30	50	**400**
Total Households	**4,600**	**4,000**	**3,300**	**3,400**	**2,200**	**1,900**	**3,300**	**22,600**
One Person household	15.7%	5.2%	3.3%	1.9%	0.5%	0.0%	0.2%	**26.8%**
Couple household	2.2%	8.5%	6.2%	6.2%	4.2%	3.4%	5.4%	**36.0%**
2 Parents 1-2 children	0.2%	0.8%	2.1%	3.7%	2.9%	3.4%	5.7%	**18.7%**
2 Parents 3+ children	0.0%	0.2%	0.5%	1.2%	0.9%	0.8%	1.6%	**5.3%**
1 Parent Family	2.2%	2.5%	2.1%	1.5%	0.7%	0.2%	0.4%	**9.7%**
Multi-family household	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	1.0%	**1.8%**
Non-family household	0.1%	0.5%	0.3%	0.3%	0.2%	0.1%	0.2%	**1.8%**
Total Households	**20.4%**	**17.7%**	**14.5%**	**15.1%**	**9.6%**	**8.3%**	**14.4%**	**100.0%**
Relative Concentration								
One Person household	**2.86**	**1.09**	0.85	0.47	0.18	0.02	0.05	
Couple household	0.30	**1.34**	**1.18**	**1.14**	**1.21**	**1.13**	**1.04**	
2 Parents 1-2 children	0.05	0.24	0.76	**1.31**	**1.62**	**2.19**	**2.09**	
2 Parents 3+ children	-	0.27	0.70	**1.57**	**1.73**	**1.80**	**2.07**	
1 Parent Family	-	**1.45**	**1.47**	**1.05**	0.80	0.26	0.30	
Multi-family household	-	0.13	0.31	0.75	0.95	**2.19**	**3.78**	
Non-family household	-	**1.45**	**1.28**	**1.23**	**1.22**	0.84	0.81	

Source: ME Housing Demand Model 2021.

3.5.1 Current Dwelling Demand: 2020

Waipā district currently has an estimated demand for around 20,900 dwellings. Around two-thirds (68%) of the demand is for urban dwellings, which is concentrated into the main urban centres of Cambridge, Te Awamutu and Kihikihi (which together account for 93% of the urban dwelling demand). A small share (5%) of the district's total dwelling demand occurs as urban demand within the smaller urban areas.

Cambridge is the district's largest urban centre, accounting for over half (52%) of the district's urban dwelling demand (approximately 7,400 dwellings), and one-third (35%) of the district's dwelling demand overall. Demand for a further 5,900 urban dwellings occurs across Te Awamutu and Kihikihi. These form the urban areas subject to the commercial feasibility assessment.

A substantial component of the district's demand is for non-urban dwellings, including lifestyle and rural dwellings. It is estimated that these types of dwellings currently account for around one-third (32%) of the district's total dwelling demand (6,600 dwellings). Many (around 40% to 45%) of these are lifestyle properties that are located within proximity to the main urban centres.

3.5.2 Short-Term Dwelling Demand: 2020-2023

The Waipā District is projected to experience reasonable growth in the short-term. Demand in the district overall, is projected to increase by 1,100 additional dwellings (+5%), which equates to an annual growth rate of 1.7%. This is between the Statistics New Zealand medium and high series growth rates for the district, and is slightly above the Statistics New Zealand high series growth rate for the Waikato Region overall (1.6%).

Dwelling demand growth is heavily concentrated into the district's urban areas. Nearly all (95%) of this demand growth is for urban dwellings. It amounts to an additional 1,100 urban dwellings over the next three years, or 1,300 dwellings with a 20% margin applied. Excluding the margin, this is a 7% increase in the district's demand for urban dwellings, equating to a 2.4% annual growth rate (compared to 1.7% for the district overall).

The urban dwelling demand growth is concentrated into the main urban areas of Cambridge, Te Awamutu and Kihikihi which are projected to account for nearly all (97%) of the district's urban dwelling demand growth. The projected dwelling demand growth reflects the existing patterns of the commercial residential development sector within the district, the presence of additional capacity within Cambridge and Te Awamutu's greenfield areas as well as the higher value of amenity within the centres.

In the short-term, urban dwelling demand is projected to grow by 2.4% p.a. in Cambridge, amounting to an additional 550 dwellings (or 660 dwellings with a margin applied). Te Awamutu forms the next largest area of projected urban dwelling demand growth. It has a projected demand increase of 300 urban dwellings, or 370 dwellings with a margin applied. Kihikihi is projected to growth at a faster rate (5.7% p.a.), but with a smaller share of the overall increase (+170 dwellings, or +200 dwellings with the margin applied).

3.5.3 Medium-Term Dwelling Demand: 2020-2030

Dwelling demand growth is projected to slow slightly into the medium-term across Waipā District. The district has a projected demand growth for an additional 3,500 dwellings over the next ten years, meaning the district's total dwelling demand is projected to increase by 17% across this period.

A high share (90%) of this projected demand is for urban dwellings, amounting to demand for an additional 3,100 urban dwellings (+3,700 with a 20% margin applied). This amounts to a 22% increase in the district's urban dwelling demand growth across the next 10 years.

In the medium-term, urban dwelling demand growth is projected to be more heavily concentrated into the main centre of Cambridge. Over the medium-term, dwelling demand in Cambridge is projected to increase by 1,900 dwellings (or 2,300 dwellings with a 20% margin applied). If dwelling demand growth is realised, then this would increase the urban dwelling component of Cambridge by 26% over the next ten years.

The next largest increase in urban dwelling demand is projected to occur within Te Awamutu. There is a projected increase of 760 urban dwellings (or 900 dwellings with a 20% margin applied), increasing Te Awamutu's total urban dwelling demand by 15%.

Minor amounts of urban dwelling demand growth are projected to occur across the remainder of the urban areas. There is a projected increase of demand for an additional 420 urban dwellings across Kihikihi and the minor urban areas combined (or 500 dwellings with a margin applied).

3.5.4 Long-Term Dwelling Demand: 2020-2050

The district's total demand for dwellings is projected to increase by nearly half (+45%) in the long-term. There is a projected demand for an additional 9,500 dwellings in the district overall across the long-term (2020-2050).

Dwelling demand growth is projected to continue to be concentrated into the district's urban areas over the long-term, although to a slightly lesser extent. A high share (88%) of the long-term demand growth is for urban dwellings. This amounts to demand for an additional 8,400 urban dwellings in the long-term (or 9,600 dwellings with a 15% margin applied). Overall, dwelling demand in the district's urban areas is projected to grow by 59% (compared to 45% for the district overall) over the long-term. If realised, this would result in a gradual increase in the urbanisation of the district. The share of demand as urban dwellings would increase from an estimated 68% currently, to 74% by 2050.

Urban dwelling demand growth is projected to continue to be concentrated into the district's main centre of Cambridge over the long-term. Cambridge is projected to account for nearly two-thirds (63%) of the district's urban growth over the next 30 years. This amounts to demand for an additional 5,200 urban dwellings, or an additional 6,000 urban dwellings with a 15% margin applied. If realised, this would result in a 71% increase in the size of Cambridge (excluding the margin) over the next 30 years.

Over the long-term, there is also a projected substantive increase in demand for urban dwellings within Te Awamutu. However, dwelling demand growth in this urban centre is projected to occur at a slower rate than Cambridge. Over the next 30 years, demand for urban dwellings is projected to increase by 2,400 dwellings in Te Awamutu, or 2,800 dwellings with a 15% margin applied. This represents a 49% increase in urban dwelling demand. Kihikihi, within relatively close proximity (1-2 kilometres from the existing urban edge) to Te Awamutu, has a smaller projected increase in urban dwelling demand (+500 dwellings, or +570 dwellings with a margin applied) over the long-term.

There is only a small projected increase in demand for urban dwellings across the minor urban areas. Over the long-term, demand in these areas is projected to increase by 230 dwellings (+260 with a margin applied). This equates to an annual growth rate of 0.7%, which is slower than the district overall (1.3%).

The district is also projected to have an increase in demand for an additional 1,100 dwellings over the long-term outside of the urban areas. It is likely that much of this demand would occur as lifestyle dwelling demand and be located around the edges of the main urban centres, or toward the north of the district in areas that are within close proximity to the urban amenity of Hamilton City.

3.5.5 Dwelling Demand by Dwelling Type

The projected urban demand by dwelling type (detached and attached dwellings) for Waipā District is shown in Figure 3-8 and Figure 3-9. Figure 3-8 projects the demand under the base case scenario where only a minor preference shift toward attached dwellings occurs through time as a function of projected changes in the underlying household composition. Figure 3-9 projects the demand under a preference shift scenario where a gradual shift in household preference towards attached dwellings is modelled through time. This reflects the gradual shift in preference toward higher density dwelling types that typically occur gradually through time in growing urban economies.

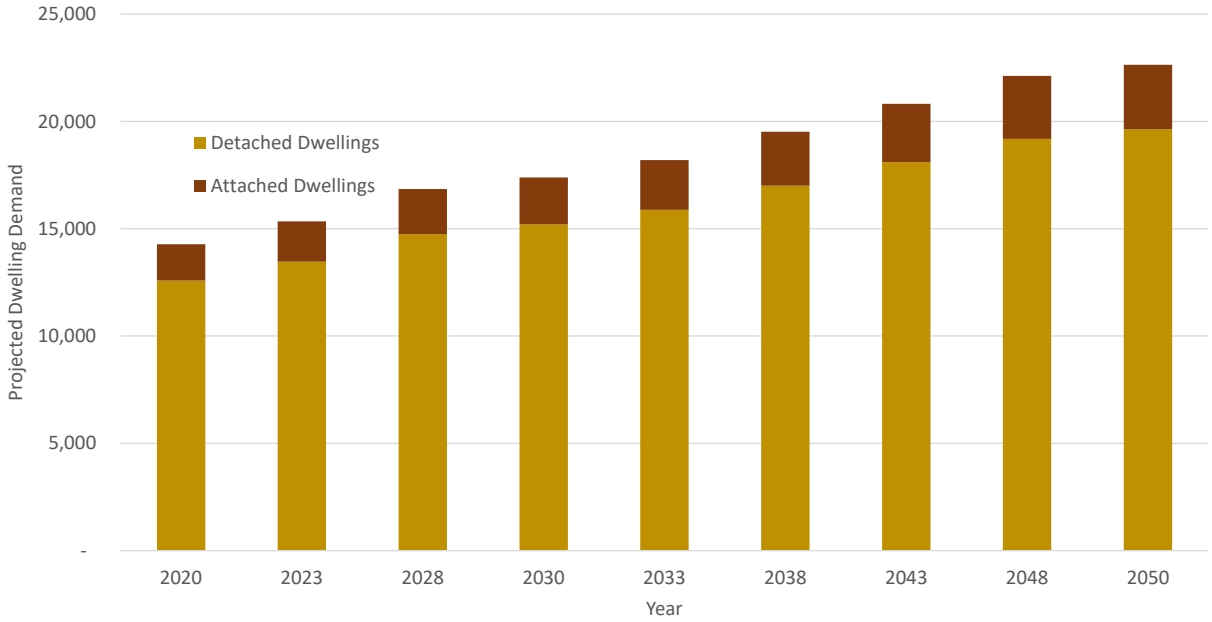
The scenarios provide a range of outputs to capture the potential dwelling preference outcomes through time. While past patterns of development across Waipā District have been characterised by standalone dwellings on full sites, greater rates of urbanisation may provide for opportunities for future intensification with more intensive dwelling types.

A shift to higher density dwellings reflects the trade-offs that households make between location, space and price. Higher density dwellings are often located in areas of higher amenity, with higher land costs (on a per m^2 basis) associated with the location. These gradual shifts in dwelling typologies are reflected in the building consent data and urban dwelling development patterns of many urban economies, including Hamilton City, through time.

Currently high shares (around 91%) of the demand is for detached dwellings. Under the base case scenario around four-fifths (82%) of the future additional dwelling demand is for detached dwellings. This amounts to around 6,800 additional detached dwellings (excluding a margin) out to 2050. There is a smaller demand (+1,500 dwellings) for attached dwellings.

The projected patterns of demand by dwelling type differ under a preference shift scenario. A small modelled preference shift[32] toward attached dwellings shows demand for attached dwellings increasing to around an additional 2,000 dwellings by 2050 (with demand for an additional 6,300 detached dwellings). This would result in a small shift in the overall share of dwellings as detached dwellings to 85% by 2050.

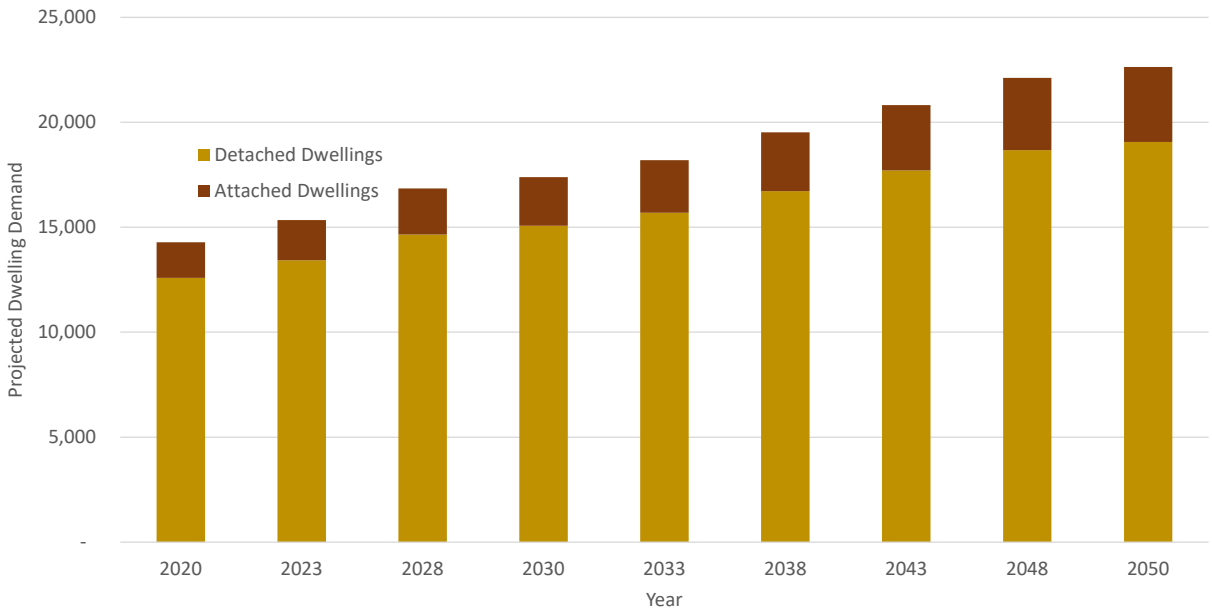
Figure 3-8: Demand by Dwelling Type in Urban Waipā District: 2020-2050 – Base Case Scenario



Source: M.E Dwelling Demand Model, 2021.

[32] This modelled scenario includes a 0.9% p.a. preference shift towards attached dwellings.

Figure 3-9: Demand by Dwelling Type in Urban Waipā District: 2020-2050 – Preference Shift Scenario



Source: M.E Dwelling Demand Model, 2021.

The projected urban demand by dwelling type is disaggregated by tenure for Waipā District in Table 3-16 and Table 3-17. Table 3-16 shows the demand under the base case scenario where only a minor preference shift toward attached dwellings occurs through time as a function of projected changes in the underlying household composition. Table 3-17 shows the preference shift scenario where a gradual change in preference toward attached dwellings is modelled.

The tables show that currently nearly three-quarters (72%) of urban Waipā's dwelling stock is owned (including within a trust). Dwelling ownership rates are substantially higher for detached dwellings where nearly three-quarters (73%) of dwellings are owned, compared to only 54% of attached dwellings.

The modelling shows projects forward the current dwelling ownership structures by dwelling type as a function of the underlying projected household composition. It is beyond the scope of the assessment to model changes in ownership patterns by dwelling typology with preference shifts through time. It shows similar future levels of dwelling ownership projected for 2050 under both scenarios.

Table 3-16: Urban Demand by Dwelling Type and Tenure in Waipā District: 2020-2050 – Base Case Scenario

Dwelling Tenure : NIDEA Future	2020			2050			2020-50		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*0.3%pa*			
Owned with mortgage	3,900	200	**4,100**	5,600	400	**6,000**	1,700	200	**1,800**
Owned without mortgage	3,400	400	**3,800**	5,700	1,000	**6,700**	2,300	600	**2,900**
Owned by Trust	2,200	100	**2,400**	3,500	300	**3,700**	1,200	100	**1,400**
Total Owned or in Trust	**9,500**	**700**	**10,300**	**14,800**	**1,600**	**16,400**	**5,200**	**900**	**6,100**
Not Owned	3,400	600	**4,000**	5,000	1,200	**6,300**	1,600	600	**2,200**
Total Housing	**13,000**	**1,300**	**14,300**	**19,800**	**2,800**	**22,700**	**6,800**	**1,500**	**8,400**
Shares %									
Owned with mortgage	28%	1%	**29%**	25%	2%	**26%**	-2.9%	0.3%	**-2.6%**
Owned without mortgage	24%	3%	**26%**	25%	4%	**29%**	1.6%	1.5%	**3.1%**
Owned by Trust	16%	1%	**17%**	15%	1%	**17%**	-0.3%	0.3%	**0.0%**
Total Owned or in Trust	**67%**	**5%**	**72%**	**65%**	**7%**	**72%**	**-1.5%**	**2.1%**	**0.5%**
Not Owned	24%	4%	**28%**	22%	5%	**28%**	-1.8%	1.2%	**-0.5%**
Total Housing	**91%**	**9%**	**100%**	**87%**	**12%**	**100%**	**-3.3%**	**3.3%**	**0.0%**

Source: ME Housing Demand Model 2021.

Table 3-17: Urban Demand by Dwelling Type and Tenure in Waipā District: 2020-2050 – Preference Shift Scenario

Dwelling Tenure : NIDEA Future	2020			2050			2020-50		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
				Trend toward Attached:		*0.9%pa*			
Owned with mortgage	3,900	200	**4,100**	5,400	400	**5,900**	1,500	300	**1,800**
Owned without mortgage	3,400	400	**3,800**	5,600	1,100	**6,700**	2,200	800	**2,900**
Owned by Trust	2,200	100	**2,400**	3,400	300	**3,700**	1,100	200	**1,300**
Total Owned or in Trust	**9,500**	**700**	**10,300**	**14,400**	**1,900**	**16,300**	**4,800**	**1,200**	**6,000**
Not Owned	3,400	600	**4,000**	4,900	1,400	**6,400**	1,500	800	**2,300**
Total Housing	**13,000**	**1,300**	**14,300**	**19,200**	**3,300**	**22,600**	**6,300**	**2,000**	**8,300**
Shares %									
Owned with mortgage	28%	1%	**29%**	24%	2%	**26%**	-3.5%	0.6%	**-2.9%**
Owned without mortgage	24%	3%	**26%**	25%	5%	**30%**	0.9%	2.3%	**3.3%**
Owned by Trust	16%	1%	**17%**	15%	1%	**16%**	-0.7%	0.5%	**-0.2%**
Total Owned or in Trust	**67%**	**5%**	**72%**	**63%**	**8%**	**72%**	**-3.3%**	**3.5%**	**0.1%**
Not Owned	24%	4%	**28%**	22%	6%	**28%**	-2.4%	2.2%	**-0.1%**
Total Housing	**91%**	**9%**	**100%**	**85%**	**15%**	**100%**	**-5.7%**	**5.7%**	**0.0%**

Source: ME Housing Demand Model 2021.

The current composition of demand for dwellings by tenure and dwelling type is shown in Table 3-18. The top third of the table shows the current distribution of households by income, dwelling type and tenure. The middle third shows the percentage distribution across each category. The lower third of the table shows the relative concentration within each ownership/dwelling typology combination across the different household income groups. Values greater than 1 indicate a higher share of households within that group fall into a particular income category than dwellings overall.

The table shows that owned dwellings tend to be occupied by higher shares of higher income households, and dwellings that are not owned, occupied by higher shares of lower income households. It also shows that the household income profile of detached dwellings is higher than that of attached dwellings.

Table 3-18: Urban Demand by Household Income, Dwelling Type and Tenure in Waipā District: 2020

Household Income	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
Under $30,000	1,200	200	**1,400**	700	200	**1,000**	1,900	500	**2,400**
$30-50,000	1,300	100	**1,500**	600	100	**700**	1,900	300	**2,200**
$50-70,000	1,300	100	**1,400**	600	80	**700**	1,900	200	**2,100**
$70-100,000	1,600	60	**1,700**	600	70	**700**	2,200	100	**2,400**
$100-120,000	1,200	60	**1,200**	300	30	**300**	1,500	90	**1,500**
$120-150,000	1,000	40	**1,100**	300	20	**300**	1,300	60	**1,300**
$150,000+	1,900	100	**2,000**	300	50	**300**	2,200	100	**2,300**
Total Households	**9,500**	**700**	**10,300**	**3,400**	**600**	**4,000**	**12,900**	**1,300**	**14,300**
Under $30,000	8%	2%	**10%**	5%	2%	**7%**	14%	3%	**17%**
$30-50,000	9%	1%	**10%**	4%	1%	**5%**	13%	2%	**15%**
$50-70,000	9%	1%	**10%**	4%	1%	**5%**	14%	1%	**15%**
$70-100,000	11%	0%	**12%**	4%	1%	**5%**	16%	1%	**17%**
$100-120,000	8%	0%	**8%**	2%	0%	**2%**	10%	1%	**11%**
$120-150,000	7%	0%	**8%**	2%	0%	**2%**	9%	0%	**9%**
$150,000+	13%	1%	**14%**	2%	0%	**2%**	15%	1%	**16%**
Total Households	**67%**	**5%**	**72%**	**24%**	**4%**	**28%**	**91%**	**9%**	**100%**
Relative Concentration									
Under $30,000	0.74	**1.90**	0.82	**1.29**	**2.37**	**1.46**	0.88	**2.12**	
$30-50,000	0.93	**1.24**	0.95	**1.11**	**1.29**	**1.13**	0.97	**1.26**	
$50-70,000	0.94	0.89	0.94	**1.22**	0.82	**1.16**	**1.01**	0.86	
$70-100,000	**1.01**	0.49	0.97	**1.13**	0.73	**1.07**	**1.04**	0.60	
$100-120,000	**1.12**	0.71	**1.09**	0.81	0.51	0.76	**1.04**	0.62	
$120-150,000	**1.15**	0.61	**1.11**	0.78	0.38	0.72	**1.05**	0.50	
$150,000+	**1.22**	0.88	**1.19**	0.52	0.45	0.51	**1.03**	0.68	

1 Not Owned includes NEI

Source: ME Housing Demand Model 2021.

4 Residential Dwelling Capacity

4.1 Approach

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

i. Plan enabled capacity – the dwelling capacity that is enabled by land zoning within the relevant district plan or spatial plan.
ii. Infrastructure serviced capacity – the dwelling capacity that is served by infrastructure at each assessment point in time. In this assessment, this is a sub-set of the plan enabled capacity and is labelled as plan enabled infrastructure served capacity.
iii. Commercially feasible capacity – the infrastructure served, plan enabled capacity where it is feasible for a commercial developer to construct a dwelling.
iv. Reasonably expected to be realised capacity – this is measured as a sub-set of the commercially feasible capacity that could reasonably be realised to accommodate future dwellings. The approach to reasonably expected to be realised capacity is outlined in Section 4.1.5.

The 2020/2021 analysis builds upon the 2017/2018 models that calculate the potential capacity for dwellings upon each property parcel. This section provides an overview of the key stages of the assessment approach. Further detailed technical information on the structure of the models is contained in the supporting technical documents to the 2017 NPS-UD assessment.

Capacity is calculated within each of the FPP areas both within the existing urban areas (intensification) as well as further outward expansion within greenfield areas. Capacity can be categorised as:

i. Infill capacity – this refers to the number of additional dwellings that can be constructed within the existing urban area without the removal or demolition of any existing dwellings. It typically involves the construction of additional dwellings on the vacant areas of parcels (e.g. constructing an additional dwelling in a large back yard area of an already developed property parcel).
ii. Redevelopment capacity – this refers to the number of additional dwellings that can be constructed within the existing urban area through the redevelopment of sites. It involves the demolition or removal of existing dwellings on a site and the subsequent construction of a greater number of dwellings on the same site.
iii. Greenfield capacity – this refers to the outward expansion of the urban edge to form new areas of urban residential development. It typically occurs on areas that are zoned for future urban use and requires the geographic extension of infrastructure at different points in time to enable the urbanisation of these areas.

The capacity results also include maximums of infill and redevelopment capacity within the existing urban area. Here, the model returns the greatest yield for each parcel out of the infill and redevelopment capacity options. Under the plan enabled capacity, the redevelopment option will always represent the greatest yield. However, under the commercially feasible capacity often only one of the development options (e.g.

standalone infill dwelling) will be feasible (with the option differing between parcels), meaning that the model selects the option that is feasible.

The following sub-sections outline the key stages in the capacity assessment.

4.1.1 Define Development Options and Planning Spatial Requirements

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

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

4.1.2 Plan Enabled Capacity

This stage of the assessment calculates the capacity that is enabled by the Plan. It identifies the number of dwellings that can theoretically be constructed on each parcel through applying the planning parameters. Once the potential development options have been identified (i.e. typology enabled by zone), the assessment then calculates whether each development option could be constructed on each site. This is assessed entirely in relation to the planning requirements[33] on each site. It is conducted at the property parcel level to assess whether additional dwellings could theoretically be constructed on each site.

Within the existing urban area, the plan enabled capacity assessment is undertaken through geometric modelling within FME software. The model applies the relevant spatial requirements of the Plan to each property parcel. To calculate infill capacity, the geometric process is carried out on each parcel around the existing building footprint on the site. Detailed technical information on the geometric process undertaken in FME is available in the 2017 assessment supporting technical documents.

Plan enabled capacity is calculated in greenfield areas through a prioritisation sequential process to obtain the yield information that reflects the likely development urban form densities. If subdivision yields, structure plans or growth cell yield information is available, then these are applied in the first instance to the corresponding greenfield parcels. In the absence of this information, plan enabled yields are calculated through applying developable land yields and site size assumptions. Developable area yields are estimated

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

by removing a share (usually around 32%) of the land area to account for roads and reserves. The remainder of the area is then divided by an average lot size to estimate the total lots from each parcel.

In Hamilton City, the average lot sizes applied in the modelling are larger than the minimum lot sizes enabled by the Plan. Lot sizes have been supplied by HCC and reflect the existing average lot sizes in greenfield areas at the urban edge. This generates a more conservative estimate of capacity than what would specifically be enabled under the Plan.

The outputs of the plan enabled capacity approach are the number of additional dwellings that are potentially able to be constructed on each site as a function of the planning provisions. These form the inputs to the commercial feasibility stage of the analysis where the modelling estimates whether it is commercially feasible to construct each dwelling development option.

4.1.3 Infrastructure Served Capacity

The next stage of the assessment identifies the share of plan enabled capacity that is served by infrastructure at each assessment point in time. Infrastructure timing information for the greenfield areas has been supplied by each of the FPPs. It shows the geographic areas served by infrastructure in the short, medium and long-term. These timings have been applied to the plan enabled capacity outputs by location to identify the shares of plan enabled capacity that are served by infrastructure in each period.

The FPPs will need to make ongoing, sustained investment in infrastructure capacity to support demand growth in infill areas.

Given the complex, integrated nature of the 3 waters networks an accurate figure for short-medium-long term infill/intensification infrastructure serviced capacity for Hamilton City Council cannot be accurately calculated. The ability for existing infrastructure in the current urban environment will vary from street to street, and suburb to suburb, significantly influenced by the age of the infrastructure and design standards at the time of construction.

In general, much of the infrastructure in the existing urban area, particularly local networks, are not designed to cater for full plan enabled capacity. Plan enabled capacity has incrementally increased through various changes to the Hamilton City Council District Plan, in particular the Operative District Plan 2017. This difference will again be exacerbated by the upcoming NPS-UD changes. Infill/intensification has continued to occur which will be absorbing any residual capacity in the networks, larger developments are required to test their demand against the capacity of the local networks to identify and mitigate infrastructure issues.

The scale of reasonably realised capacity is generally accepted as being within the general capacity of the network to absorb, subject to potential localised improvements identified as part of development. Significant investment in infrastructure to deliver plan enabled infill/intensification serviced capacity will be required. The nature and value of that investment is to be considered through the next versions of Hamilton City Council's infrastructure Master Plans, and will be informed by new land use expectations arising from the NPS-UD changes.

4.1.4 Commercially Feasible Capacity

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

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

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

In accordance with the NPS-UDC technical guidance, this assessment has assumed that developments with a margin of 20% or greater[34] are commercially feasible to construct for a commercial developer. Dwelling typology/size and density combinations are deemed to be commercially feasible if they achieve at least this margin in the assessment.

Detailed analysis has been undertaken to inform the ranges of costs and prices within the feasibility model. These reflect 2020 values. The assumed ranges are contained in in the appendices (Section 8.1) of this report.

Further information was sought from commercial developers across the FPP area to, in part, inform the feasibility modelling. Limited information was supplied on the developer costs, although some developers indicated that lower margins (than the modelled 20%) were sometimes achieved. An overview of the assessment of the developer survey feedback is contained in Section 6.4.

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

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

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

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

4.1.5 Reasonably Expected to be Realised (RER) Capacity

The final stage of the capacity assessment estimates the share of commercially feasible, infrastructure served[35] capacity that is reasonably expected to be realised. In this stage, the amount of feasible capacity is reduced to reflect the level and scale of development which is more likely to be delivered by the market. The assessment recognises that the nature and type of development delivered may not achieve the densities (and therefore, capacity) that are enabled by the Plan.

The modelling structure means that some of the difference between feasible RER and plan enabled capacity is already captured in earlier stages of the capacity modelling and therefore has also been removed from plan enabled capacity. This occurs where site specific constraints are applied during the plan enabled modelling. These constraints may either remove whole parcels or parts of parcels. Types of constraints include geographic/topographic constraints and land use constraints (e.g. current use as an unzoned reserved or education, etc).

Some information from the FPPs was received in relation to site specific constraints, which removed capacity in the early stages of the plan enabled capacity modelling. All parts of properties that fall within Hamilton's gully areas were removed during this process as well as some of the geographic feature areas within the greenfield areas. Within Waikato District, restrictions on capacity were applied within Raglan to reflect the Rangitahi Peninsula cap of 500 dwellings. It was further assumed that the achievable density on the other Raglan future greenfield areas would also reflect similar topographical constraints. No further information on site constraints or developable areas of future zoned land was supplied by the FPPs.

The following sub-sections describe our further approach to estimate the share of feasible capacity that is reasonably expected to be realised in the final stages of the capacity analysis.

Greenfield RER

The analysis estimates the reasonably expected to be realised yield on the greenfield areas that are projected to be feasible to develop. It recognises that the likely densities may not reflect the densities enabled by the Plan, with areas often developed at lower densities than those enabled under the Plan. In the first instance, the model incorporates developer information to apply any known subdivision yields on specific sites as supplied by developers. It also applies any planning yield caps or structure plan estimates for specific sites. This predominantly results in a lower yield than that enabled by the relevant district plan[36].

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

[35] Refer to Section 4.1.3 for more detail.

[36] Within Hamilton City, there are two instances where the RER capacity within the greenfield areas exceeds the capacity enabled by the Plan due to specific yields enabled through resource consents or structure plans. These occur within small areas of Te Rapa North and Peacocke.

Extensive information was supplied by Hamilton City Council in relation to developer subdivision plans, structure plans or other district plan yield caps and existing patterns of development at the urban edge. These were used directly within the model. The model applies a gradual decrease in average lot sizes (of 0.5% p.a.) through time across the balance of sites (where developer or planning yields are not available) to reflect gradual increases in development density[37]. In the Waikato and Waipā districts, the model applies a larger site size than the planning minimums (under each operative or proposed plan), based on the existing development patterns in the market (identified through GIS analysis and sales data).

Existing Urban RER

The share of the existing urban area commercially feasible plan enabled capacity that is reasonably expected to be realised was also estimated. In areas of higher density that enabled vertical patterns of apartment development, the model assumed a lower number of storeys would be developed than enabled under the Plan. This approach was applied within the Hamilton City Centre area.

The RER component of feasible capacity across the remaining suburban residential areas of the FPP area were estimated through analysis of the geographic patterns of residential development through time. Data on CCCs[38] were analysed spatially in relation to the existing urban edge[39] through time for each of the main urban areas. The analysis identified the relative share of development occurring as greenfield development or development within the existing urban area through time.

Within Hamilton City, these were combined with the greenfield RER capacities to estimate the relative share of RER development within the existing urban areas based on the observed spatial patterns of growth through time. Further calculations were then undertaken to triangulate the estimated existing urban share of RER in relation to the total feasible capacity estimated within the existing urban area. This process applied limits within the calculations to ensure that the model did not result in unreasonably large shares of feasible capacity being developed. This produces a conservative result where development across the existing urban area is limited by any capacity constraints within the greenfield area.

An equivalent analysis of the geographical patterns of residential development was undertaken across the Waikato and Waipā district's main urban areas. It produced more limited results, particularly within the Waikato District, due to substantial changes in the nature of growth in the main urban areas through time. Consequently, the model instead assumes that the RER capacity is reflected as a share of the commercially feasible capacity through time. In the short-term, it assumes that the RER equates to 10% of the commercially feasible capacity, 20% in the medium-term and 40% in the long-term. These assumptions were also triangulated against the total RER capacity to ensure that the assessment was not substantively relying on high shares of existing urban capacity.

4.1.6 Hamilton City Centre Residential Capacity Modelling

Residential dwelling capacity has been modelled across all three precincts (Downtown, City Living and Ferrybank) of Hamilton's City Centre. An apartment model has been constructed which tests the plan

[37] Any long-term reduction in average site sizes are capped to the existing planning minimums. In most cases the long-term average site size remains substantially above the planning minimum site size.

[38] All individual CCC records were supplied by each council for approximately the last 10 to 25 years.

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

enabled and commercially feasible capacity of different types of apartment construction within the City Centre. This includes modelling the plan enabled capacity and feasibility of different types of developments (e.g. three-level walk-up apartments vs. higher multi-level mixed use apartment buildings).

Within the City Centre, it has been assumed that all ground floor capacity within the Downtown and City Living precincts is allocated to non-residential uses. Ground floor non-residential uses are assumed to be feasible.

The maximum storey heights have been assumed for each precinct:

- Downtown Precinct – 5 storeys.
- City Living Precinct – 8 storeys.
- Ferrybank Precinct – 3 storeys.

The interface between residential and non-residential uses has been taken into account within the calculation of RER within the City Centre. In the short-term, RER capacity represents 1% of the total City Centre plan enabled residential capacity. This increases to around 4% to 5% in the medium-term, and to between 10% and 24% in the long-term.

4.1.7 Modelled Growth Scenarios

Capacity has been modelled against three scenarios within the FPP main urban areas. The first scenario applies current prices. This means that the feasible capacity across the current and future urban area reflects the current 2020 market and remains constant through time. Increases in commercially feasible and reasonably expected to be realised capacity within this scenario are a function of increases in the geographical extent of infrastructure provision within the greenfield areas through time.

In alignment with the NPS-UD, further scenarios have been developed to assess long-term capacity[40]. These scenarios assume that costs and prices gradually change through time as demand grows. Development opportunities correspondingly change as demand increases for dwellings and different development types. Two scenarios have been tested to provide a range of potential outcomes of future capacity. These are subsequently used in the sufficiency and housing affordability assessments to test a range of potential outcomes.

The first scenario – growth scenario 1 – assumes an annual average growth rate of 1.0% in costs and 1.5% in prices (including the price of land). The second scenario – growth scenario 2 – assumes an annual average growth rate of 1.25% in costs and 2.5% in prices.

Low growth rates have also been applied to test the market growth rates required to generate different levels of feasible capacity. This helps to determine the impact of planning though identifying the required price changes across the zoned capacity to generate sufficient feasible capacity to meet demand.

[40] The assessment recognises the NPS-UD requirements provide for additional scenarios only in relation to long-term capacity. The short and medium-term results have also been provided here for completeness, and to inform Hamilton City Council planning purposes.

4.1.8 Structure of Outputs

The remainder of the chapter contains the results of the residential capacity modelling for each of the FPP areas. Capacity outputs are provided for each of the spatial framework main urban areas and settlements within the Waikato and Waipā district's and by area type within Hamilton City. Results are reported separately for the short, medium and long-term, and then summarised across all three time periods in the final part of each sub-section.

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

- Plan enabled capacity with no infrastructure constraints applied (light green sections of the tables).
- Plan enabled capacity with infrastructure constraints applied (dark green sections of the tables).
- Commercially feasible, infrastructure-served capacity (light blue sections of the tables).
- Reasonably expected to be realised capacity (RER) (dark blue sections of the tables).

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

- Max Infill – this is an aggregation across all existing urban parcels of the maximum dwelling yield option on each parcel from infill development. Parcels may contain multiple yield options where different dwelling typologies and corresponding spatial requirements are enabled under the Plan.
- Max Redevelopment - this is an aggregation across all existing urban parcels of the maximum dwelling yield option on each parcel from redevelopment. Parcels may contain multiple yield options where different dwelling typologies and corresponding spatial requirements are enabled under the Plan. The yields are expressed as net additional dwellings as the outputs subtract any existing dwellings. Infill and redevelopment yields are not additive – the following measure provides the maximum combination of these two development options.
- Max Existing Urban – this is an aggregation across all existing urban parcels of the maximum dwelling yield option on each parcel from either infill or redevelopment.
- Greenfield – this is the number of additional dwellings within the greenfield areas. These are areas of urban expansion beyond the existing urban area.
- Greenfield + Infill – this is the greenfield and infill yields combined and can be broadly used to define a lower range of capacity.
- Greenfield + Infill + Redevelopment – this is the greenfield yield and the Maximum Existing Urban yield, as specified above. It defines the maximum potential capacity across the combined existing urban area and greenfield areas of urban expansion.

4.2 Waikato District Residential Capacity

4.2.1 Short-Term Residential Capacity: 2023

The capacity in Waikato District's main urban areas and settlements enabled under the ODP in the short-term is displayed in Table 4-1. The first part (light green) of the table shows the plan enabled capacity without infrastructure constraints, while the second part (dark green) includes the infrastructure constraints in the greenfield areas.

In total, there is capacity under the ODP for 7,800 to 11,600 additional dwellings in the main urban areas, and a further 500 to 700 dwellings in the urban settlements (total of 8,200 to 12,300 additional dwellings), when infrastructure constraints are not applied. The lower end of the range is the combined total of the greenfield and existing urban area infill development options, with the upper end of the range also including redevelopment potential within the existing urban area. Without infrastructure constraints, there is a zoned capacity for 4,600 dwellings within the main urban greenfield areas. The largest areas of zoned greenfield capacity are in Raglan, Pōkeno/Tuakau and Huntly.

Pōkeno/Tuakau contains the largest share of plan enabled capacity with zoned capacity for around 2,200 to 3,200 additional dwellings. Approximately one-third to one-half of this is within the greenfield areas (+1,200 dwellings). Huntly, with 1,500 to 2,400 additional dwellings is the next largest area of capacity, of which 1,500 dwellings is in the greenfield area. Ngāruawāhia has a plan enabled capacity of 1,100 to 1,900 additional dwellings, with a low proportion (+400 dwellings) as greenfield.

None of the additional greenfield capacity in Waikato District is currently served by infrastructure. As such, the plan enabled infrastructure served capacity is only that within the existing urban areas, with a total of 3,400 to 7,200 additional dwellings. In accordance with the NPS-UD requirements, this forms the capacity assessed in the short-term within Waikato District.

Infrastructure is planned to be provided within the short-term (by 2023), for a plan-enabled capacity of up to around 1,500 greenfield dwellings. The main areas of planned provision are in Raglan and Pōkeno/Tuakau. However, this capacity is not included within the short-term sufficiency assessment.

Table 4-1: Waikato District Plan Enabled Residential Capacity: Short-Term - 2023

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						SHORT-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	1,000	2,000	2,000	1,200	2,200	3,200	1,000	2,000	2,000	-	1,000	2,000
Te Kauwhata	300	500	500	200	500	700	300	500	500	-	300	500
Ngaruawahia	700	1,500	1,500	400	1,100	1,900	700	1,500	1,500	-	700	1,500
Huntly	500	1,400	1,400	1,000	1,500	2,400	500	1,400	1,400	-	500	1,400
Taupiri	200	400	400	70	300	500	200	400	400	-	200	400
Raglan	700	1,400	1,400	1,500	2,200	2,900	700	1,400	1,400	-	700	1,400
Total Main Urban Areas	**3,400**	**7,200**	**7,200**	**4,400**	**7,800**	**11,600**	**3,400**	**7,200**	**7,200**	**-**	**3,400**	**7,200**
Total Settlements	200	500	500	200	500	700	200	500	500	-	200	500
TOTAL URBAN	**3,600**	**7,700**	**7,700**	**4,600**	**8,200**	**12,300**	**3,600**	**7,700**	**7,700**	**-**	**3,600**	**7,700**

Source: M.E FPP Residential Capacity Model, 2020.

Table 4-2 displays the infrastructure served plan enabled capacity development options that are estimated to be commercially feasible in the short-term across the main urban areas[41]. The first part (light blue) of the table displays the capacity which is feasible. The second part (dark blue) shows the estimated component as RER development options capacity.

It is estimated that there is a feasible capacity of 2,000 to 2,600 additional dwellings across the main urban areas. The absence of existing infrastructure in the short-term means that the feasible capacity is restricted to the existing urban areas. Higher amounts of infill capacity are estimated to be feasible, than redevelopment options, which are likely to become feasible through time. The modelling estimates that

[41] As set out in the spatial framework, the commercially feasible assessment is only conducted on the main urban areas. The capacity assessment within the urban settlements and minor urban areas is limited to plan enabled capacity.

around 10% of the currently feasible capacity in the short-term is likely to represent RER development options. This amounts to 200 to 300 dwellings across the main urban area.

It is likely that greenfield development opportunities will continue to be taken up within the short-term as infrastructure is supplied to new areas within the short-term. However, these are excluded from the assessment, which can only consider greenfield areas where infrastructure is already in place.

Table 4-2: Waikato District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Short-Term – 2023

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	500	400	700	-	500	700	50	40	70	-	50	70
Te Kauwhata	100	100	100	-	100	100	10	10	10	-	10	10
Ngaruawahia	400	400	500	-	400	500	40	40	50	-	40	50
Huntly	200	-	200	-	200	200	20	-	20	-	20	20
Taupiri	200	300	300	-	200	300	20	30	30	-	20	30
Raglan	500	500	700	-	500	700	50	50	70	-	50	70
TOTAL MAIN URBAN	**2,000**	**1,700**	**2,600**	**-**	**2,000**	**2,600**	**200**	**200**	**300**	**-**	**200**	**300**

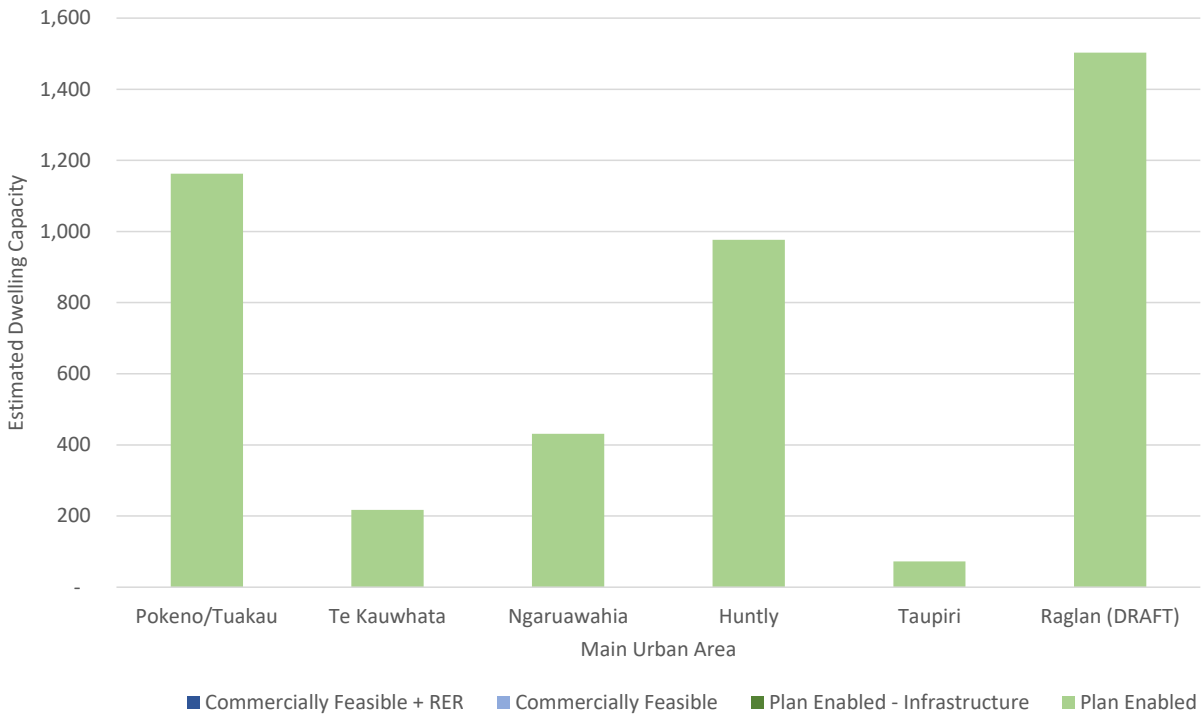
Source: M.E FPP Residential Capacity Model, 2020.

The estimated dwelling capacity by main urban area is summarised in Figure 4-1 and Figure 4-2. They show the total plan enabled capacity, and the components of this that are estimated to be RER (dark blue), commercially feasible by not RER (light blue), plan enabled and infrastructure served but not commercially feasible (dark green) and plan enabled but not infrastructure served (light green). Figure 4-1 shows the capacity on the greenfield areas only, and Figure 4-2, the combined capacity on both the greenfield and existing urban areas.

Key aspects are:

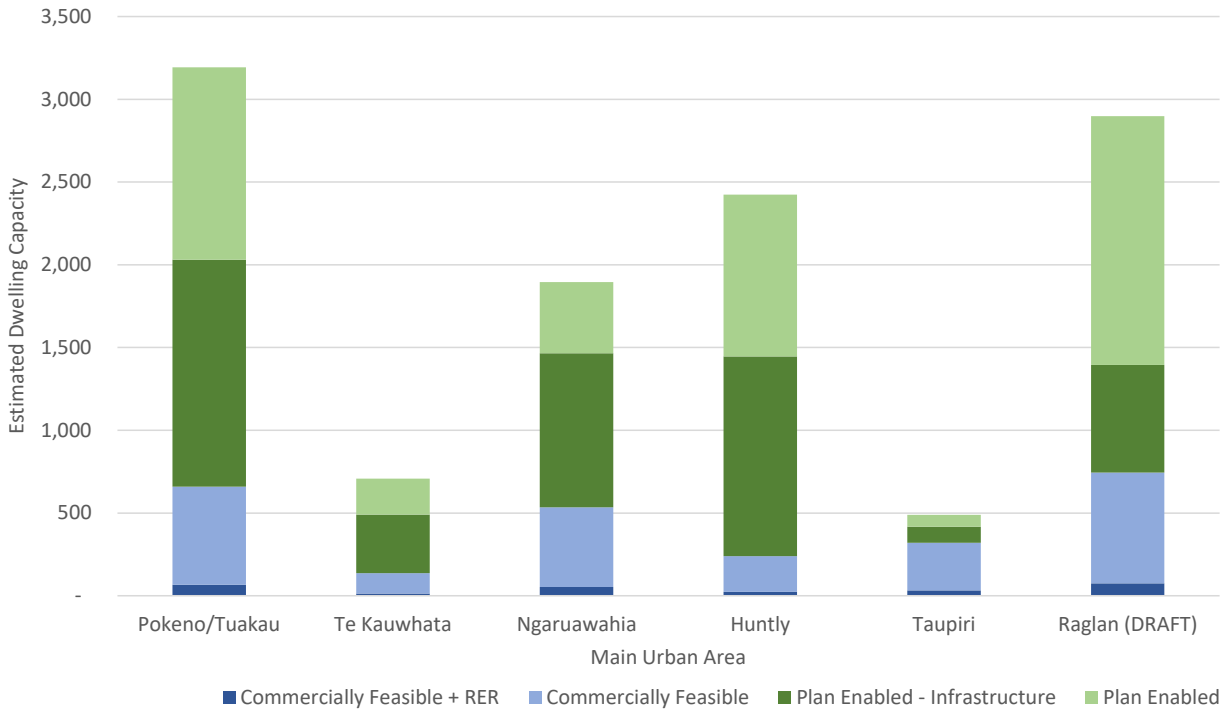
- There is significant zoned greenfield capacity across the district's main urban centres. However, none of this is currently served by infrastructure.
- There are large amounts of plan-enabled capacity within the existing urban areas across most of the district's main urban centres. The largest areas of existing urban capacity include Pōkeno/Tuakau, Ngāruawāhia, Huntly and Raglan.
- Significant portions of the plan enabled capacity within the existing urban areas are estimated to be currently commercially feasible. The largest amounts are in Pōkeno/Tuakau and Raglan, reflecting the growth pressures and/or higher prices within these areas. Lower shares of the plan-enabled capacity within Huntly are estimated to be feasible due to lower demand within this location.
- Significant amounts of existing urban capacity is enabled under the plan, but is not estimated to be currently commercially feasible.
- Only small amounts of capacity within the existing urban areas are estimated to represent RER, to reflect the lower rates of capacity uptake within the existing urban areas under the existing zoning structure. With the exception of Huntly, most of the past growth within these areas has occurred through greenfield expansion.

Figure 4-1: Waikato District Estimated Urban Residential Capacity: Greenfield – Short-Term – 2023



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-2: Waikato District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Short-Term – 2023



Source: M.E FPP Residential Capacity Model, 2020.

4.2.2 Medium-Term Residential Capacity: 2030

The PDP contains significant areas of urban expansion from the ODP across Waikato District in the medium-term. The total zoned greenfield development capacity almost quadruples under the PDP to reach an estimated 19,100 additional dwellings (Table 4-3) across the main urban areas. This represents an increase in the zoned opportunity for development capacity of around 15,000 additional greenfield dwellings. Together with the existing urban area, the total zoned plan enabled capacity across the district's main urban areas is an additional 23,000 to 26,400 dwellings in the medium-term, and a further 900 to 1,200 additional dwellings within the urban settlements.

The expansion of zoned greenfield areas accounts for nearly all of the increase in plan-enabled capacity within the medium-term. A large share of this zoned area is planned to have infrastructure supplied in the medium-term, with a combined greenfield capacity for an additional 11,900 dwellings.

The largest areas of planned infrastructure are within Pōkeno/Tuakau (+6,000 dwellings) and Te Kauwhata (+3,700 dwellings), where significant growth is occurring. Together, these areas are projected to account for around four-fifths of the district's infrastructure-served plan-enabled greenfield capacity. These areas also have further zoned greenfield capacity beyond that served by infrastructure (approximately 70% of

the district's zoned greenfield capacity). This heavily concentrates the district's greenfield capacity to the north.

Table 4-3: Waikato District Plan Enabled Residential Capacity: Medium-Term - 2030

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						MEDIUM-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	1,400	2,000	2,000	9,300	10,700	11,300	1,400	2,000	2,000	6,000	7,300	7,900
Te Kauwhata	500	800	800	4,400	4,900	5,200	500	800	800	3,700	4,200	4,500
Ngaruawahia	600	1,400	1,400	1,900	2,400	3,200	600	1,400	1,400	900	1,500	2,300
Huntly	500	1,400	1,400	1,400	1,900	2,900	500	1,400	1,400	100	600	1,500
Taupiri	200	400	400	300	600	700	200	400	400	300	500	700
Raglan	700	1,300	1,300	1,700	2,500	3,000	700	1,300	1,300	1,000	1,700	2,300
Total Main Urban Areas	**3,900**	**7,300**	**7,300**	**19,100**	**23,000**	**26,400**	**3,900**	**7,300**	**7,300**	**11,900**	**15,800**	**19,200**
Total Settlements	600	900	900	300	900	1,200	600	900	900	100	700	1,000
TOTAL URBAN	**4,500**	**8,200**	**8,200**	**19,400**	**23,900**	**27,600**	**4,500**	**8,200**	**8,200**	**12,000**	**16,600**	**20,200**

Source: M.E FPP Residential Capacity Model, 2020.

Table 4-4 shows that the district has an estimated commercially feasible capacity of 12,800 to 13,100 additional dwellings across the main urban areas. Most (around 80%) of this is greenfield capacity, which is concentrated into Pōkeno/Tuakau and Te Kauwhata, with significant amounts also in Raglan and Ngāruawāhia.

Over three-quarters of the total capacity is estimated to represent RER development opportunities, equating to a RER capacity of 9,800 to 9,900 additional dwellings across the main urban areas. Most of the RER capacity is greenfield capacity, with a small share (around 600 dwellings) estimated to occur within the existing urban areas.

A high share (85%) of the infrastructure served greenfield capacity is projected to be commercially feasible and around three-quarters (78%) representing RER capacity once differences in yields are taken into account. Lower shares of the existing urban capacity is projected to be commercially feasible, particularly for redevelopment options. The maximum existing urban feasible capacity is estimated at around 2,900 additional dwellings, with a small portion of these assumed to represent RER development opportunities in the medium-term (under the current prices scenario).

Table 4-4: Waikato District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Medium-Term – 2030

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	800	300	800	4,900	5,800	5,800	200	60	200	4,600	4,800	4,800
Te Kauwhata	300	200	300	3,100	3,400	3,400	60	40	60	2,800	2,900	2,900
Ngaruawahia	400	300	500	900	1,300	1,300	80	60	90	700	800	800
Huntly	300	-	300	-	300	300	60	-	60	-	60	60
Taupiri	200	300	300	300	500	600	50	60	60	200	300	300
Raglan	500	400	600	1,000	1,500	1,600	100	80	100	900	1,000	1,000
TOTAL MAIN URBAN	**2,600**	**1,500**	**2,900**	**10,200**	**12,800**	**13,100**	**500**	**300**	**600**	**9,300**	**9,800**	**9,900**

Source: M.E FPP Residential Capacity Model, 2020.

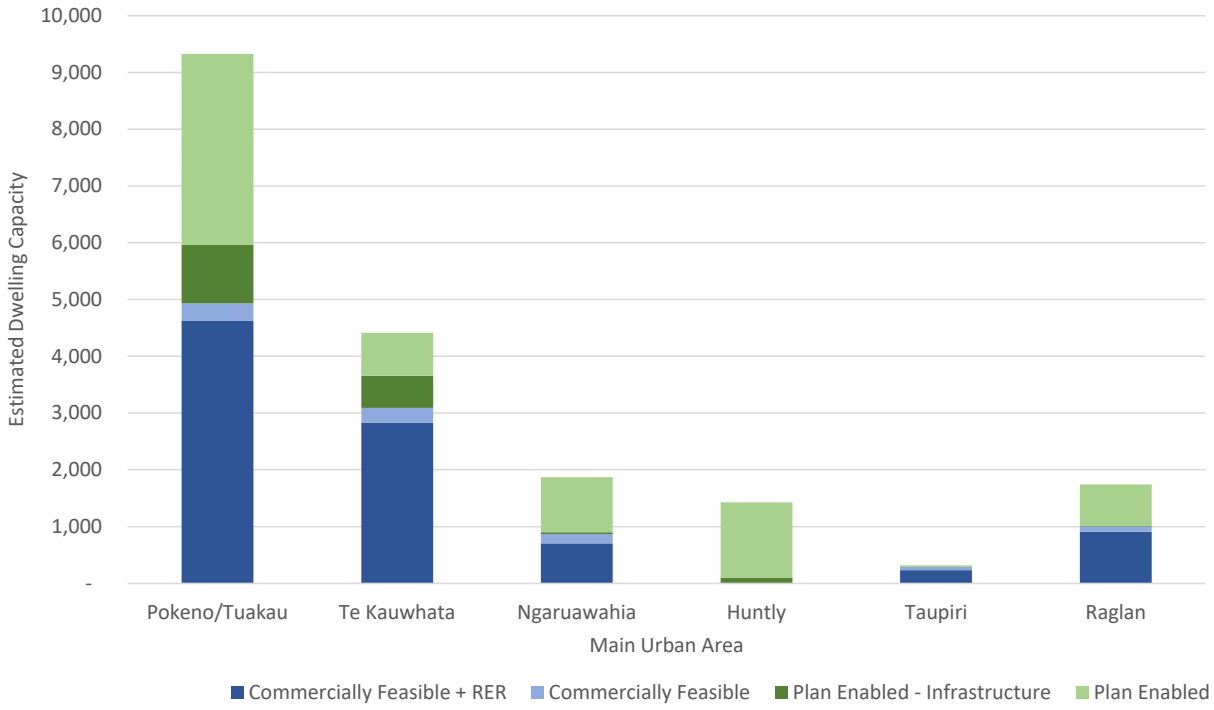
The total plan enabled capacity across the main urban areas, and the breakdown by capacity type, is shown in Figure 4-3 (greenfield only) and Figure 4-4 (greenfield and existing urban combined). In the medium-term, the additional dwelling capacity is concentrated into the northern areas of the district within

Pōkeno/Tuakau. If the patterns of growth uptake correspond with the additional dwelling capacity, this is likely to result in a shift in the distribution of households within the district. Huntly currently represents the largest urban centre, but contains some of the lowest shares of plan enabled and feasible development capacity.

The figures show that in the medium-term, there are sizeable areas of zoned greenfield opportunity that are not planned to be served by infrastructure. This is concentrated into Pōkeno/Tuakau, with significant components also in Huntly and Ngāruawāhia.

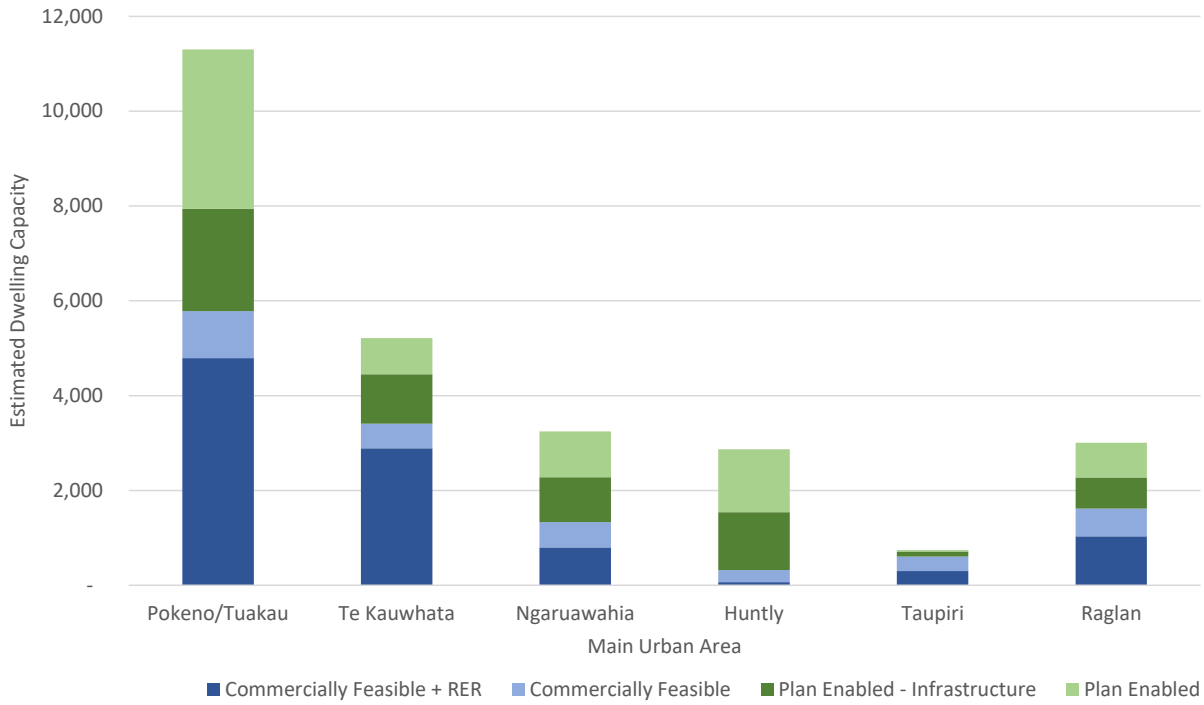
Most of the plan enabled greenfield capacity is projected to be commercially feasible, however, there are also significant amounts of infrastructure served zoned greenfield capacity that is not projected to be commercially feasible (total 1,700 additional dwellings). This is proportional to the distribution of greenfield capacity and is mainly in Pōkeno/Tuakau and Te Kauwhata.

Figure 4-3: Waikato District Estimated Urban Residential Capacity: Greenfield – Medium-Term – 2030



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-4: Waikato District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Medium-Term – 2030



Source: M.E FPP Residential Capacity Model, 2020.

4.2.3 Long-Term Residential Capacity: 2050

There are further large projected increases in plan enabled urban capacity in the long-term across the Waikato District. The Waikato 2070 (W2070) strategy contains substantial areas of urban expansion as well as opportunity for further intensification within the existing urban areas.

Table 4-5 shows that there is an estimated total plan enabled capacity for an additional 41,200 to 46,500 dwellings in the long-term across the main urban areas. This amounts to a further 75% to 80% increase from the capacity enabled under the PDP, and is around three to four times the capacity currently enabled by the ODP.

Most (82% to 93%) of the long-term plan enabled capacity is within the greenfield areas (+38,100 dwellings). The largest share of this zoned capacity continues to be in Pōkeno/Tuakau, although there are large increases in the zoned greenfield capacity across all of the main urban areas in the long-term. A large share (78%) of the additional areas of urban expansion are planned to be served by infrastructure in the long-term. This amounts to a total infrastructure served zoned greenfield capacity for an additional 29,600 dwellings across the district's main urban areas, and a further 4,000 additional dwellings within the urban settlements (a combined greenfield total of an additional 33,600 dwellings).

Table 4-5: Waikato District Plan Enabled Residential Capacity: Long-Term - 2050

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						LONG-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	1,100	2,200	2,200	16,600	17,700	18,800	1,100	2,200	2,200	12,600	13,700	14,800
Te Kauwhata	300	600	600	6,400	6,600	6,900	300	600	600	6,200	6,400	6,700
Ngaruawahia	400	1,600	1,600	3,200	3,600	4,800	400	1,600	1,600	2,500	3,000	4,200
Huntly	400	2,300	2,300	4,600	4,900	6,900	400	2,300	2,300	3,300	3,600	5,600
Taupiri	200	500	500	2,300	2,500	2,700	200	500	500	2,300	2,500	2,700
Raglan	700	1,200	1,200	5,100	5,800	6,300	700	1,200	1,200	2,700	3,400	3,900
Total Main Urban Areas	**3,100**	**8,400**	**8,400**	**38,100**	**41,200**	**46,500**	**3,100**	**8,400**	**8,400**	**29,600**	**32,700**	**38,000**
Total Settlements	800	1,100	1,100	4,200	5,000	5,300	800	1,100	1,100	4,000	4,800	5,100
TOTAL URBAN	**3,900**	**9,500**	**9,500**	**42,300**	**46,200**	**51,800**	**3,900**	**9,500**	**9,500**	**33,600**	**37,500**	**43,100**

Source: M.E FPP Residential Capacity Model, 2020.

The following tables (Table 4-15 to Table 4-17) show the portion of Waikato District's plan enabled capacity that is projected to represent commercially feasible development options in the long-term and the share which are estimated to represent RER development opportunities. In this section, three scenarios are presented for long-term feasible capacity. Table 4-15 contains the capacity estimates under the current prices scenario where the change in feasible capacity is a function only of infrastructure expansion within the greenfield areas. The alternative scenarios that take into account the effect of demand growth through changing costs and prices and contained in Table 4-16 (Growth Scenario 1) and Table 4-17 (Growth Scenario 2).

Current Prices Scenario

Under the current prices scenario, over three-quarters (78%) of the infrastructure served greenfield capacity is projected to represent commercially feasible development options[42] in the long-term within the district's main urban areas. Relatively high proportions of the plan enabled greenfield capacity is projected to be commercially feasible in most of the main urban areas. The exception is Huntly, which does not contain any commercially feasible greenfield capacity using current prices in the long-term. However, this is largely due to the modelling using a 20% margin and current (2020) prices. It is likely that some of the plan enabled greenfield capacity will be taken up in Huntly in the long-term, albeit at a lower margin or by a different part of the market.

The share of plan enabled capacity within the existing urban areas that is projected to be feasible is lower at between 28% (redevelopment) to 63% (infill opportunities). The largest area of existing urban feasible capacity is projected to occur in Pōkeno/Tuakau, followed by Huntly, Raglan and Ngāruawāhia.

Once RER is taken into account, the long-term projected capacity across the district's main urban areas amounts to between 21,600 and 22,100 additional dwellings under the current prices scenario. It is projected that around 20,800 of the additional RER dwelling capacity occurs within the greenfield areas, which amounts to around 90% of the greenfield capacity that is estimated to represent commercially feasible development capacity.

[42] These represent the feasible development opportunities for developers and do not reflect the actual take-up of capacity, which is likely to be lower and in line with the projected demand. This is an important difference between capacity and growth.

Table 4-6: Waikato District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Current Prices)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	600	700	1,100	10,400	11,000	11,500	300	300	400	9,500	9,700	9,900
Te Kauwhata	100	100	200	5,800	5,900	6,000	40	40	70	5,200	5,300	5,300
Ngaruawahia	200	400	500	2,000	2,200	2,500	90	200	200	1,700	1,700	1,900
Huntly	300	300	600	-	300	600	100	100	200	-	100	200
Taupiri	200	400	400	2,200	2,500	2,600	80	100	100	2,000	2,100	2,100
Raglan	500	400	600	2,700	3,200	3,300	200	200	200	2,400	2,600	2,700
TOTAL MAIN URBAN	**1,900**	**2,300**	**3,300**	**23,100**	**25,000**	**26,400**	**800**	**900**	**1,300**	**20,800**	**21,600**	**22,100**

Source: M.E FPP Residential Capacity Model, 2020.

Under the growth scenarios, a greater share of the plan enabled capacity within the existing urban areas, and within the greenfield areas (e.g. Huntly), becomes feasible through time. It is also projected that an increased share of the commercially feasible capacity within the existing urban areas is gradually taken up through time.

Growth Scenario 1

Under Growth Scenario 1 (Table 4-16), the projected long-term feasible capacity increases to an additional 31,200 to 33,100 dwellings within the district's main urban areas. This represents an increase of around 6,200 to 6,700 additional dwellings from the current prices scenario. This is a function of gradual growth in demand through time resulting in an increased range of development options become feasible.

Most of the increase (+5,900 dwellings) in feasible capacity occurs through an expansion in the greenfield areas that become commercially feasible to develop. The largest increase occurs within Huntly, where greenfield areas are not currently feasible to develop (if the zoning were in place), but are projected to become feasible through time.

The types of feasible development opportunities within the existing urban areas are also projected to gradually increase through time. Across the short and medium-term there is projected faster growth in infill development opportunities, with an increasing range of redevelopment opportunities becoming feasible through time in the longer-term.

Within the feasible capacity, there is an estimated RER capacity of 27,000 to 27,800 additional dwellings. Most of this is within the greenfield areas, where it is estimated that a high portion of the yield enabled within these areas could be achieved if they were developed as greenfield areas.

The modelling also makes a smaller allowance for RER capacity within the existing urban areas. Under this scenario, there is an estimated RER capacity of 900 to 1,600 additional dwelling within these areas. The largest share is projected to occur within Pōkeno. Even with growth in the market, the modelling has taken a conservative approach is projecting only a low share of existing urban area development (under the existing zoning information and margins required for the assessment) is likely to represent RER capacity. In large part, this is due to the relative ease of greenfield development options, where there is a very large supply within the medium and long-term.

Furthermore, within the information supplied[43] for the assessment, there are limited options for higher forms of intensification within the existing urban areas. In areas containing the long-term Medium Density Residential Zone, the modelling has projected higher rates of feasibility within these areas through time. Where applied, a higher share of the plan enabled capacity within this zone is projected to be feasible through time.

Table 4-7: Waikato District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Growth Scenario 1)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	600	900	1,200	12,400	13,000	13,600	300	400	500	11,300	11,500	11,800
Te Kauwhata	100	200	200	6,100	6,200	6,400	40	90	90	5,500	5,600	5,600
Ngaruawahia	400	700	900	2,500	2,900	3,400	200	300	400	2,100	2,300	2,500
Huntly	300	500	700	3,000	3,300	3,700	100	200	300	2,800	2,900	3,100
Taupiri	200	400	400	2,300	2,500	2,700	90	200	200	2,000	2,100	2,200
Raglan	500	600	600	2,700	3,200	3,400	200	200	300	2,400	2,600	2,700
TOTAL MAIN URBAN	**2,200**	**3,400**	**4,100**	**29,000**	**31,200**	**33,100**	**900**	**1,300**	**1,600**	**26,200**	**27,000**	**27,800**

Source: M.E FPP Residential Capacity Model, 2020.

Growth Scenario 2

Under Growth Scenario 2 (Table 4-16), the projected long-term feasible capacity increases to an additional 32,400 to 35,200 dwellings (+1,200 to 2,100 dwellings from Growth Scenario 1) within the district's main urban areas. This represents an increase of around 7,400 to 8,800 additional dwellings from the current prices scenario. This is a function of gradual growth in demand through time resulting in an increased range of development options become feasible.

The largest further feasible capacity increases between Growth Scenarios 1 and 2 occur through a greater range of redevelopment opportunities within the existing urban area becoming feasible. Nearly all of the greenfield areas are already projected to become feasible to develop under the lower growth scenario. The increase in feasible redevelopment capacity amounts to an additional 1,700 dwellings (from Growth Scenario 1), and is spread across the main urban areas.

[43] The modelling is based on zoning information supplied and confirmed by Waikato District Council in November 2020. Information on the current notified plan changes, including the wider application of the Medium Density Residential Zone, has not been supplied for the HBA assessment.

Table 4-8: Waikato District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Growth Scenario 2)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Pokeno/Tuakau	1,000	1,300	1,700	12,500	13,600	14,200	400	500	700	11,400	11,800	12,100
Te Kauwhata	300	300	500	6,200	6,400	6,600	100	100	200	5,600	5,700	5,700
Ngaruawahia	400	1,200	1,300	2,500	3,000	3,800	200	500	500	2,100	2,300	2,700
Huntly	300	900	1,000	3,300	3,600	4,300	100	400	400	3,000	3,100	3,400
Taupiri	200	500	500	2,300	2,500	2,700	90	200	200	2,000	2,100	2,200
Raglan	700	700	900	2,700	3,400	3,600	300	300	400	2,500	2,700	2,800
TOTAL MAIN URBAN	**2,900**	**4,900**	**5,800**	**29,500**	**32,400**	**35,300**	**1,200**	**2,000**	**2,300**	**26,500**	**27,700**	**28,900**

Source: M.E FPP Residential Capacity Model, 2020.

The projected long-term capacity by type across each of the district's main urban areas is summarised in Figure 4-5 (greenfield only) and Figure 4-6 (greenfield and existing urban) for both the current prices and higher growth scenarios. Most of the infrastructure served greenfield areas are projected to be commercially feasible across the main urban areas. The exception is Huntly, and a part of Pōkeno/Tuakau, which are not feasible to develop under the existing market conditions. The market is not currently delivering greenfield dwellings in Huntly, and therefore, does not contain any feasible capacity if current prices are applied.

A share of the capacity in Pōkeno/Tuakau is also not currently feasible if current prices are applied to the long-term future greenfield areas. Although demand is currently strong in this location, there is a large amount of greenfield capacity supplied relative to both the existing size of the settlement and long-term demand. It is therefore in alignment with current market conditions that a large share of the capacity is likely to be feasible, with a share also likely to be unfeasible due to the volume supplied.

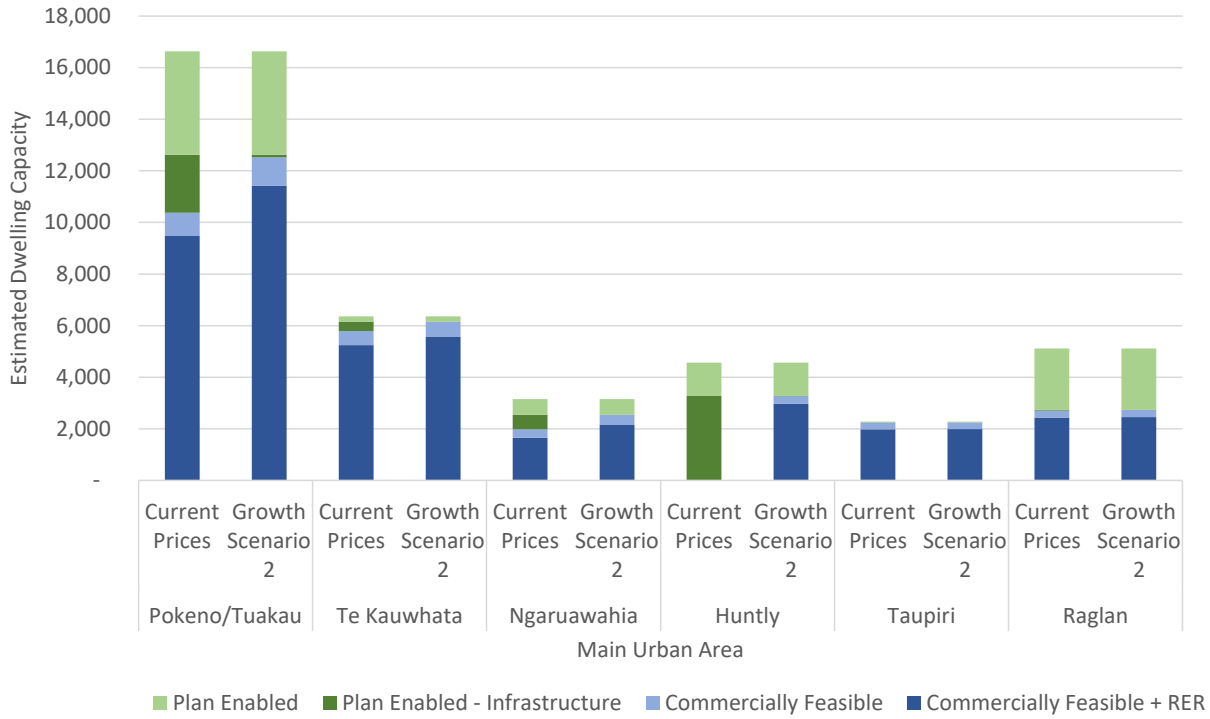
Under the modelled growth scenarios, where the market is allowed to change gradually in response to demand growth, then nearly all of these greenfield areas become feasible.

In the long-term, a large share of the greenfield areas are planned to be served by infrastructure. In addition, there are substantial areas of zoned greenfield land that are not planned to be served by infrastructure within the long-term. These occur in Pōkeno/Tuakau, Raglan and Huntly.

Figure 4-6 shows additional areas of infrastructure-served plan-enabled capacity within the existing urban areas that are not projected to be commercially feasible in the long-term. There is likely to be additional capacity within the existing urban areas that is not feasible to develop through time. A lower take-up of capacity within the existing urban areas is expected, particularly where there are large volumes of greenfield capacity provided.

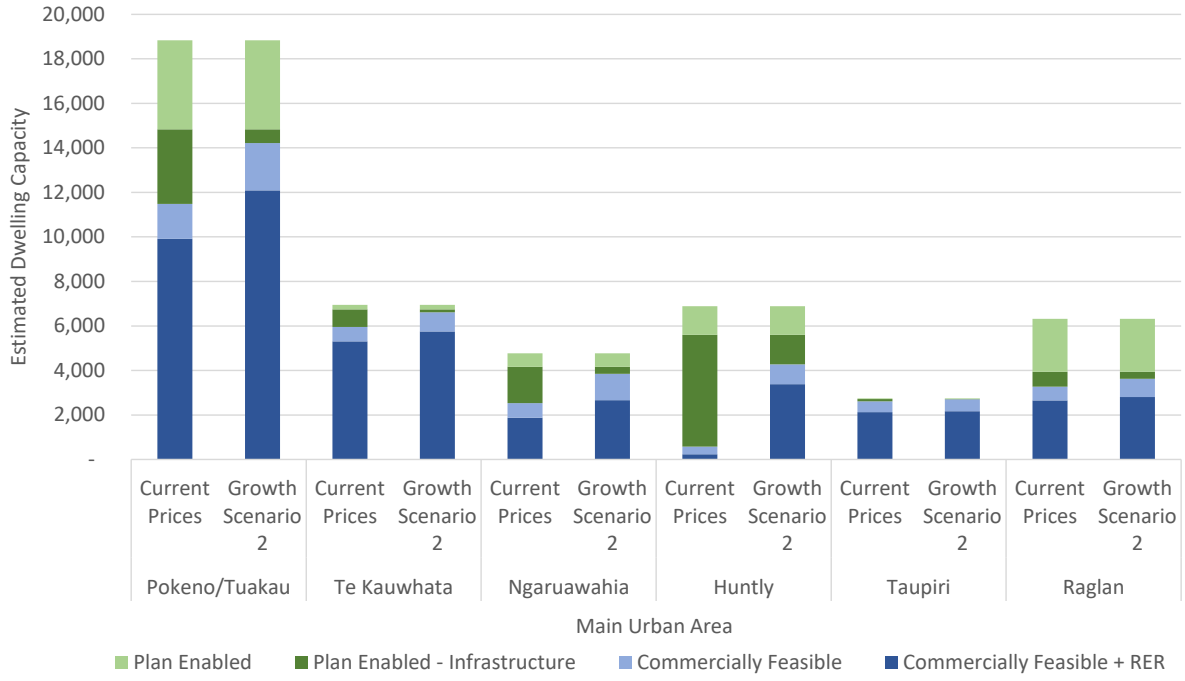
The relative contribution of intensification of the existing urban areas to overall capacity lessens (on a proportional basis) through time across many of these urban areas as the plan-enabled urban footprint is expanded to a large extent. It is important to note however, that the modelling does not take into account much of the potential for intensification (a large share of the proposed Medium Density Residential Zone) that is currently being evaluated through hearings on the PDP. This information was not available at the time of modelling or completion of the HBA report.

Figure 4-5: Waikato District Estimated Urban Residential Capacity: Greenfield – Long-Term – 2050



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-6: Waikato District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Long-Term – 2050



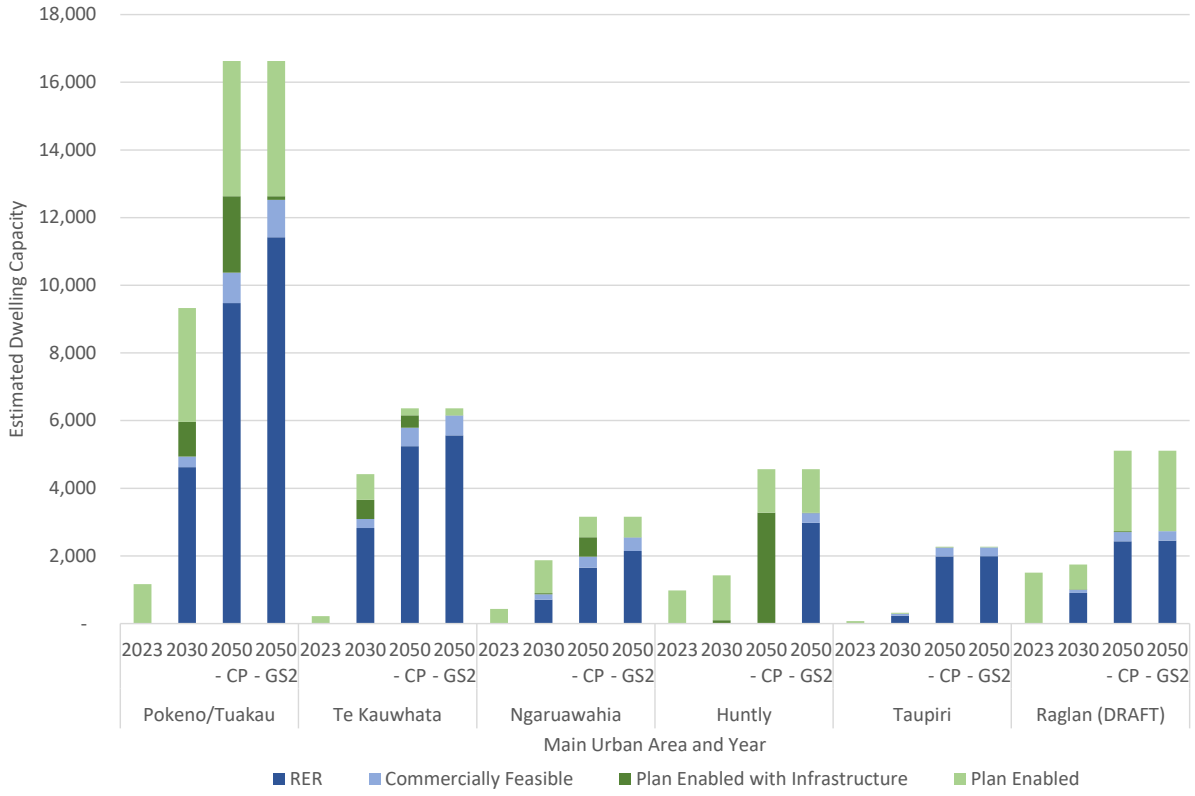
Source: M.E FPP Residential Capacity Model, 2020.

4.2.4 Residential Capacity: Short, Medium and Long-Term

The following graphs (Figure 4-7 and Figure 4-8) summarise the change in projected capacity through time across the district's main urban areas. Figure 4-7 shows the greenfield capacity only, and Figure 4-8 both the greenfield and existing urban capacity.

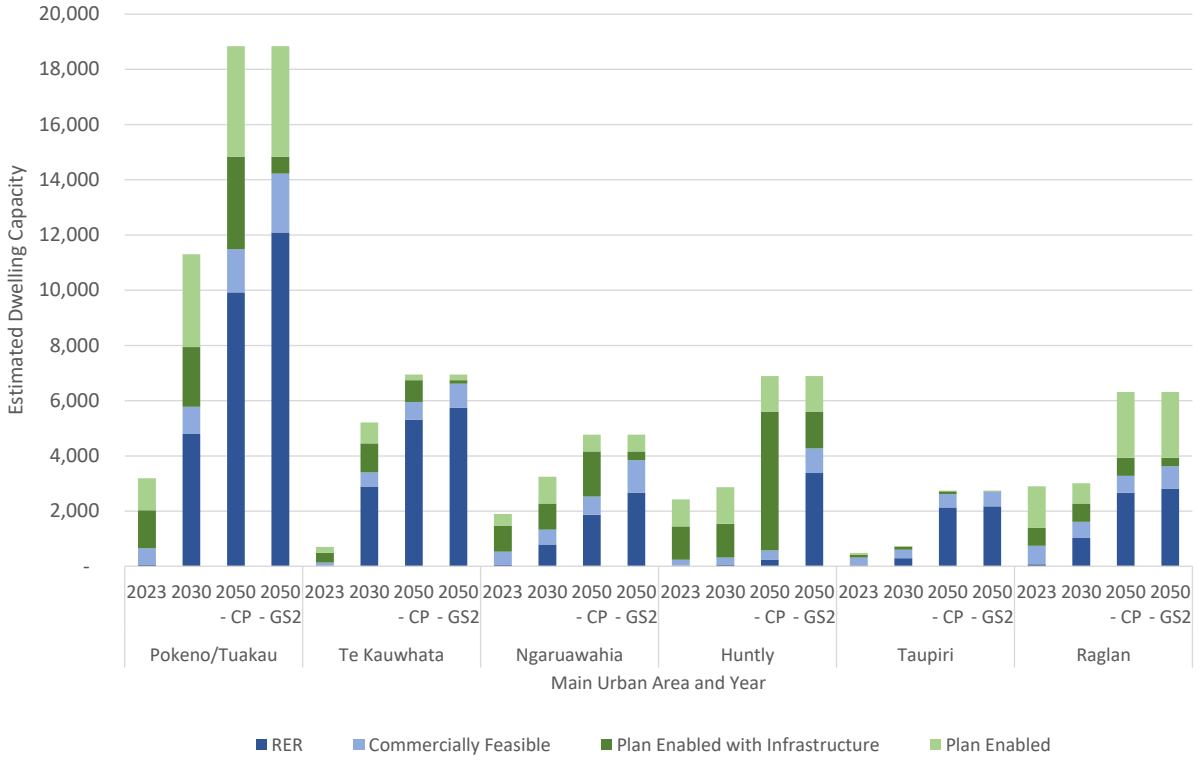
Most of the additional capacity is projected to be supplied in Pōkeno/Tuakau, Te Kauwhata, Raglan and Huntly (although, not served by infrastructure) in the short-term. The main increases in capacity between the short and medium-term occur in Pōkeno/Tuakau and Te Kauwhata. In the long-term the main increases in capacity occur in Pōkeno/Tuakau, Raglan and Huntly where the W2070 contains sizeable areas of outward urban expansion.

Figure 4-7: Waikato District Estimated Urban Residential Capacity: Greenfield 2023-2050



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-8: Waikato District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban 2023-2050



Source: M.E FPP Residential Capacity Model, 2020.

4.3 Hamilton City Residential Capacity

4.3.1 Short-Term Residential Capacity: 2023

Hamilton City residential capacity has been assessed in relation to the Operative District Plan (ODP) across the short, medium and long-term. It takes into account the existing urban area (which has expanded outward since the 2017/2018 assessment) and the greenfield areas of future urban expansion.

The capacity in Hamilton City enabled under the ODP in the short-term is displayed in Table 4-9. The first part (light green) of the table shows the plan enabled capacity without infrastructure constraints, while the second part (dark green) includes the infrastructure constraints in the greenfield areas.

In total, there is zoned capacity for an additional 22,900 to 108,300 additional dwellings within Hamilton City's existing urban area[44]. The lower end of the range includes only infill development options, with the upper end of the range also including redevelopment potential. Through applying the underlying zoning

[44] Refer to Section 4.1.3 for more detail.

provisions, there is further capacity for an additional 22,300 dwellings within the city's greenfield areas. In total, there is a combined zoned capacity for an additional 45,100 to 130,600 additional dwellings within Hamilton City without taking into account infrastructure constraints.

Within the urban area, over half of the additional infill dwelling capacity occurs within the lower value areas (Level 1 and Level 2 areas) of the city. Almost all of the capacity occurs within the General Residential Zone, reflecting the spatial extent of the zone across the city. A small share of capacity occurs within the Residential Intensification Zone. There is almost no capacity within the Special Heritage and Special Residential Zones.

When taking into account redevelopment capacity, over one-third (38%; 41,400 dwellings) occurs within the City Centre Zone. The remaining 62% of capacity (66,900 dwellings) occurs within the residential zones outside of the city centre. The rate of uptake of capacity within the City Centre is likely to be lower in the short and medium-term, which is reflected in a conservative approach taken within the subsequent feasibility assessment.

The plan enabled additional dwelling capacity by development option within Hamilton's existing urban area is shown in Table 4-10. The upper section of the table shows the infill capacity by dwelling typology and zone, and the lower half, the redevelopment capacity options by typology and zone. Capacity by typology is not additive and the maximum ('Max') columns show the maximum yield across the typologies combined. The last column is the maximum yield across both infill and redevelopment options.

The table shows that a large share of the infill capacity occurs through the addition of a further dwelling to an already developed parcel to form a duplex pair together with the existing dwelling. There is capacity for around 15,000 additional dwellings through this development pathway. If the vacant areas of existing parcels are subdivided and new dwellings constructed, then there is capacity for nearly 3,000 single dwellings, or 6,300 duplex dwellings (and 500 apartments within the Residential Intensification Zone).

Redevelopment of sites into duplex pairs forms the largest type of redevelopment capacity enabled under the ODP. There is also large redevelopment capacity within the City Centre, with a maximum potential for an additional 41,400 dwellings. However, a significant share of this capacity is likely to be taken up by non-residential uses.

Rotokauri, Peacocke and Temple View form the largest areas of zoned greenfield capacity (excluding infrastructure constraints) under the ODP, accounting for over four-fifths of the potential capacity. Rototuna and Ruakura North also contain significant areas of zoned greenfield capacity. No zoned residential capacity is identified within Te Rapa North as the underlying ODP zoning is for industrial uses.

In the short-term, approximately only 11% of the zoned greenfield capacity is served by infrastructure. This equates to a total plan-enabled, infrastructure-served greenfield capacity for an additional 2,400 dwellings. Almost all (90%) of this is within Rototuna (2,200 dwellings), meaning that nearly all (85%) of the capacity within Rototuna will be served by infrastructure within the short-term. A small amount of greenfield capacity (200 dwellings) is currently served by infrastructure within Ruakura North.

Table 4-9: Hamilton City Plan Enabled Residential Capacity: Short-Term – 2023

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						SHORT-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	4,600	13,500	13,500				-	-	-			
Level 2	7,300	23,000	23,100				-	-	-			
Level 3	4,000	14,800	14,800				-	-	-			
Level 4	3,500	11,900	12,100				-	-	-			
Level 5	900	3,400	3,400				-	-	-			
City Centre	2,600	41,400	41,400				-	-	-			
Total Existing Urban	**22,900**	**108,100**	**108,300**				**-**	**-**	**<108,300**			
Te Rapa North				-						-		
Rotokauri				6,800						200		
Rototuna				2,600						2,100		
Ruakura North				1,600						600		
Ruakura South				80						-		
Temple View				5,000						-		
Peacocke				6,200						200		
Total Greenfield				**22,300**						**3,100**		
Total Hamilton					**45,100**	**130,600**					**-**	**<111,500**

Source: M.E FPP Residential Capacity Model, 2020.

Table 4-10: Plan Enabled Capacity in Hamilton's Existing Urban Area

	INFILL (Additional Dwelling Capacity)				
	Single	**Duplex**	**Add Duplex**	**Apartment**	**Max Infill**
General Residential Zone	2,600	5,800	15,200	-	19,800
Residential Intensification Zone	300	500	-	500	500
City Centre Zone	-	-	-	2,600	2,600
Total	**2,900**	**6,300**	**15,200**	**3,100**	**22,900**

	REDEVELOPMENT (Additional Dwelling Capacity)				
	Single	**Duplex**	**Apartment**	**Max Redevelopment**	**Max Infill + Redevelopment**
General Residential Zone	10,700	62,000	-	62,000	62,300
Residential Intensification Zone	2,700	4,000	4,500	4,600	4,600
City Centre Zone	-	-	41,400	41,400	41,400
Total	**13,400**	**66,000**	**46,000**	**108,100**	**108,300**

Source: M.E FPP Residential Capacity Model, 2020.

The share of plan enabled capacity projected to be commercially feasible and reasonably expected to be realised in the short-term is shown in Table 4-11. It is estimated that the feasible dwelling development options (light blue section of the table) within Hamilton's existing urban area amount to between 10,100 and 16,300 additional dwellings. In combination with greenfield capacity, this amounts to an a commercially feasible capacity of 12,000 to 18,100 dwellings in the short-term. Just over one-quarter of the redevelopment capacity occurs within the City Centre.

Within the existing urban area, this amounts to around 15% of the existing urban plan enabled capacity representing feasible development options in the short-term. The share is higher for infill development (44%) and lower (8%) for redevelopment capacity. A higher proportion of redevelopment capacity is concentrated into the higher value areas within the city.

There is an estimated RER capacity of around 3,000 to 3,600 additional dwellings within Hamilton in the short-term. Around 50% to 60% of this capacity is projected to occur within the greenfield areas, with the remainder within the existing urban area. It is important to note that only a small share (11% of commercially feasible and 2% of plan enabled) of the existing urban capacity is expected to be RER. This is based off the average rates of capacity take-up within the existing urban area relative to greenfield growth. There is a much larger amount of capacity within the existing urban area that is estimated to be feasible within the short-term, and an even larger amount enabled under the Plan (some 60 times the existing urban RER capacity).

There is a projected commercially feasible capacity for around 1,900 dwellings within Hamilton's greenfield areas in the short-term. This amounts to around 78% of the infrastructure-served greenfield capacity, and around 8% of greenfield capacity overall. Most of the infrastructure-served greenfield areas are located adjacent to the existing urban edge and are projected to be commercially feasible development options within the short-term. A portion of the capacity in Rototuna is modelled as not likely to be commercially feasible. This is primarily due to the higher value of properties in this area as they are currently established as higher value lifestyle properties, which would affect the feasibility of redeveloping these areas into new subdivision areas.

It is estimated that there is a RER capacity of 1,800 dwellings within the greenfield areas in the short-term. The RER yields on some of Hamilton's greenfield areas are projected to be higher than that enabled under the ODP as the developer yields and structure plans are higher than the capacities enabled through the underlying zoning. Rototuna accounts for nearly all of this capacity, containing 90% of Hamilton's RER greenfield capacity in the short-term.

The estimated short-term commercially feasible and RER capacities under growth scenarios 1 and 2 are contained in the district level summaries in the sufficiency assessment.

Table 4-11: Hamilton City Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Short-Term – 2023 (Current Prices)

	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
LOCATION	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	1,700	600	2,100				200	80	300			
Level 2	3,500	1,200	4,300				500	200	600			
Level 3	1,200	1,100	1,900				200	100	200			
Level 4	2,600	1,600	3,200				300	200	400			
Level 5	300	400	600				40	50	70			
City Centre	800	4,200	4,300				50	300	300			
Total Existing Urban	**10,100**	**9,200**	**16,300**				**1,300**	**900**	**1,800**			
Te Rapa North				-						-		
Rotokauri				200						200		
Rototuna				1,600						1,500		
Ruakura North				600						600		
Ruakura South				-						-		
Temple View				-						-		
Peacocke				200						200		
Total Greenfield				**2,600**						**2,500**		
Total Hamilton					**12,700**	**18,800**					**3,700**	**4,300**

Source: M.E FPP Residential Capacity Model, 2020.

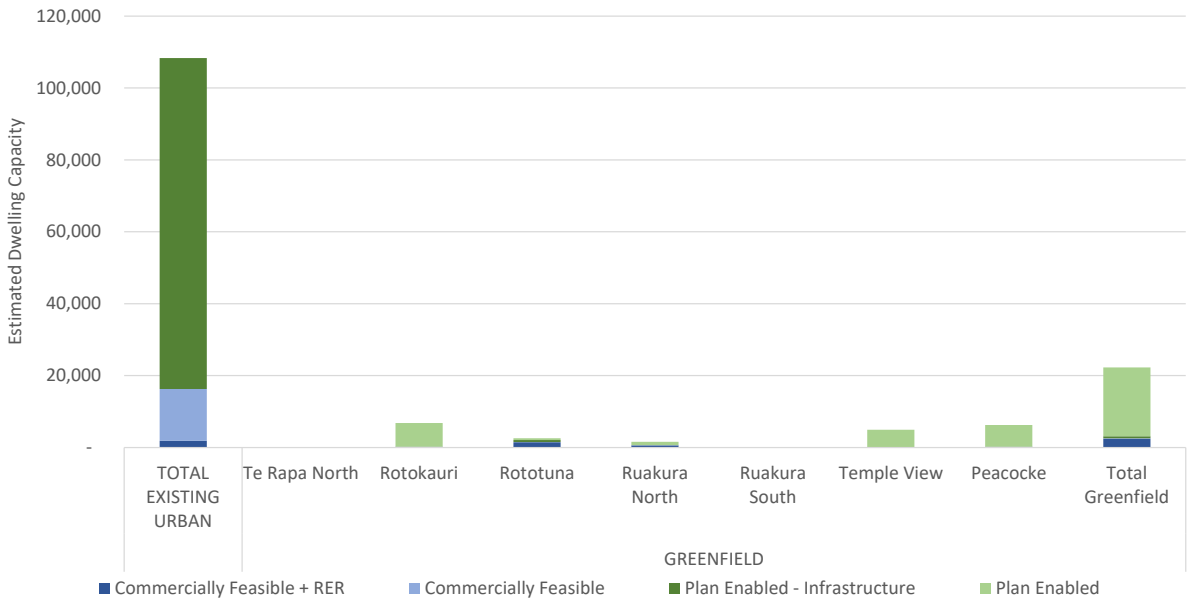
The estimated dwelling capacity within Hamilton's existing urban area and each of the greenfield areas is summarised in Figure 4-9. It shows the total plan enabled capacity, and the components of this that are

estimated to be RER (dark blue), commercially feasible by not RER (light blue), plan enabled and infrastructure served[45] but not commercially feasible (dark green) and plan enabled but not infrastructure served (light green).

Key aspects are:

- Hamilton's existing urban area contains the largest amount of plan enabled capacity for additional dwellings.
- A minor share of the plan enabled capacity within the existing urban area is projected to be currently commercially feasible. There is a large amount of additional zoned opportunity beyond what is currently estimated to be commercially feasible.
- A minor share of the greenfield zoned capacity will be served by infrastructure in the short-term. It is projected that most of this will be commercially feasible to develop and represent RER capacity.

Figure 4-9: Hamilton City Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Short-Term – 2023 (Current Prices)



Source: M.E FPP Residential Capacity Model, 2020.

4.3.2 Medium-Term Residential Capacity: 2030

Hamilton City's medium-term estimated plan enabled capacity is shown in Table 4-12. The same underlying zoning framework is also applied in the medium-term assessment, meaning that the plan enabled capacity

[45] Refer to Section 4.1.3 for more detail.

within the existing urban area remains the same across the short and medium-term. In total, there is a plan enabled capacity for an additional 22,900 to 108,300 dwellings within the existing urban area[46].

In the medium-term, there is an estimated zoned capacity for an additional 8,700 dwellings in infrastructure-served greenfield areas. This is around 40% of the total zoned greenfield capacity.

The greenfield zoned area served by infrastructure will more than triple in the medium-term (in comparison to the short-term). The largest areas of infrastructure expansion are planned to occur in Peacocke (+4,500 dwellings) and Ruakura North (+1,300 dwellings), with smaller amounts in Rototuna (+400 dwellings) and Ruakura South (+80 dwellings). In the medium-term, this makes Peacocke and Rototuna the largest areas of infrastructure-served greenfield capacity.

Table 4-12: Hamilton City Plan Enabled Residential Capacity: Medium-Term - 2030

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						MEDIUM-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	4,600	13,500	13,500				-	-	-			
Level 2	7,300	23,000	23,100				-	-	-			
Level 3	4,000	14,800	14,800				-	-	-			
Level 4	3,500	11,900	12,100				-	-	-			
Level 5	900	3,400	3,400				-	-	-			
City Centre	2,600	41,400	41,400				-	-	-			
Total Existing Urban	**22,900**	**108,100**	**108,300**				**-**	**-**	**<108,300**			
Te Rapa North				-						-		
Rotokauri				6,800						-		
Rototuna				2,600						2,600		
Ruakura North				1,600						1,600		
Ruakura South				80						80		
Temple View				5,000						-		
Peacocke				6,200						4,500		
Total Greenfield				**22,300**						**8,700**		
Total Hamilton					**45,100**	**130,600**					**-**	**<117,100**

Source: M.E FPP Residential Capacity Model, 2020.

The portion of Hamilton's plan enabled capacity that is projected to represent commercially feasible development options in the medium-term is displayed in Table 4-13. In total, there is an estimated commercially feasible development capacity of between 17,400 and 23,600 dwellings across the existing urban and greenfield areas combined.

The RER component of this capacity is estimated to be 14,800 to 18,000 dwellings. This is based off the average rates of dwelling capacity take-up within existing urban areas relative to greenfield areas. Within the existing urban area, it equates to around two-thirds of the existing urban area capacity that is currently feasible being RER, and around 10% of the plan enabled capacity.

Under the current prices scenario, the feasible capacity within the existing urban area remains equal to that in the short-term. There is a feasible capacity of between 10,100 to 16,300 additional dwellings within the existing urban area.

[46] Refer to Section 4.1.3 for more detail.

Within the greenfield areas, the commercially feasible capacity increases to an additional 7,400 dwellings. This amounts to 84% of the infrastructure-served zoned capacity within the greenfield areas. The areas of feasible greenfield capacity reflect the extent of the areas served by infrastructure, with Peacocke, Rototuna and Ruakura North being the largest areas of feasible capacity.

The RER component of the greenfield capacity is estimated to increase to 7,600 additional dwellings in the medium-term. The areas of RER capacity cover a high share of the infrastructure-served zoned area. There is also a small amount of capacity in Te Rapa North, which is projected to occur within a private plan change area as signalled through the developer information. Some of the RER capacity within the Peacocke area is projected to occur at higher yields (as signalled through the developer information), with a share of the infrastructure-served capacity in Peacocke not projected to be RER in the medium-term.

Table 4-13: Hamilton City Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Medium-Term – 2030 (Current Prices)

	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
LOCATION	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	1,700	600	2,100				1,300	400	1,500			
Level 2	3,500	1,200	4,300				2,600	900	3,200			
Level 3	1,200	1,100	1,900				900	800	1,400			
Level 4	2,600	1,600	3,200				1,900	1,200	2,400			
Level 5	300	400	600				200	300	400			
City Centre	800	4,200	4,300				300	1,600	1,600			
Total Existing Urban	**10,100**	**9,200**	**16,300**				**7,200**	**5,200**	**10,500**			
Te Rapa North				-						400		
Rotokauri				-						-		
Rototuna				1,700						1,600		
Ruakura North				1,100						900		
Ruakura South				80						60		
Temple View				-						-		
Peacocke				4,500						4,600		
Total Greenfield				**7,400**						**7,600**		
Total Hamilton					**17,400**	**23,600**					**14,800**	**18,000**

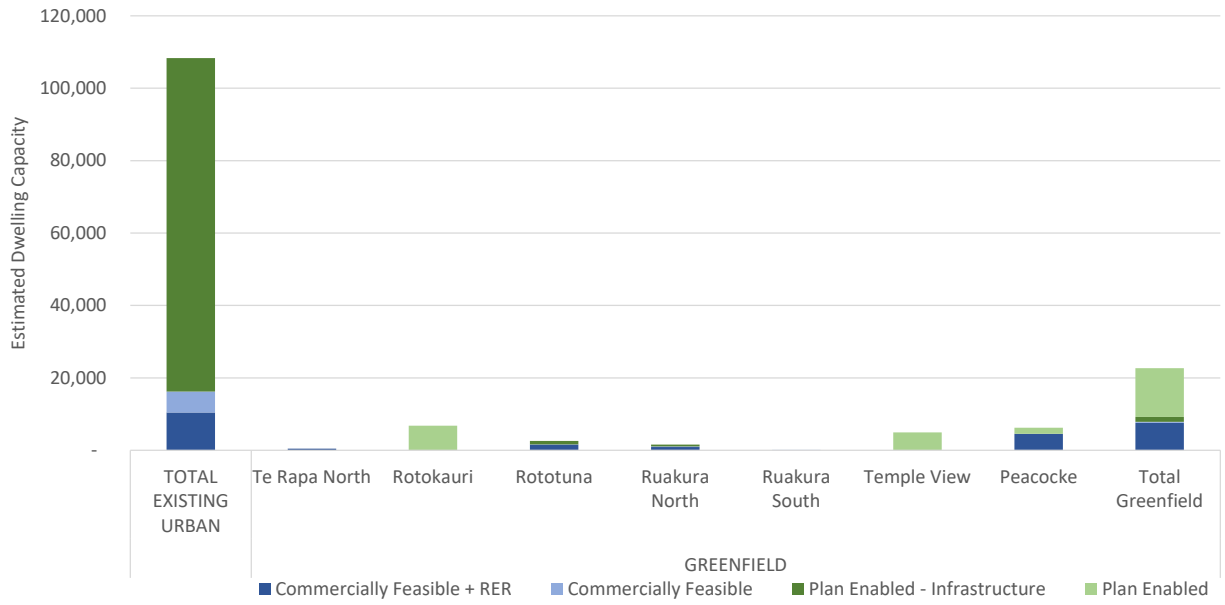
Source: M.E FPP Residential Capacity Model, 2020.

The total plan enabled capacity across Hamilton City, and the breakdown by capacity type, is shown in Figure 4-10. Under the current prices scenario, the existing urban area plan enabled capacity remains the same as the short-term[47]. The share of commercially feasible capacity (as estimated using current prices) as RER increases in line with the estimated greenfield RER capacity.

Further infrastructure served and feasible capacity is estimated across the greenfield areas in line with the spatial expansion of infrastructure provision in the medium-term. The figure shows that most of the greenfield capacity is reasonably expected to be realised, with a small amount of additional commercially feasible capacity and zoned, infrastructure-served capacity beyond that which is commercially feasible. In addition, there is substantial further zoned opportunity that is not likely to be served by infrastructure within the medium-term.

[47] Refer to Section 4.1.3 for more detail.

Figure 4-10: Hamilton City Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Medium-Term – 2030 (Current Prices)



Source: M.E FPP Residential Capacity Model, 2020.

4.3.3 Long-Term Residential Capacity: 2050

The estimated long-term plan-enabled capacity for Hamilton City is shown in Table 4-14. If infrastructure constraints are excluded, the total zoned capacity remains the same (at 45,100 to 130,600 additional dwellings[48]) as the short and medium-term as long-term capacity is also assessed using the ODP zoning framework.

There is significant planned infrastructure expansion within the long-term. The total infrastructure served plan-enabled greenfield capacity increases by 140% from the medium-term (+12,300 dwellings from the medium-term), to reach 21,000 dwellings in the long-term. The largest areas of expansion are around Rotokauri and Templeview (in the Future Urban Zone area), followed by the remainder of Peacocke. Expansion into the Temple View Future Urban Zone, means that together with Peacocke and Rotokauri, it forms one the city's largest areas of greenfield capacity in the long-term.

[48] Refer to Section 4.1.3 for more detail.

Table 4-14: Hamilton City Plan Enabled Residential Capacity: Long-Term - 2050

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						LONG-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	4,600	13,500	13,500				-	-	-			
Level 2	7,300	23,000	23,100				-	-	-			
Level 3	4,000	14,800	14,800				-	-	-			
Level 4	3,500	11,900	12,100				-	-	-			
Level 5	900	3,400	3,400				-	-	-			
City Centre	2,600	41,400	41,400				-	-	-			
Total Existing Urban	**22,900**	**108,100**	**108,300**				**-**	**-**	**<108,300**			
Te Rapa North				-						-		
Rotokauri				6,800						5,600		
Rototuna				2,600						2,600		
Ruakura North				1,600						1,600		
Ruakura South				80						80		
Temple View				5,000						5,000		
Peacocke				6,200						6,200		
Total Greenfield				**22,300**						**21,000**		
Total Hamilton					**45,100**	**130,600**					**-**	**<129,300**

Source: M.E FPP Residential Capacity Model, 2020.

The following tables (Table 4-15 to Table 4-17) show the portion of Hamilton's plan enabled capacity that is projected to represent commercially feasible development options in the long-term and the share which are estimated to represent RER development opportunities. In this section, three scenarios are presented for long-term feasible capacity. Table 4-15 contains the capacity estimates under the current prices scenario where the change in feasible capacity is a function only of infrastructure expansion within the greenfield areas. The alternative scenarios that take into account the effect of demand growth through changing costs and prices and contained in Table 4-16 (Growth Scenario 1) and Table 4-17 (Growth Scenario 2).

Current Prices Scenario

Under the current prices scenario (Table 4-15), commercially feasible capacity within the existing urban area is projected to remain the same as the short and medium-term assessment periods. It is estimated that all of the existing urban currently feasible capacity would be taken up in the long-term in this scenario, with a RER capacity of 16,300 dwellings. By holding currently feasible capacity constant, this scenario assumes that the existing trend of an increasing share of take-up within the existing urban area would continue into the medium-term, but would then reverse in the long-term, with an acceleration in the rate of greenfield expansion relative to growth within the existing urban area.

Feasible capacity within the greenfield areas is projected to approximately double, in line with the expansion of new areas served by infrastructure. The current prices assessment does not estimate any feasible capacity within Temple View given the existing lower prices within this area. The greenfield RER capacity is projected to increase by a slightly greater amount than the commercially feasible capacity. This is because the yields indicated in the developer information within some areas exceed those theoretically enabled within the underlying ODP zoning.

Table 4-15: Hamilton City Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Current Prices)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	1,700	600	2,100				1,700	600	2,100			
Level 2	3,500	1,200	4,300				3,500	1,200	4,300			
Level 3	1,200	1,100	1,900				1,200	1,100	1,900			
Level 4	2,600	1,600	3,200				2,600	1,600	3,200			
Level 5	300	400	600				300	400	600			
City Centre	800	4,200	4,300				800	4,200	4,300			
Total Existing Urban	**10,100**	**9,200**	**16,300**				**10,100**	**9,200**	**16,300**			
Te Rapa North				-						400		
Rotokauri				5,000						4,900		
Rototuna				1,700						1,700		
Ruakura North				1,100						900		
Ruakura South				80						70		
Temple View				-						-		
Peacocke				6,200						6,600		
Total Greenfield				**14,100**						**14,600**		
Total Hamilton					**24,200**	**30,400**					**24,600**	**30,800**

Source: M.E FPP Residential Capacity Model, 2020.

Under the growth scenarios, a greater share of the plan enabled capacity within the existing urban areas becomes feasible through time. The share of this capacity that is RER also increases in line with the observed patterns of growth distribution across the urban structure of Hamilton.

Growth Scenario 1

Under Growth Scenario 1 (Table 4-16), there is a projected long-term feasible capacity for an additional 21,100 to 42,800 dwellings within the existing urban area. This is a function of gradual growth in demand through time resulting in an increased range of development options become feasible. The types of feasible development opportunities are also projected to increase through time. Across the short and medium-term there is projected faster growth in infill development opportunities, with an increasing range of redevelopment opportunities becoming feasible through time.

In the long-term, there is a projected RER capacity of 17,200 to 29,600 dwellings within the existing urban area. This amounts to 69% of the long-term feasible capacity that is taken up through time, and 27% of the plan-enabled capacity. Under this lower growth scenario, RER is more concentrated into suburban areas outside of the City Centre, and within this, a higher share as infill development. It assumes that only 16% of the plan-enabled capacity within the City Centre is taken up.

The long-term projected feasible greenfield capacity is for an additional 14,900 dwellings under Growth Scenario 1. This is slightly higher than the current growth scenario, where additional greenfield areas become feasible to develop within Rototuna and Rotokauri (relative to the current prices scenario). The pattern of greenfield feasible capacity similarly follows the provision of infrastructure within the greenfield areas. The RER greenfield capacity is slightly higher at 15,200 additional dwellings due to the higher yields provided through the developer information.

Table 4-16: Hamilton City Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Growth Scenario 1)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	4,500	2,700	6,200				3,900	2,300	5,300			
Level 2	7,100	4,600	10,000				6,000	3,900	8,500			
Level 3	3,900	2,100	5,200				3,300	1,800	4,400			
Level 4	3,200	2,100	4,100				2,700	1,800	3,500			
Level 5	800	900	1,300				600	700	1,100			
City Centre	1,700	15,700	15,900				700	6,700	6,700			
Total Existing Urban	**21,100**	**28,100**	**42,800**				**17,200**	**17,200**	**29,600**			
Te Rapa North				-						400		
Rotokauri				5,200						5,100		
Rototuna				2,300						2,100		
Ruakura North				1,100						900		
Ruakura South				80						70		
Temple View				-						-		
Peacocke				6,200						6,600		
Total Greenfield				**14,900**						**15,200**		
Total Hamilton					**36,000**	**57,700**					**32,500**	**44,900**

Source: M.E FPP Residential Capacity Model, 2020.

Growth Scenario 2

Growth Scenario 2 (Table 4-17) contains a higher level of feasible capacity across both the existing urban and greenfield areas due to the higher rates of growth assumed. Under this scenario, there is a feasible capacity of an additional 22,200 to 74,000 dwellings within the existing urban area. There is little change to the lower end of the range as this is formed by the infill development options, most of which already become potentially feasible within the short and medium-term under the lower growth scenario. The main increase in the upper end of the feasible capacity range comes about through a higher share of City Centre capacity becoming feasible as well as increases in a range of redevelopment options that become feasible.

The share of RER capacity within the existing urban area is also projected to increase to between 11,500 to 30,500 dwellings within the existing urban area. This is similar to the level of RER under the lower growth scenario as the model restricts growth within the existing urban area relative to the greenfield RER. The main differences occur in the development patterns, where a higher share of the RER occurs through redevelopment, and within the City Centre. This scenario assumes that RER capacity within existing urban area amounts to 41% of the estimated feasible capacity and 28% of the plan-enabled capacity.

The long-term projected feasible and RER dwelling capacity in the greenfield areas is slightly higher under Growth Scenario 2, with an additional 15,700 dwellings RER in the long-term. This is an increase of around 500 dwellings from Growth Scenario 1 through a slight increase in the spatial extent of the feasible area. Under this scenario, dwelling capacity within the Temple View greenfield area is modelled to be feasible at margins below the 20% threshold used within the assessment, so is therefore not captured as feasible capacity within the modelled results. However, development may still occur within this area when infrastructure is provided at a lower margin or if developments are constructed in at different densities to that currently around the closest urban edge.

Table 4-17: Hamilton City Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Growth Scenario 2)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Level 1	4,500	5,700	8,300				2,500	3,100	4,500			
Level 2	7,100	10,400	14,400				3,900	5,700	7,900			
Level 3	3,900	5,300	7,600				2,200	2,900	4,100			
Level 4	3,200	3,800	5,100				1,800	2,100	2,800			
Level 5	800	1,500	1,900				500	800	1,100			
City Centre	2,600	36,800	36,800				700	10,100	10,100			
Total Existing Urban	**22,200**	**63,600**	**74,000**				**11,500**	**24,800**	**30,500**			
Te Rapa North				-						500		
Rotokauri				5,500						5,300		
Rototuna				2,300						2,200		
Ruakura North				1,400						1,100		
Ruakura South				80						70		
Temple View				-						-		
Peacocke				6,200						6,600		
Total Greenfield				**15,500**						**15,700**		
Total Hamilton					**37,800**	**89,600**					**27,200**	**46,200**

Source: M.E FPP Residential Capacity Model, 2020.

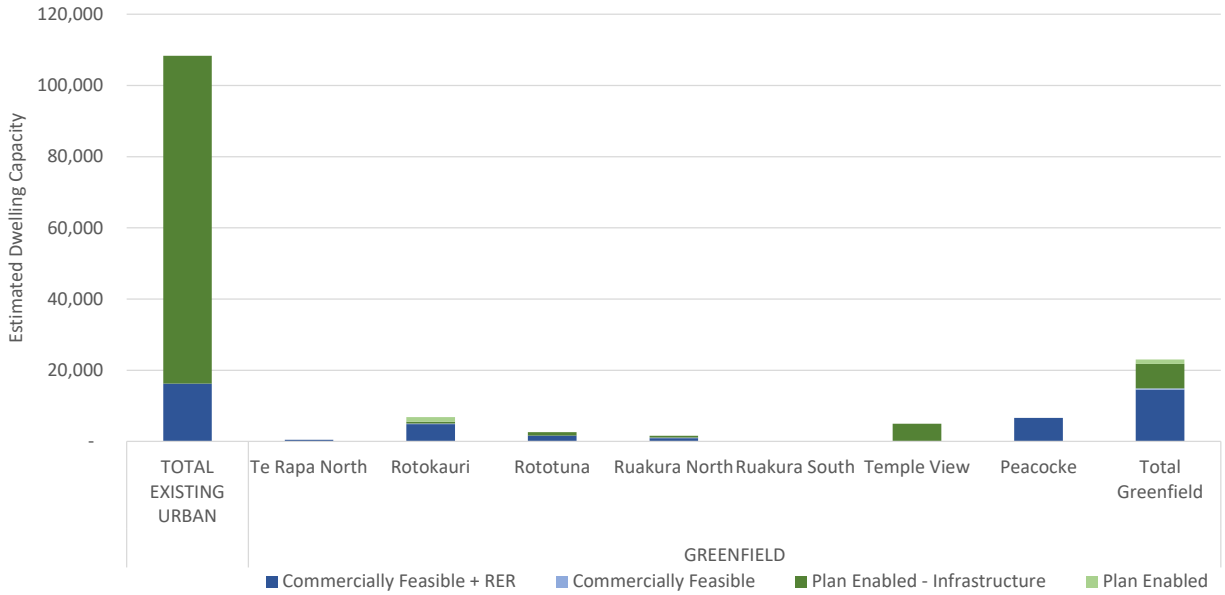
The total plan enabled capacity across Hamilton City, and the breakdown by capacity type, is shown in the following Figures. The range of long-term estimated outcomes is shown across the two figures where Figure 4-11 shows the current prices scenario, and Figure 4-12 contains the results from the higher growth scenario (Growth Scenario 2).

Under each scenario, the RER capacity accounts for only a minor share of the total zoned opportunity within the existing urban area. Using current market conditions, it accounts for only 15% of the total zoned opportunity. When an allowance for demand growth is included, it accounts for around one-quarter (27% to 28%) of the zoned opportunity. Under the range of scenarios tested, there is a large amount of zoned capacity for additional dwellings within the existing urban area beyond that which is estimated to represent RER development opportunities in the long-term. There is zoned opportunity for around 78,000 to 92,000 further additional dwellings beyond that which is RER under the scenarios[49]. Within this, there is zoned opportunity for a further 34,000 to 92,000 additional dwellings that are not projected to be commercially feasible.

The long-term estimated RER capacity within the greenfield areas largely corresponds within infrastructure provision. There is still a sizeable amount of infrastructure-served zoned greenfield opportunity within Temple View beyond the capacity that is RER in the long-term, and smaller amounts in other locations.

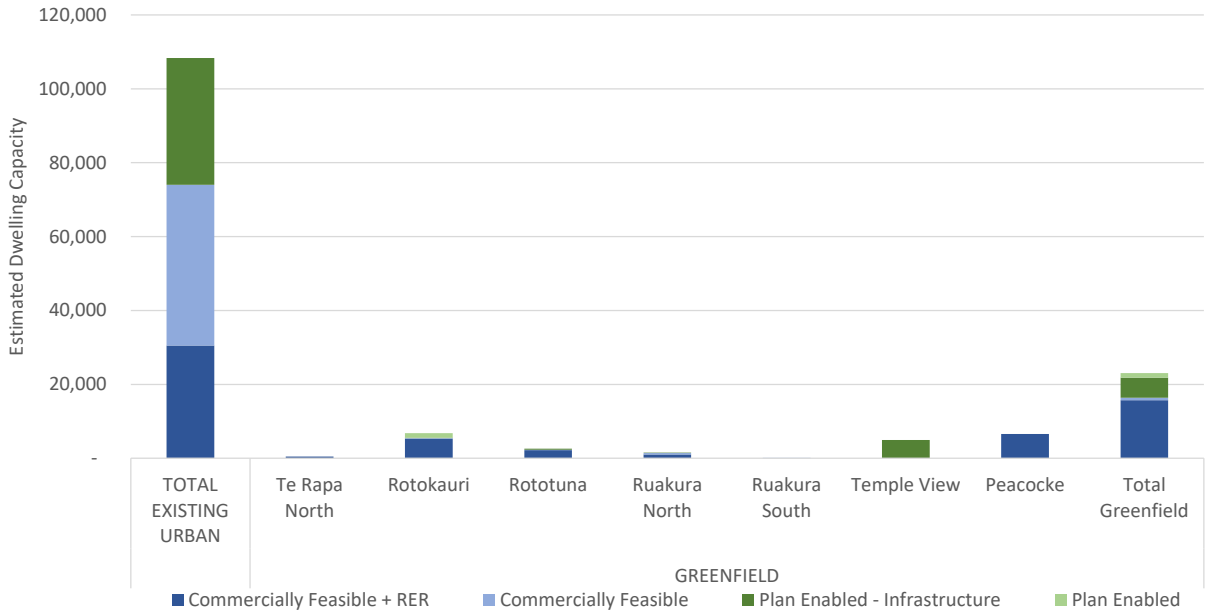
[49] Refer to Section 4.1.3 for more detail.

Figure 4-11: Hamilton City Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Long-Term – 2050 (Current Prices)



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-12: Hamilton City Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Long-Term – 2050 (Growth Scenario 2)



Source: M.E FPP Residential Capacity Model, 2020.

4.3.4 Residential Capacity: Short, Medium and Long-Term

The following graph (Figure 4-13) summarises the change in projected capacity through time across Hamilton City's existing urban and greenfield areas. Within the existing urban area, it includes the maximum development yield, which is a combination of infill and redevelopment options. Each of the three scenarios

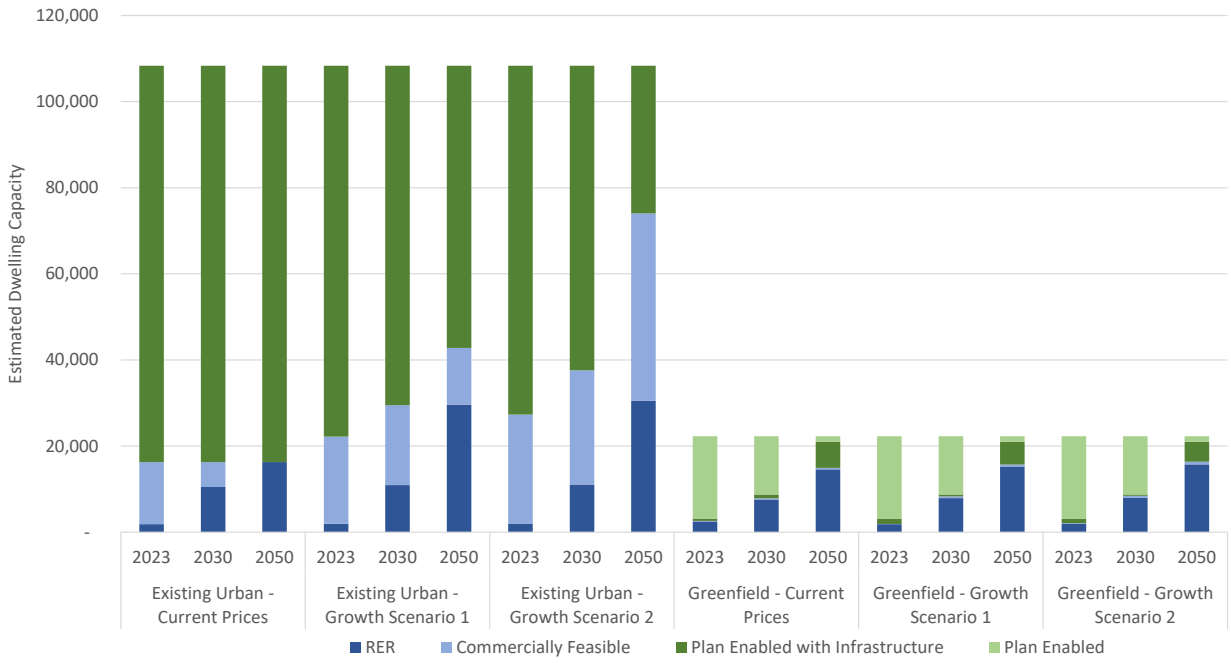
(Current Prices, and Growth Scenarios 1 and 2) are included to illustrate the difference in capacity across the different scenarios.

The total zoned opportunity[50] within the plan enabled capacity remains the same across all three time periods, as the ODP is used as a consistent underlying zoning framework across each assessment period. The RER share of feasible capacity within the existing urban area differs across the three scenarios as RER capacity is held at a fixed maximum proportion to greenfield take-up across the scenarios. The share of RER capacity within the greenfield areas corresponds with the spatial extent of infrastructure provision.

Under all scenarios, only a minor share of the total zoned opportunity within the existing urban area is projected to form part of the RER capacity. The feasible capacity remains constant in the current prices scenario where the market conditions reflect only the current market. In the long-term, it is estimated that all of the capacity that is currently feasible (in 2020) will be taken up. Constraining uptake within these parameters correspondingly assumes that a reversal in the historic growth patterns will occur in Hamilton beyond the medium-term where increasing shares of growth would instead occur within the greenfield areas.

Under the growth scenarios, the share of capacity that becomes feasible increases through time (and correspondingly the share of RER capacity within the existing urban area). This better reflects the patterns of dwelling capacity uptake in relation to the distribution of new dwellings between the existing urban and greenfield areas. Under all scenarios, there is a large amount of zoned opportunity within the existing urban area beyond that estimate to form part of the RER development opportunities.

Figure 4-13: Hamilton City Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban 2023-2050 (Current Prices and Growth Scenarios 1 and 2)



Source: M.E FPP Residential Capacity Model, 2020.

[50] Refer to Section 4.1.3 for more detail.

4.4 Waipā District Residential Capacity

4.4.1 Short-Term Residential Capacity: 2023

The capacity in Waipā District's main urban areas and settlements enabled under the ODP in the short-term is displayed in Table 4-18. The first part (light green) of the table shows the plan enabled capacity without infrastructure constraints, while the second part (dark green) includes the infrastructure constraints in the greenfield areas.

In total, there is zoned capacity under the ODP for 15,800 to 19,000 additional dwellings in the main urban areas of Cambridge, Te Awamutu and Kihikihi, and a further 300 to 1,400 additional dwellings within the smaller urban settlements (total of 16,100 to 20,400 additional dwellings). The lower end of the range is the combined total of the greenfield and existing urban area infill development options, with the upper end of the range also including redevelopment potential within the existing urban area.

Without taking account of infrastructure constraints, most (76% to 91%) of the main urban area short-term zoned capacity is within the greenfield areas. There is a zoned opportunity for 14,400 additional dwellings within the greenfield areas. Most (80%) of this occurs within the Deferred Residential Zone.

Around half (49%) of the district's greenfield capacity is currently served by infrastructure. This amounts to an additional 7,100 dwellings within the greenfield areas. Together, with the existing urban area, this results in an infrastructure served plan enabled capacity of an additional 8,400 to 11,700 dwellings across the main urban areas.

There are relatively even amounts of infrastructure served plan enabled capacity in Cambridge and Te Awamutu in the short-term. Each have capacity for around 3,400 to 3,500 additional dwellings within greenfield areas served by infrastructure in the short-term.

Table 4-18: Waipā District Plan Enabled Residential Capacity: Short-Term – 2023

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						SHORT-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	400	2,100	2,100	8,500	8,900	10,600	400	2,100	2,100	3,500	4,000	5,700
Te Awamutu	800	2,000	2,000	5,800	6,500	7,800	800	2,000	2,000	3,400	4,200	5,400
Kihikihi	200	500	500	100	300	600	200	500	500	100	300	600
Total Main Urban Areas	**1,400**	**4,600**	**4,600**	**14,400**	**15,800**	**19,000**	**1,400**	**4,600**	**4,600**	**7,100**	**8,400**	**11,700**
Total Settlements	300	1,400	1,400	-	300	1,400	300	1,400	1,400	-	300	1,400
TOTAL URBAN	**1,700**	**6,000**	**6,000**	**14,400**	**16,100**	**20,400**	**1,700**	**6,000**	**6,000**	**7,100**	**8,700**	**13,100**

Source: M.E FPP Residential Capacity Model, 2020.

Around half to two-thirds of the infrastructure served plan enabled capacity is projected to be commercially feasible in the short-term. This amounts to a projected feasible capacity of 5,900 to 6,500 additional dwellings across the main urban areas. Most (80% to 90%) of this occurs within the greenfield areas (+5,100 dwellings).

Cambridge contains the largest amount of feasible capacity, with over three-quarters of the greenfield capacity feasible that has infrastructure in the short-term. Around two-thirds of the greenfield capacity in Te Awamutu is projected to be feasible.

When taking into account the capacity that is RER, there is an estimated potential development capacity for around 4,300 to 4,400 additional dwellings in the district's main urban areas in the short-term. This amounts to around 40% to 50% of the plan enabled infrastructure served capacity, and around 60% to 70% of the projected commercially feasible capacity.

Within the greenfield areas, around three-quarters (72%) of the infrastructure-served greenfield areas are projected to be feasible development options within the short-term. When taking into account what is RER, the yield on the feasible capacity reduces by about 18% to 4,200 additional dwellings. This represents nearly all (95% to 97%) of the total RER capacity.

It is estimated that around 30% of the plan enabled capacity within the existing urban area is currently commercially feasible. The modelling assumes that 15% of this would be likely to represent RER development opportunities within the short-term. This results in a small contribution of around 100 to 200 additional dwellings within the main urban areas within the short-term. This equates to around 5% of plan-enabled existing urban capacity, and less than 5% of the RER development opportunity.

Table 4-19: Waipā District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Short-Term – 2023

	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
LOCATION	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	300	400	600	2,800	3,100	3,400	40	60	90	2,300	2,300	2,400
Te Awamutu	400	200	500	2,300	2,700	2,800	60	30	80	1,900	1,900	2,000
Kihikihi	100	300	300	30	100	300	10	40	40	20	40	70
TOTAL MAIN URBAN	**800**	**900**	**1,400**	**5,100**	**5,900**	**6,500**	**100**	**100**	**200**	**4,200**	**4,300**	**4,400**

Source: M.E FPP Residential Capacity Model, 2020.

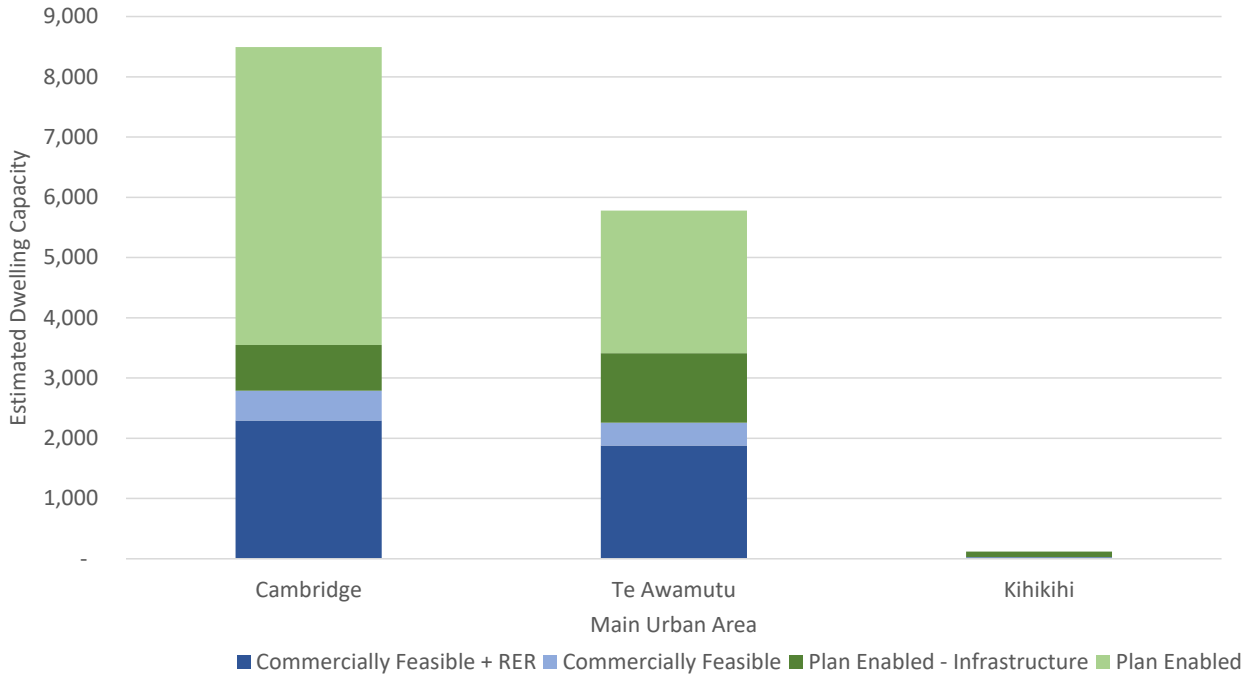
The estimated dwelling capacity by main urban area is summarised in Figure 4-14 and Figure 4-15. They show the total plan enabled capacity, and the components of this that are estimated to be RER (dark blue), commercially feasible by not RER (light blue), plan enabled and infrastructure served but not commercially feasible (dark green) and plan enabled but not infrastructure served (light green). Figure 4-14Figure 4-1 shows the capacity on the greenfield areas only, and Figure 4-15, the combined capacity on both the greenfield and existing urban areas.

Key aspects are:

- The largest projected capacity occurs within Cambridge in the short-term, with substantial capacity also in Te Awamutu. Kihikihi contains a smaller amount of capacity.
- The projected amount of RER (up to 4,400 additional dwellings) capacity represents a significant opportunity for development in relation to the current urban dwelling demand base (approximately 13,200 dwellings across the main urban areas).
- There are significant areas of greenfield capacity beyond the projected feasible capacity that are currently served by infrastructure in the short-term, particularly in Te Awamutu.

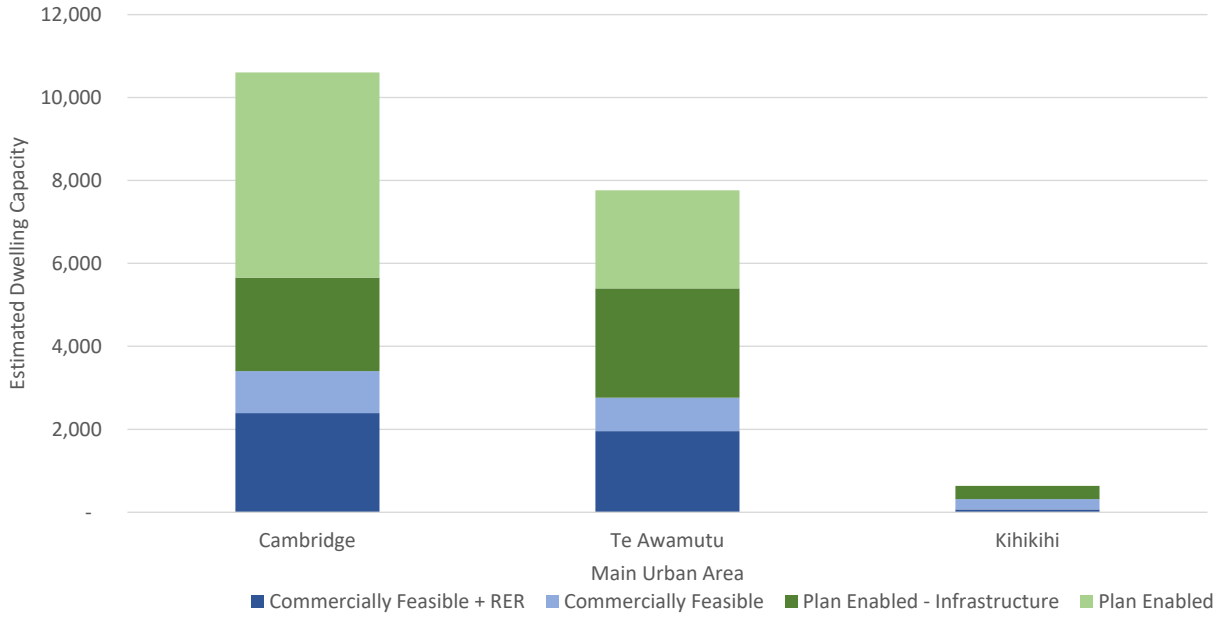
- Both Cambridge and Te Awamutu contain a large amount of zoned greenfield capacity that is not currently served by infrastructure within the short-term.

Figure 4-14: Waipā District Estimated Urban Residential Capacity: Greenfield – Short-Term – 2023



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-15: Waipā District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Short-Term – 2023



Source: M.E FPP Residential Capacity Model, 2020.

4.4.2 Medium-Term Residential Capacity: 2030

There is very little projected change in the plan enabled capacity across Waipā District's main urban areas between the short and medium term. The ODP is used to calculate the plan enabled capacity across all three assessment time periods, meaning that there is no change to the total zoned capacity for residential development.

There is a small projected increase in the area served by infrastructure in Cambridge between the time periods. The increase in infrastructure served plan enabled capacity amount to an increase of 500 additional dwellings in Cambridge, bringing Cambridge's infrastructure served greenfield capacity to an additional 4,000 dwellings.

In total, there is a zoned capacity under the ODP for 15,800 to 19,000 additional dwellings in the main urban areas. When infrastructure constraints are applied, the capacity becomes an additional 8,900 to 12,200 dwellings across the main urban areas (and 9,200 to 13,600 additional dwellings including capacity within the smaller urban settlements).

Table 4-20: Waipā District Plan Enabled Residential Capacity: Medium-Term – 2030

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						MEDIUM-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	400	2,100	2,100	8,500	8,900	10,600	400	2,100	2,100	4,000	4,500	6,100
Te Awamutu	800	2,000	2,000	5,800	6,500	7,800	800	2,000	2,000	3,400	4,200	5,400
Kihikihi	200	500	500	100	300	600	200	500	500	100	300	600
Total Main Urban Areas	**1,400**	**4,600**	**4,600**	**14,400**	**15,800**	**19,000**	**1,400**	**4,600**	**4,600**	**7,600**	**8,900**	**12,200**
Total Settlements	300	1,400	1,400	-	300	1,400	300	1,400	1,400	-	300	1,400
TOTAL URBAN	**1,700**	**6,000**	**6,000**	**14,400**	**16,100**	**20,400**	**1,700**	**6,000**	**6,000**	**7,600**	**9,200**	**13,600**

Source: M.E FPP Residential Capacity Model, 2020.

In the medium-term, there is a projected feasible capacity for an additional 6,300 to 6,900 additional dwellings within the main urban areas. The RER component amounts to around 4,900 to 5,100 additional dwellings.

The estimated commercially feasible capacity is projected to increase by around 400 additional dwellings within Cambridge with the small extension in the plan enabled area served by infrastructure. In holding the market constant through using current prices, there is no change to the projected feasible capacity within the existing urban area.

There is an increase (+500 dwellings) in the RER share of the greenfield commercially feasible capacity between the short and medium-term, to reach a total of 4,700 additional dwellings within the greenfield areas. Most of this occurs through the expansion of infrastructure in Cambridge (+450 dwellings). There are also some increases in the RER yields across the feasible areas as a result of gradual increases in the greenfield development density through time.

The modelling also estimates a small increase in the commercially feasible development options that represent RER capacity within the medium-term. When prices are held constant, the total amount of feasible capacity remains constant, with the RER share increasing to 200 to 300 dwellings. This amounts to around 7% of plan-enabled capacity within the existing urban area, and 7% of the total RER capacity.

Table 4-21: Waipā District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Medium-Term – 2030

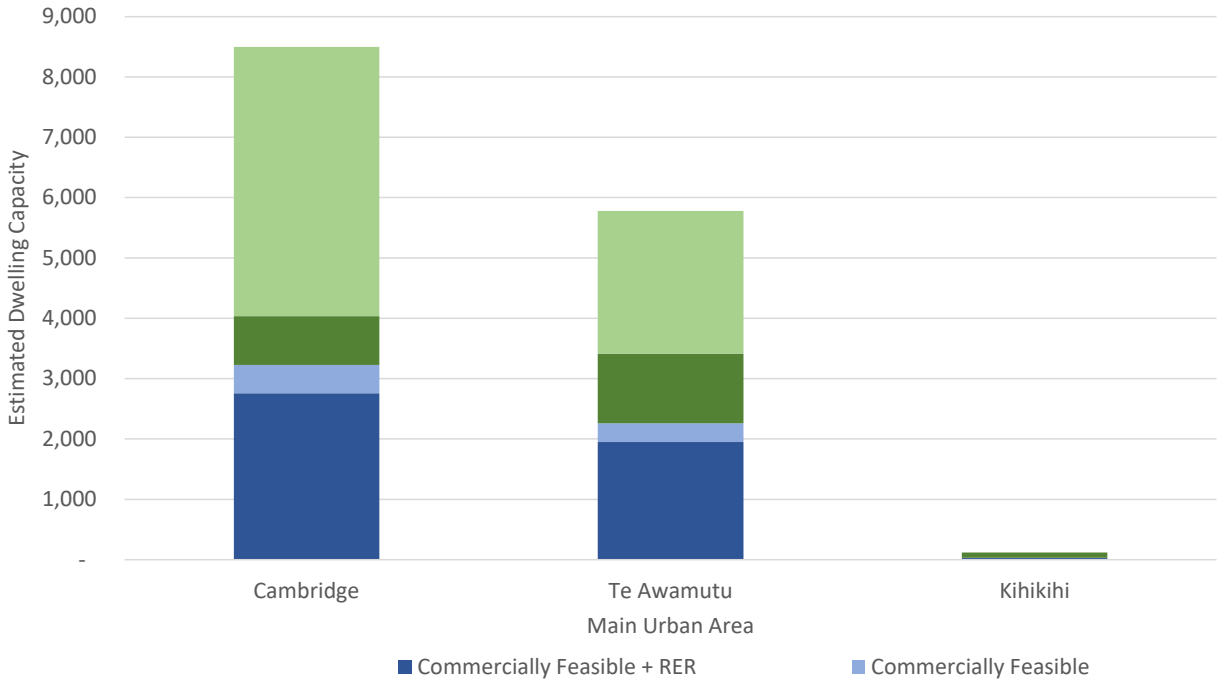
LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	300	400	600	3,200	3,500	3,800	100	200	300	2,800	2,900	3,100
Te Awamutu	400	200	500	2,300	2,700	2,800	200	100	300	1,900	2,100	2,200
Kihikihi	100	300	300	30	100	300	50	100	100	30	70	200
TOTAL MAIN URBAN	**800**	**900**	**1,400**	**5,500**	**6,300**	**6,900**	**400**	**500**	**700**	**4,700**	**5,100**	**5,400**

Source: M.E FPP Residential Capacity Model, 2020.

The total plan enabled capacity across the main urban areas, and the breakdown by capacity type, is shown in Figure 4-16 (greenfield only) and Figure 4-17 (greenfield and existing urban combined). The total zoned area capacity remains the same across the short and medium-term, and the patterns are very similar to

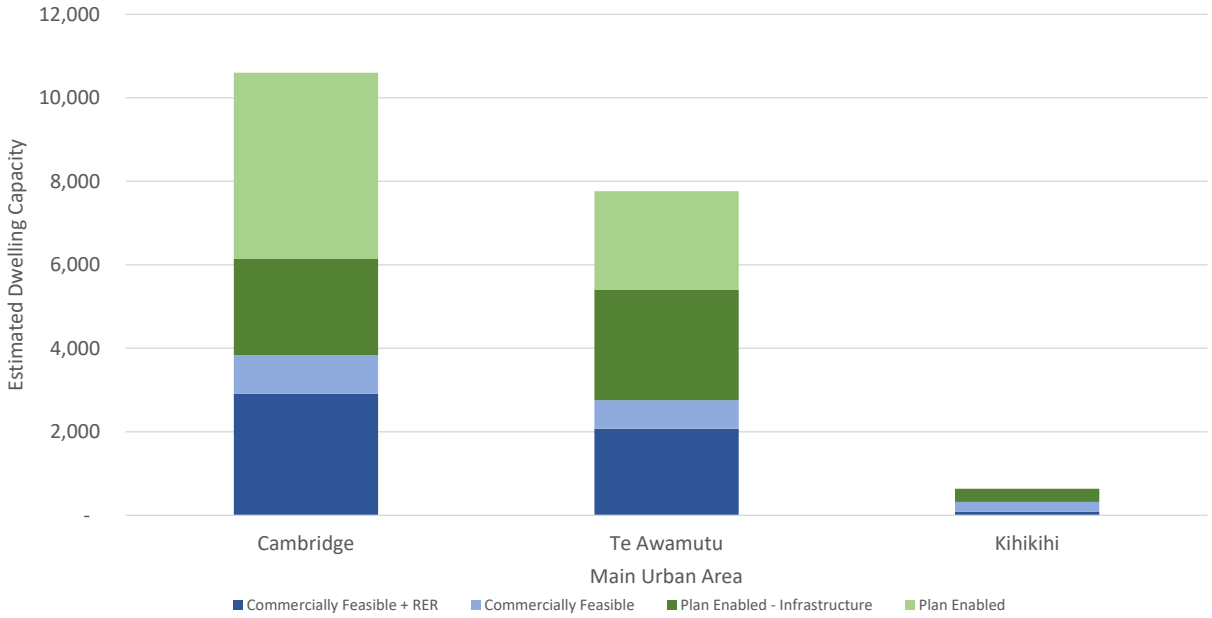
the short-term capacity, with small increases in capacity in Te Awamutu, and a small increase in greenfield RER in Cambridge.

Figure 4-16: Waipā District Estimated Urban Residential Capacity: Greenfield – Medium-Term – 2030



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-17: Waipā District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Medium-Term – 2030



Source: M.E FPP Residential Capacity Model, 2020.

4.4.3 Long-Term Residential Capacity: 2050

The total greenfield zoned area remains constant between the medium and long-term as the ODP zoning has been used as the zoning layer in both assessment periods. However, within this, there are sizeable increases in the zoned greenfield areas that are planned to be served by infrastructure in the long-term. The infrastructure served greenfield capacity is projected to increase by around two-thirds between these time periods (+5,100 additional dwellings), to reach a total infrastructure served greenfield capacity of 12,700 additional dwellings by the long-term. Greenfield capacity increases are projected to occur across the main urban areas of Cambridge and Te Awamutu as further growth cell areas are supplied with infrastructure throughout the long-term.

In combination with the existing urban area, there is a projected long-term infrastructure served plan enabled capacity of between 14,100 and 17,300 additional dwellings across the main urban areas. There is a further 300 to 1,400 additional dwelling capacity within the smaller urban settlements, bringing the total long-term plan enabled capacity to between 14,400 and 18,700 additional dwellings.

Table 4-22: Waipā District Plan Enabled Residential Capacity: Long-Term – 2050

LOCATION	NO INFRASTRUCTURE CONSTRAINTS						LONG-TERM INFRASTRUCTURE PROVISION					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	400	2,100	2,100	8,500	8,900	10,600	400	2,100	2,100	6,800	7,200	8,900
Te Awamutu	800	2,000	2,000	5,800	6,500	7,800	800	2,000	2,000	5,800	6,500	7,800
Kihikihi	200	500	500	100	300	600	200	500	500	100	300	600
Total Main Urban Areas	**1,400**	**4,600**	**4,600**	**14,400**	**15,800**	**19,000**	**1,400**	**4,600**	**4,600**	**12,700**	**14,100**	**17,300**
Total Settlements	300	1,400	1,400	-	300	1,400	300	1,400	1,400	-	300	1,400
TOTAL URBAN	**1,700**	**6,000**	**6,000**	**14,400**	**16,100**	**20,400**	**1,700**	**6,000**	**6,000**	**12,700**	**14,400**	**18,700**

Source: M.E FPP Residential Capacity Model, 2020.

The following tables (Table 4-23 to Table 4-25) show the portion of Waipā District's plan enabled capacity that is projected to represent commercially feasible development options in the long-term and the share which are estimated to represent RER development opportunities. In this section, three scenarios are presented for long-term feasible capacity. Table 4-23 contains the capacity estimates under the current prices scenario where the change in feasible capacity is a function only of infrastructure expansion within the greenfield areas. The alternative scenarios that take into account the effect of demand growth through changing costs and prices and contained in Table 4-24 (Growth Scenario 1) and Table 4-25 (Growth Scenario 2).

Current Prices Scenario

Under the current prices scenario, the greenfield areas that are feasible to develop correspondingly increase across both Cambridge and Te Awamutu with the further expansion of infrastructure from the medium-term. The largest increase occurs in Cambridge, where the further feasible greenfield areas could accommodate an additional 2,500 dwellings, bringing the total feasible greenfield capacity to 5,800 dwellings (and 6,100 to 6,400 additional dwellings with the existing urban area).

The net increase in commercially feasible capacity within Te Awamutu in the long-term is smaller despite similar increases in plan enabled capacity to Cambridge. Part of this is due to the presence of lifestyle block areas (and their associated value) within the areas of infrastructure expansion.

In total, there is a projected capacity of 10,100 to 10,800 additional feasible dwellings across the main urban areas. There is no change to the feasible development opportunity under the current prices scenario as the market is held constant.

Once the RER component is taken into account, this results in a development opportunity capacity of 9,300 to 9,700 additional dwellings across Waipā's main urban areas. The RER development yield across the feasible greenfield areas amounts to an additional 8,900 dwellings, which is around 95% of the maximum potential yield on the feasible greenfield areas, and 70% of the plan enabled yield in the total greenfield area served by infrastructure.

Within the existing urban area, there is an estimated RER of 800 additional dwellings. This equates to just over half (56%) of the development opportunities being taken up that are estimated to be feasible in the current market, and 17% of the total plan-enabled capacity. Under the current prices scenario, the RER only considers the take-up of development opportunity that is estimated to be currently feasible and does not consider any development opportunities that are likely to become feasible in the future.

Table 4-23: Waipā District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Current Prices)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	300	400	600	5,800	6,100	6,400	200	200	400	5,500	5,700	5,900
Te Awamutu	400	200	500	3,500	3,900	4,000	200	100	300	3,400	3,600	3,700
Kihikihi	100	300	300	30	100	300	40	100	100	30	70	100
TOTAL MAIN URBAN	**800**	**900**	**1,400**	**9,400**	**10,100**	**10,800**	**400**	**500**	**800**	**8,900**	**9,300**	**9,700**

Source: M.E FPP Residential Capacity Model, 2020.

Growth Scenario 1

Under the lower growth scenario (Growth Scenario 1), the commercially feasible capacity increases across Waipā's main urban areas. A greater share of the infrastructure-served greenfield areas become commercially feasible to develop. The potential yield from feasible greenfield areas increases to an additional 11,700 dwellings (up from 9,400 under the current prices scenario) (see Table 4-24). The largest increases occur across Te Awamutu as it becomes feasible to redevelop existing lifestyle block areas with growth in the market.

A greater range of development opportunities also become feasible within the existing urban area. The potentially feasible development opportunities increases to around 900 to 1,900 additional dwellings within the urban area. The largest increase occur within the redevelopment capacity where growth in the market over time makes it feasible to redevelop properties.

When taking account of the RER component of the feasible capacity, Growth Scenario 1 has a total capacity of between 11,700 and 12,200 additional dwellings across the main urban areas. Most of this occurs within the greenfield areas, where the RER yield on the feasible areas is estimated to be around 11,100 additional dwellings.

The RER yield within the existing urban area increases slightly by 100 to 300 additional dwellings (from the current prices scenario), to have a total RER of 500 to 1,100 additional dwellings. The increase is due to a greater range of development options becoming feasible with market growth. Similar rates of take up, to the current prices scenario, across the feasible development options within the existing urban area. In total, it amounts to just over half (56%) of the feasible development opportunities in the long-term and 23% of the plan enabled capacity.

Table 4-24: Waipā District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Growth Scenario 1)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	300	700	800	6,100	6,400	6,900	200	400	500	5,800	6,000	6,300
Te Awamutu	500	400	700	5,600	6,100	6,300	300	300	400	5,300	5,600	5,700
Kihikihi	100	400	400	30	100	400	40	100	200	30	70	200
TOTAL MAIN URBAN	**900**	**1,500**	**1,900**	**11,700**	**12,600**	**13,600**	**500**	**800**	**1,100**	**11,100**	**11,700**	**12,200**

Source: M.E FPP Residential Capacity Model, 2020.

Growth Scenario 2

The commercially feasible capacity increases further under Growth Scenario 2 to between 13,400 to 14,800 additional dwellings. The feasible greenfield areas increase slightly, with a yield increase of an additional 500 dwellings. The increase is smaller between the growth scenarios as most of the greenfield areas already become feasible to develop under the lower growth scenario. In total, there is a potential yield of 12,200 dwellings on the feasible greenfield areas.

The RER component of the feasible greenfield areas amounts to 11,600 dwellings under the second growth scenario. This is an increase of 400 dwellings from the lower growth scenario.

There is also an increase of the RER component of the feasible capacity within the existing urban area. There is a projected 700 to 1,500 dwellings within this area. This assumes the same level of uptake across the feasible development options, with the increase occurring due to an increase in the number of development options that become feasible. It amounts to just over half (57%) of the feasible development options over the long-term, and 33% of the plan enabled capacity.

Table 4-25: Waipā District Commercially Feasible and Reasonably Expected to be Realised Residential Capacity: Long-Term – 2050 (Growth Scenario 2)

LOCATION	COMMERCIALLY FEASIBLE						REASONABLY REALISED CAPACITY					
	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment	Max Infill	Max Redevelopment	Max Existing Urban	Greenfield	Greenfield + Infill	Greenfield + Infill + Redevelopment
Main Urban Areas												
Cambridge	-	1,000	1,200	6,400	6,800	7,500	200	600	700	6,100	6,300	6,800
Te Awamutu	700	700	1,000	5,700	6,400	6,700	400	400	600	5,400	5,900	6,100
Kihikihi	100	400	400	80	200	500	50	200	200	70	100	200
TOTAL MAIN URBAN	**1,200**	**2,200**	**2,700**	**12,200**	**13,400**	**14,800**	**700**	**1,200**	**1,500**	**11,600**	**12,300**	**13,100**

Source: M.E FPP Residential Capacity Model, 2020.

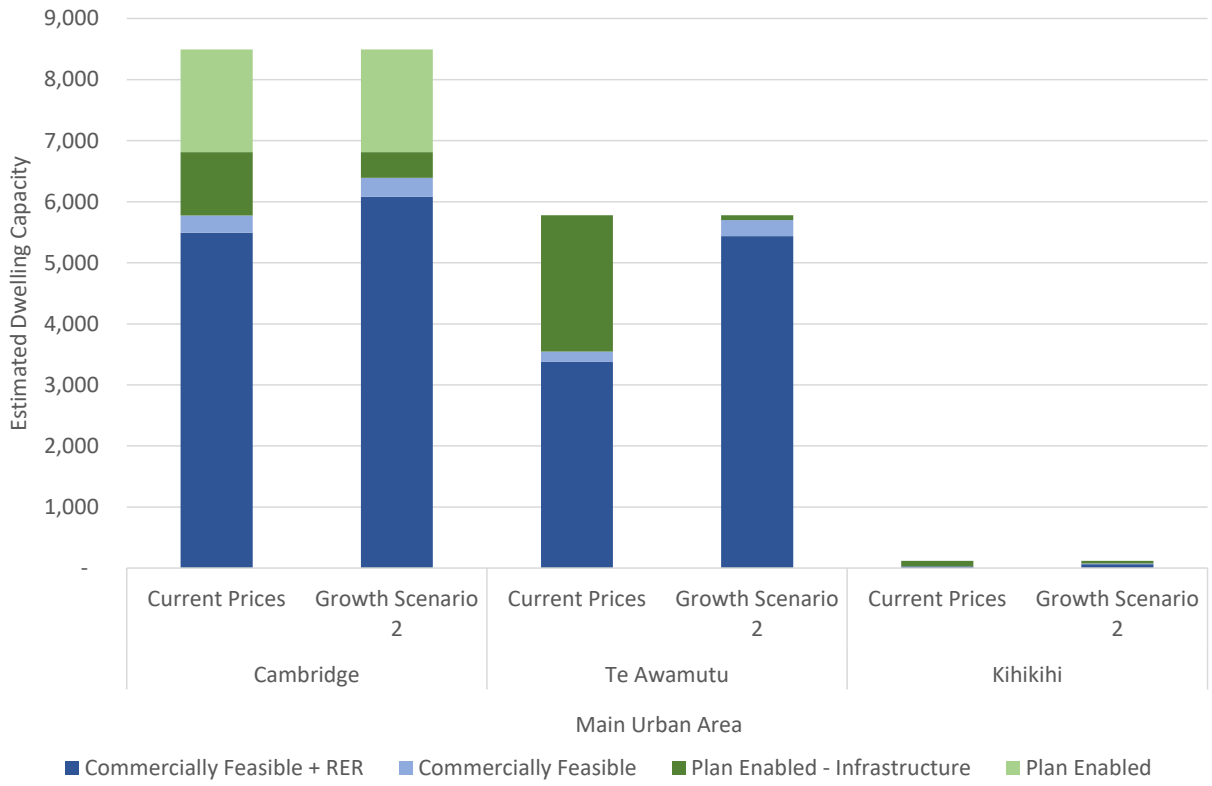
The total plan enabled capacity across the main urban areas, and the breakdown by capacity type, is shown in Figure 4-18 (greenfield only) and Figure 4-19 (greenfield and existing urban combined).

The total zoned area capacity remains the same across the short, medium and long-term. However, the total feasible and RER capacity increases. The difference in capacity between Cambridge and Te Awamutu increases in the long-term, under the current prices scenario, as the feasibility of capacity around Te Awamutu is lower in the long-term relative to Cambridge. With some market growth in Growth Scenario 2,

almost all of the infrastructure served greenfield areas become feasible to develop in both Cambridge and Te Awamutu.

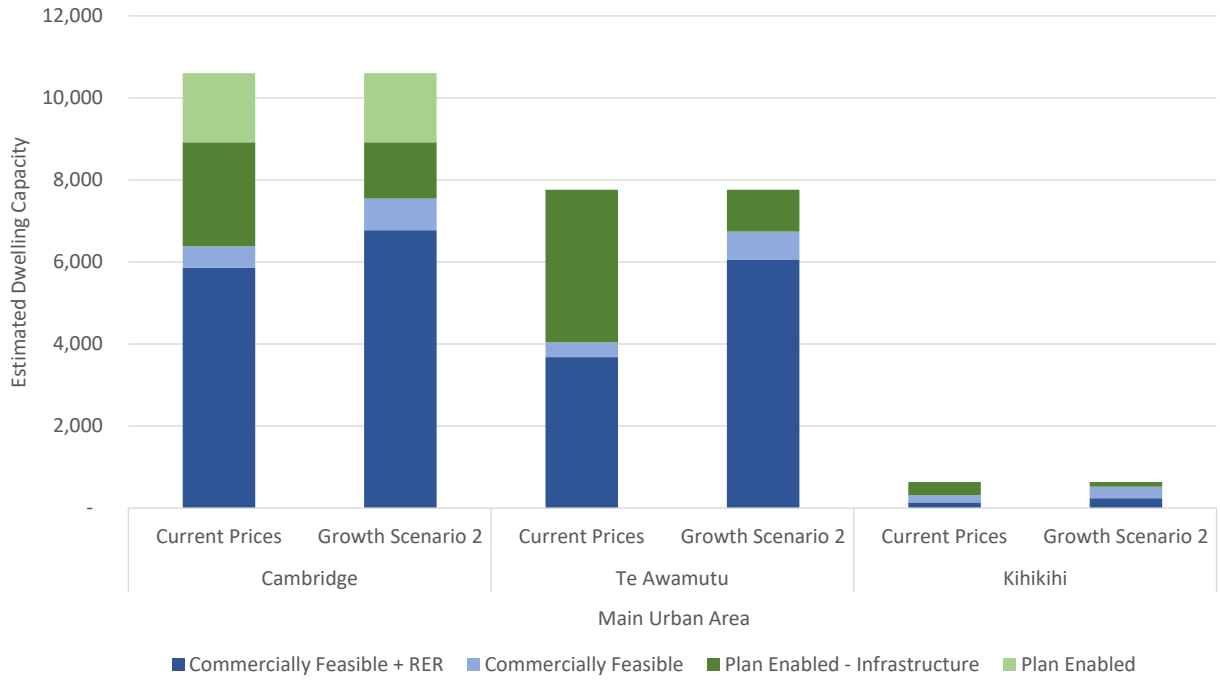
The graphs show that all of the plan enabled greenfield capacity in Te Awamutu is planned to be served by infrastructure in the long-term. However, a significant portion of the greenfield capacity around Cambridge is not planned to be served by infrastructure. Both areas have significant areas of infrastructure served greenfield capacity that are not projected to be commercially feasible to develop (at a 20%+ margin) in the long-term under the current prices scenario. This is mainly due to the presence of existing lifestyle block land uses in these areas. However, these areas largely become feasible to develop with market growth under the growth scenarios.

Figure 4-18: Waipā District Estimated Urban Residential Capacity: Greenfield – Long-Term – 2050



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-19: Waipā District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban – Long-Term – 2050



Source: M.E FPP Residential Capacity Model, 2020.

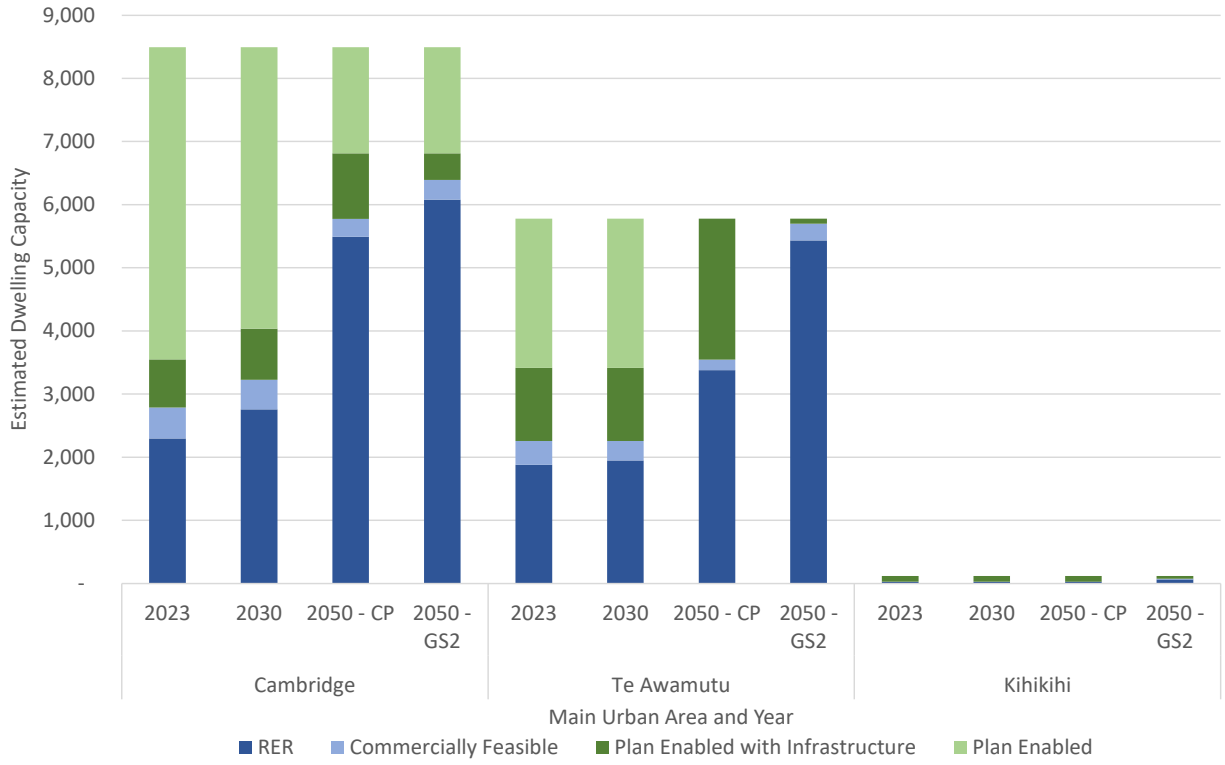
4.4.4 Residential Capacity: Short, Medium and Long-Term

The following graphs (Figure 4-20 and Figure 4-21) summarise the change in projected capacity through time across the district's main urban areas. Figure 4-20 shows the greenfield capacity only, and Figure 4-21 both the greenfield and existing urban capacity.

The additional projected capacity is distributed across the main urban areas of Cambridge and Te Awamutu, with a minor share in Kihikihi. These areas contain the main residential growth cells that have planned infrastructure supply through time. Much of the growth capacity for Kihikihi is supplied as large lot residential zones to accommodate lifestyle dwelling demand, which is outside the scope of the urban capacity assessment.

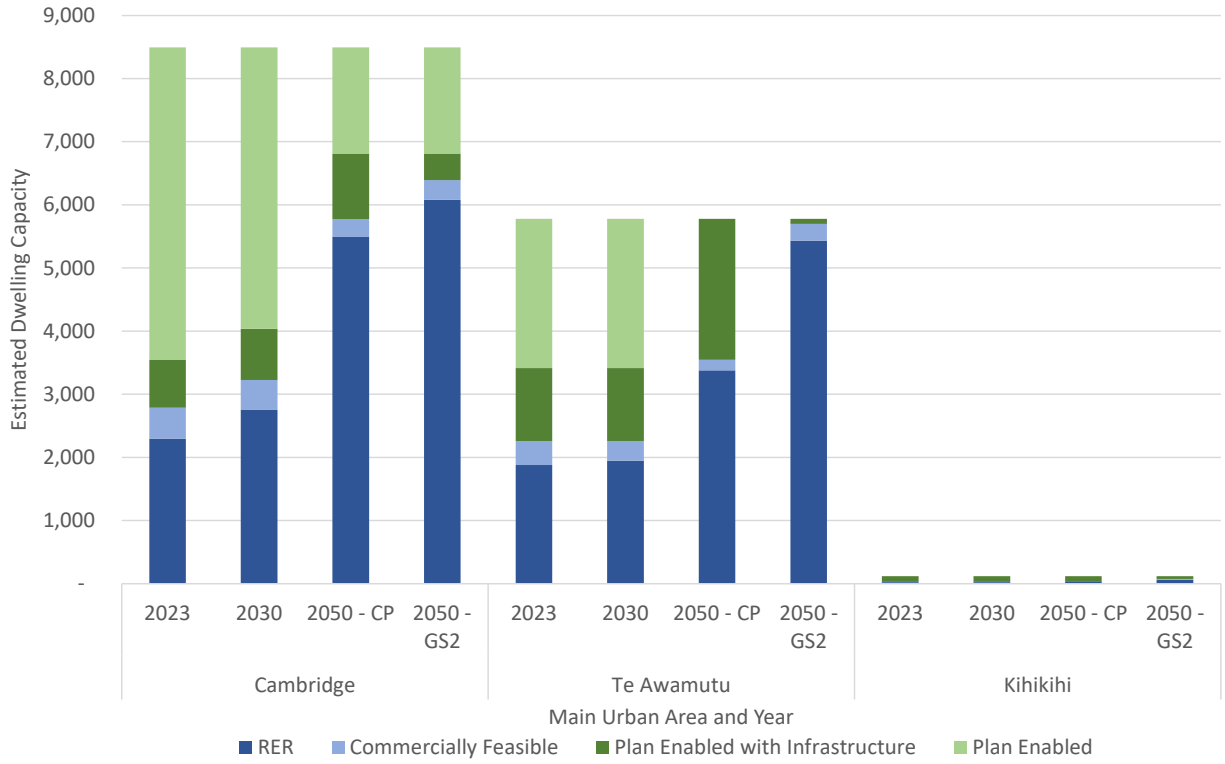
Higher shares of the greenfield capacity is projected to be feasible within Cambridge than Te Awamutu under the current prices scenario, with similar shares in the growth scenario.

Figure 4-20: Waipā District Estimated Urban Residential Capacity: Greenfield 2023-2050



Source: M.E FPP Residential Capacity Model, 2020.

Figure 4-21: Waipā District Estimated Urban Residential Capacity: Greenfield and Maximum Existing Urban 2023-2050



Source: M.E FPP Residential Capacity Model, 2020.

5 Sufficiency of Capacity

5.1 Introduction

The NPS-UD requires an assessment of the sufficiency of the estimated capacity to meet future demand. The policy statement considers that sufficient capacity needs to be supplied to meet demand over the short, medium and long-term as well as an additional margin to ensure that there are likely to be a range of development options within which the market can operate.

This section contains the sufficiency assessment for each of the FPP areas over the short, medium and long-term. It draws together the capacity calculations within Section 4 and the demand for dwellings in Section 3.

5.2 Approach

A sufficiency assessment has been conducted for each of the FPP areas. The assessments compare the urban capacity with urban demand, as set out in Sections 3 and 4. The assessment have been undertaken at the scale at which the main markets within the FPP area operate. This is important because the districts cover a large geographic area where location is not substitutable across the extent of the area to meet demand[51]. The assessments compare the demand arising within each part of the districts with the capacity which is likely to represent a suitable geographic market within which to meet the demand. Within this, the urban areas identified in the previous sections have been aggregated into geographic groupings. This is also important to enable the market sufficient flexibility to take up capacity options across these areas.

Within the Waikato District, sufficiency is assessed across the following geographic areas:

- Pōkeno/Tuakau – northern urban areas of the district.
- Te Kauwhata/Ngāruawāhia/Huntly/Taupiri – mid-district urban areas.
- Raglan.

Within Waipā District, sufficiency is assessed across the following geographic areas:

- Cambridge.
- Te Awamutu/Kihikihi.

Hamilton City is treated as one urban market where household demand is met across different types of location within the urban area. The feasibility modelling disaggregates the market into different types of locations, corresponding with dwelling values constructed in each type of area. When this analysis is compared to demand by dwelling value band, it assesses whether there are sufficient dwelling capacity options across Hamilton to meet the demand for different value locations.

[51] For example, the modelling assumes that demand arising within the northern part of the Waikato district needs to be met within the northern urban areas of Pōkeno/Tuakau and is not able to be met further south across the urban areas within the mid part of the district. It appropriately spatially matches demand with capacity.

The sufficiency assessment disaggregates the capacity by types of location within Hamilton to show the relative contribution of each type of location to the sufficiency of capacity in each value band. These include the City Centre, the rest of the existing urban area and the greenfield areas.

In accordance with the NPS-UD, the sufficiency assessment compares the RER capacity with the demand and demand margin. In the short-term, the RER capacity must be plan-enabled (under an Operative District Plan), have existing infrastructure in place, and be commercially feasible to develop. In the medium-term, the RER capacity must be plan enabled (either under an Operative or Proposed District Plan), served by infrastructure (either existing infrastructure or have funding identified in a long-term plan), and be commercially feasible to develop. Within the existing urban area, the assessment uses the maximum feasible RER capacity from a combination of the infill and redevelopment development options.

The NPS-UD requires that under the short and medium-term assessments, the capacity must be feasible in today's market, using current prices. It must be compared to the expected demand for dwellings, plus a 20% competitiveness margin on the net increase in demand.

In the long-term, the NPS-UD allows assessment of RER capacity that is feasible at a range of different market growth assumptions, including a scenario of no market change – i.e. where long-term demand is compared to the capacity which is current feasible within the market. Alternative scenarios are able to be included, which allow a level of growth to occur within the market. Over the long-term, capacity must be compared to the net increase in demand plus a 15% competitiveness margin (on the net increase in dwelling demand).

Our assessment provides the required current prices comparisons for the short, medium and long-term. In addition, it provides a sufficiency assessment for the two growth scenarios outlined in Section 4. We have also included these results as additional information within the short and medium-term assessments to show the sensitivity of the analysis to holding prices constant. This is important because it contributes to an understanding of which aspects of the process may be contributing to any identified shortfalls in capacity.

In undertaking our sufficiency assessments, we also consider the volume of further capacity at each classification. For instance, we subsequently also show the total amount of commercially feasible and plan-enabled capacity in relation to the demand (plus a margin). This is important because it helps to identify whether there are any supply constraints in relation to either the quantity of development opportunity supplied within the planning framework, or within the market.

Within each of the main urban areas our analysis disaggregates the sufficiency assessment by dwelling value band. This shows whether there are any shortfalls or surpluses within different value band parts of the market. While a surplus or shortfall may be present at the total level, there may be differences of sufficiency within different parts of the market.

Importantly, our value band assessment considers the total market rather than just the marginal addition of new dwelling stock and new household formation. It is critical to take this approach when assessing the sufficiency of different value bands as there is significant movement within the marketplace. This is a key sorting mechanism through which the different and changing needs are met within the market. It would be incorrect to simply compare new dwelling stock with the new households formed. A large portion of the (particularly higher value) dwelling stock is likely to be occupied through the movement of existing

households into these dwellings. Correspondingly, a high share of the newly formed households' demand for dwellings is likely to be met within lower value dwellings within the existing stock.

It is important to be aware that by nature, the sufficiency assessments are likely to overstate shortfalls in capacity within the lower dwelling value bands, and overstate capacity surpluses in the higher dwelling value bands. The requirement is to compare demand with feasible capacity at a snapshot in time, where the capacity assessment identifies the capacity that is feasible to construct at the snapshot point in time. This is an important distinction from a growth modelling assessment (which is outside the scope of the NPS-UD capacity assessment) whereby capacity is gradually taken up through time.

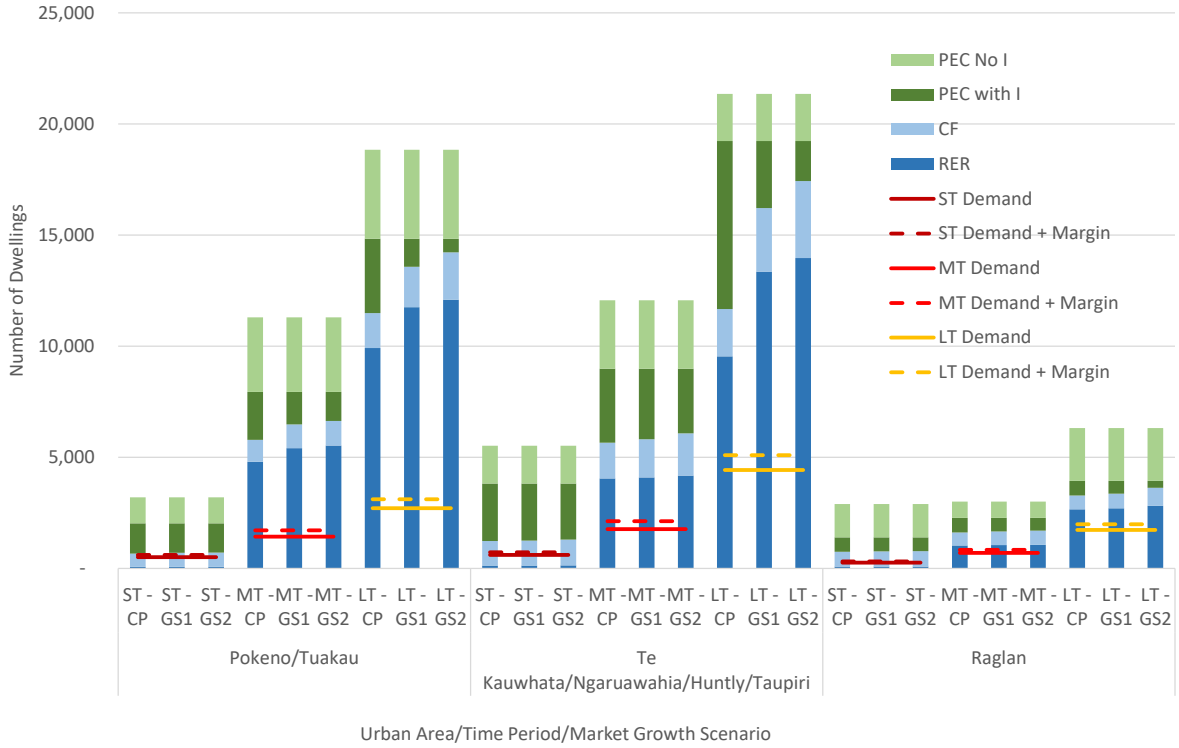
The prices at which capacity is constructed change through time, with capacity taken up at the start of each time period likely to be at lower prices. This is not reflected in a snapshot approach where demand is compared to feasible capacity at a particular point in time. As such, the modelling does not capture the lower values at which a share of the stock would be added through time. It therefore understates the likely future dwelling stock within the lower to mid value bands and correspondingly, overstates any shortfalls which may occur within these bands. Conversely, the total feasible capacity estimated within higher value bands is typically overstated, where a share of the capacity is likely to have already been constructed earlier on at lower prices.

5.3 Waikato District Sufficiency Assessment

5.3.1 District Level Urban Summary

The graph below (Figure 5-1) summarises the sufficiency of potential future dwelling capacity across each of Waikato District's main urban areas in the short, medium and long-term. It includes the capacity across both the existing urban and potential future greenfield areas. The bars show the estimated additional future capacity, while the lines show the projected net increase in dwelling demand. The three modelled scenarios (current prices, growth scenario 1, and growth scenario 2) are shown for each time period. However, in accordance with the NPS-UD requirements, sufficiency is assessed only in relation to the current prices scenario for the short and medium-term. The other scenarios have been shown for information purposes.

Figure 5-1: Projected Urban Residential Dwelling Capacity and Urban Dwelling Demand by Waikato District Urban Area and Market Growth Scenario: Short, Medium and Long-Term



Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

The capacity bars in the graph follow the same structure as the capacity graphs in Section 4.The full extent of the bars show the total plan-enabled capacity across the greenfield and existing urban areas combined. The bars are disaggregated into different categories of capacity, which are additive to the full extent of the bar (i.e. the total capacity enabled under the Plan). The light green portions of the bars show the capacity that is enabled under the Plan, but is not served by infrastructure. The dark green sections show the plan-enabled capacity that is served by infrastructure, but is not estimated to be commercially feasible to develop. The light blue sections show the plan-enabled capacity that is estimated to be commercially feasible to develop, but does not fall within the reasonably expected to be realised (RER) estimate. The dark blue sections of the bars show the component of the feasible capacity that is estimated to be RER.

The lines on the graph show the projected demand for dwellings across each time period. The solid lines show the net increase in demand across the time period (from 2020). The dashed lines show the net increase in demand together with the margin required on the NPS-UD. A 20% margin is applied in the short and medium-terms, while a 15% margin is applied across the long-term.

The sufficiency assessment compares the demand plus a margin with the RER capacity within each time period.

In the short-term, the sufficiency assessment suggests that there are shortfalls in potential future capacity across all of the urban areas in the district. There are capacity shortfalls of around 600 dwellings across the mid-district urban areas (combined) of Te Kauwhata, Ngāruawāhia, Huntly and Taupiri where the RER capacity estimates compare to a demand (plus margin) for an additional 700 dwellings. A similar shortfall

is projected to occur in the northern urban areas of Pōkeno and Tuakau of around 500 dwellings, and a shortfall of around 200 dwellings in Raglan.

The short-term shortfalls in these areas occur as no greenfield capacity is included within the short-term assessment. Information supplied on the greenfield areas showed there were no greenfield areas that already have infrastructure in place. The RER capacity is estimated entirely from the potential uptake of a share of the feasible development opportunities within the existing urban areas.

There are significant development opportunities that are projected to be currently feasible within the existing urban areas of these centres. In all cases, they exceed the projected shortfalls in capacity. However, in Pōkeno/Tuakau, the estimated feasible options within the existing urban area only exceeds the projected demand by a minor amount. This largely occurs as much of the existing urban area has been developed relatively recently, and therefore, at intensities that either do not allow significant further infill, or where the value of the relatively new existing dwellings makes redevelopment options infeasible. It is likely that some of the short-term shortfalls in capacity will be met through a greater uptake of the feasible development options within the existing urban areas.

In the medium and long-terms, the north and mid-district main urban areas have a sizeable projected surplus in the capacity sufficiency assessment. This is due to the large expansion of infrastructure-served future greenfield areas under the PDP and Waikato 2070 Plans. It is projected that large parts of this capacity are likely to represent feasible development options.

In the medium-term, the largest surpluses are projected to occur across Pōkeno and Tuakau, with a combined surplus of around 3,100 dwellings. A further surplus of around 1,900 dwellings is projected to occur across the main urban areas of the mid part of the district. The surplus is smaller (around 200 dwellings) in Raglan.

In the long-term, there are large amounts of further infrastructure-served greenfield expansion under the Waikato 2070 Plan. There are also limited areas of zoned intensification within the existing urban areas, in the long-term. However, this assessment only captures a share of the future intensification areas as these were not available at the time of modelling. The main areas of intensification modelled are in Huntly and Ngāruawāhia.

There are large projected surpluses across the district in the long-term. Together, these amount to 11,900 to 18,700 dwellings across the main urban areas. The surpluses occur largely as a result of the expansion of the greenfield areas in the medium and long-terms. In comparison, the total demand, across these urban areas, amounts to around 8,900 additional dwellings in the long-term (10,200 additional urban dwellings with a margin)[52].

The following sub-sections provide further examination of the sufficiency of capacity by dwelling value band in the short, medium and long-term.

[52] As set out in Section 3, this includes the demand for urban dwellings. Total growth for the district is projected to be higher as it also includes a significant component of non-urban (lifestyle and rural) dwelling demand growth.

5.3.2 Short-Term Sufficiency: 2023

The sufficiency of capacity by dwelling value band is shown in Table 5-1 to Table 5-3 below. Each row of the table represents a dwelling value band. As set out in Section 5.2, it is important to assess the total dwelling stock (current plus potential future estate) in relation to the total household demand (current plus potential future households) when assessing sufficiency by dwelling value band. The upper part of the tables where RER feasible capacity is displayed form the sufficiency assessment requirements.

While not included as part of the sufficiency assessment, the comparison of demand to the total projected feasible development capacity options are also shown. These follow the same structure as the sufficiency assessment tables. It is important also to understand the value band distribution of the total feasible capacity as this estimates the potentially feasible development option for the commercial market. These are displayed in the lower half of the tables below.

The first part of the tables (yellow columns) show the total and potential future demand (including the margin) for dwellings within each of the dwelling value bands. The middle (blue columns) section of the table shows the total dwelling capacity across each of the district's main urban areas. The first column shows the existing base, while the middle three columns show the potential additional dwelling capacity (RER component), with the final blue column showing the current and potential future dwelling estate combined. This final blue column is compared to the final yellow column (demand plus margin) to produce the final sufficiency (orange section) part of the table. The sufficiency section shows the net difference between the total potential capacity and potential demand within each value band (first column), with this number expressed as a percentage of the total dwelling stock in the final column.

Table 5-1: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Pōkeno/Tuakau – Short-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2023 Demand	2023 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	70	90	90	70	-	-	-	70	-20	81%
$200k to $300k	70	90	90	70	-	-	-	70	-20	81%
$300k to $400k	100	100	100	100	-	-	-	100	-30	81%
$400k to $500k	500	600	600	500	-	-	-	500	-100	81%
$500k to $600k	600	700	700	600	-	-	-	600	-100	81%
$600k to $700k	600	700	700	600	20	-	20	600	-100	84%
$700k to $800k	600	800	800	600	40	-	40	700	-100	87%
$800k to $900k	60	70	70	60	-	-	-	60	-10	86%
$900k to $1m	10	20	20	10	-	-	-	10	0	81%
$1m+	10	10	10	10	-	-	-	10	0	81%
TOTAL	**2,600**	**3,100**	**3,200**	**2,600**	**70**	**-**	**70**	**2,700**	**-500**	**83%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	70	90	90	70	-	-	-	70	-20	81%
$200k to $300k	70	90	90	70	-	-	-	70	-20	81%
$300k to $400k	100	100	100	100	-	-	-	100	-30	81%
$400k to $500k	500	600	600	500	-	-	-	500	-100	81%
$500k to $600k	600	700	700	600	-	-	-	600	-100	81%
$600k to $700k	600	700	700	600	200	-	200	800	70	110%
$700k to $800k	600	800	800	600	400	-	400	1,100	300	136%
$800k to $900k	60	70	70	60	30	-	30	90	20	129%
$900k to $1m	10	20	20	10	-	-	-	10	0	81%
$1m+	10	10	10	10	-	-	-	10	0	81%
TOTAL	**2,600**	**3,100**	**3,200**	**2,600**	**700**	**-**	**700**	**3,300**	**60**	**102%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-2: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Kauwhata/Ngāruawāhia/Huntly/Taupiri – Short-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2023 Demand	2023 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	400	400	400	400	-	-	-	400	-40	89%
$200k to $300k	1,400	1,500	1,600	1,400	-	-	-	1,400	-200	89%
$300k to $400k	2,000	2,200	2,300	2,000	-	-	-	2,000	-300	89%
$400k to $500k	1,100	1,200	1,200	1,100	-	-	-	1,100	-100	89%
$500k to $600k	600	600	600	600	20	-	20	600	-50	93%
$600k to $700k	300	300	300	300	80	-	80	400	40	113%
$700k to $800k	80	90	100	80	20	-	20	100	10	109%
$800k to $900k	20	20	20	20	-	-	-	20	0	89%
$900k to $1m	10	10	10	10	-	-	-	10	0	96%
$1m+	10	10	10	10	-	-	-	10	0	98%
TOTAL	**5,800**	**6,400**	**6,600**	**5,800**	**100**	**-**	**100**	**6,000**	**-600**	**91%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	400	400	400	400	-	-	-	400	-40	89%
$200k to $300k	1,400	1,500	1,600	1,400	-	-	-	1,400	-200	89%
$300k to $400k	2,000	2,200	2,300	2,000	-	-	-	2,000	-300	89%
$400k to $500k	1,100	1,200	1,200	1,100	-	-	-	1,100	-100	89%
$500k to $600k	600	600	600	600	200	-	200	800	200	127%
$600k to $700k	300	300	300	300	800	-	800	1,100	800	334%
$700k to $800k	80	90	100	80	200	-	200	300	200	294%
$800k to $900k	20	20	20	20	-	-	-	20	0	89%
$900k to $1m	10	10	10	10	10	-	10	10	10	161%
$1m+	10	10	10	10	10	-	10	10	0	177%
TOTAL	**5,800**	**6,400**	**6,600**	**5,800**	**1,200**	**-**	**1,200**	**7,100**	**500**	**108%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-3: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Raglan – Short-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2023 Demand	2023 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	-	-	-	-	-	-	-	-	0	85%
$200k to $300k	70	80	80	70	-	-	-	70	-10	85%
$300k to $400k	200	200	200	200	-	-	-	200	-30	85%
$400k to $500k	400	500	500	400	-	-	-	400	-80	85%
$500k to $600k	400	400	400	400	-	-	-	400	-60	85%
$600k to $700k	300	400	400	300	20	-	20	300	-40	90%
$700k to $800k	200	200	200	200	40	-	40	200	10	103%
$800k to $900k	100	100	100	100	20	-	20	100	0	103%
$900k to $1m	70	80	80	70	-	-	-	70	-10	85%
$1m+	100	100	100	100	-	-	-	100	-20	85%
TOTAL	**1,800**	**2,100**	**2,200**	**1,800**	**70**	**-**	**70**	**1,900**	**-200**	**89%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	-	-	-	-	-	-	-	-	0	85%
$200k to $300k	70	80	80	70	-	-	-	70	-10	85%
$300k to $400k	200	200	200	200	-	-	-	200	-30	85%
$400k to $500k	400	500	500	400	-	-	-	400	-80	85%
$500k to $600k	400	400	400	400	-	-	-	400	-60	85%
$600k to $700k	300	400	400	300	200	-	200	500	100	132%
$700k to $800k	200	200	200	200	400	-	400	500	300	257%
$800k to $900k	100	100	100	100	200	-	200	300	200	261%
$900k to $1m	70	80	80	70	-	-	-	70	-10	85%
$1m+	100	100	100	100	-	-	-	100	-20	85%
TOTAL	**1,800**	**2,100**	**2,200**	**1,800**	**700**	**-**	**700**	**2,600**	**400**	**120%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

In the short-term, the capacity shortfalls across the districts main urban areas occur across almost all dwelling value bands. In Pōkeno/Tuakau, the shortfalls are largest in the low to mid value bands ($400k to $800k), with some capacity projected to occur within these value bands within the existing urban area (which includes the further uptake of vacant lots within new areas that have already been urbanised). The overall short-term sufficiency of capacity Pōkeno/Tuakau is estimated to be 83%. However, there are significant amounts of feasible development options in Pōkeno within the mid dwelling value bands ($600k to $900k). It is likely that some of the feasible capacity within these value bands could be taken up to meet a share of the shortfall in the adjacent lower value bands.

Shortfalls in capacity are projected to be concentrated into the lower dwelling value bands (up to $500k) within the mid-district main urban areas (Te Kauwhata, Ngāruawāhia, Huntly and Taupiri). This is predominantly due to the existing lower dwelling value band profile of demand within these areas. There are further amounts of feasible capacity within these areas within the upper mid dwelling value bands ($500k to $800k), with no additional capacity projected to be feasible in the lower dwelling value bands. It is likely that a share of the feasible capacity within these value bands could meet some of the shortfalls within the adjacent lower dwelling value bands.

It is likely that the assessment has overstated the projected shortfalls in the lower dwelling value bands in the mid to upper urban areas of the district. A conservative approach has been taken that assumes that the dwelling demand profile of new households is consistent with the existing household base. However, in some areas (particularly Pōkeno) a higher proportion of the demand is likely to occur through the

overflow of growth pressures from the adjacent Auckland Region where households fall within the upper mid value bands, seeking newly constructed dwellings in these locations.

The projected shortfalls in capacity are also spread across nearly all dwelling value bands within Raglan. The assessment shows that there is additional capacity (beyond that estimated to be RER) within the upper-mid dwelling value bands ($600k to $900k), with additional capacity projected to be feasible in the lower value bands. Some of this capacity may be able to meet capacity shortfalls in the adjacent lower dwelling value bands.

It is important to note that the current prices scenario also holds the dwelling value demand of each household constant through time. It assumes a 0% rate of household income growth, which affects the value of dwellings demanded. While outside the parameters of the NPS-UD, when household incomes gradually increase through time under growth scenarios 1 and 2, on balance[53], the shortfall of potential feasible capacity within the lower dwelling value bands decreases. While no additional supply is generally feasible within the lower dwelling value bands, a share of the households within these dwelling value bands shift up to higher dwelling value bands as their total household incomes increase. The modelling suggests that if these were taken into account in the short-term, then the lower value band capacity shortfalls in the mid-district urban areas would be likely to decrease slightly.

5.3.3 Medium-Term Sufficiency: 2030

The medium-term sufficiency by dwelling value band across the district's main urban areas is shown in Table 5-4 to Table 5-6 for the current prices scenario. At the total level, there are surplus in each area, with overall sufficiency ranging from 108% (Raglan) to 171% (Pōkeno/Tuakau) (with the mid-district urban areas at 124%). However, all three areas continue to show significant shortfalls in capacity across the lower to mid dwelling value bands (up to $500k to $700k).

[53] Gradual market growth within these scenarios applies to both household incomes (demand) as well as the value of dwelling capacity (supply).

Table 5-4: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Pōkeno/Tuakau – Medium-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2030 Demand	2030 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	70	100	100	70	-	-	-	70	-50	60%
$200k to $300k	70	100	100	70	-	-	-	70	-50	60%
$300k to $400k	100	200	200	100	-	-	-	100	-80	60%
$400k to $500k	500	800	800	500	-	-	-	500	-300	60%
$500k to $600k	600	900	1,000	600	-	-	-	600	-400	60%
$600k to $700k	600	900	900	600	-	-	-	700	-200	77%
$700k to $800k	600	1,000	1,000	600	200	4,600	4,800	5,200	4,200	500%
$800k to $900k	60	90	100	60	10	10	20	100	0	103%
$900k to $1m	10	20	20	10	-	-	-	10	-10	60%
$1m+	10	10	10	10	-	-	-	10	0	60%
TOTAL	**2,600**	**4,000**	**4,300**	**2,600**	**200**	**4,600**	**4,800**	**7,400**	**3,100**	**171%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	70	100	100	70	-	-	-	70	-50	60%
$200k to $300k	70	100	100	70	-	-	-	70	-50	60%
$300k to $400k	100	200	200	100	-	-	-	100	-80	60%
$400k to $500k	500	800	800	500	-	-	-	500	-300	60%
$500k to $600k	600	900	1,000	600	-	-	-	600	-400	60%
$600k to $700k	600	900	900	600	-	-	-	700	-200	77%
$700k to $800k	600	1,000	1,000	600	800	4,900	5,700	6,100	5,100	588%
$800k to $900k	60	90	100	60	50	-	50	100	40	137%
$900k to $1m	10	20	20	10	-	-	-	10	-10	60%
$1m+	10	10	10	10	-	-	-	10	0	60%
TOTAL	**2,600**	**4,000**	**4,300**	**2,600**	**800**	**4,900**	**5,700**	**8,300**	**4,000**	**193%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-5: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Kauwhata/Ngāruawāhia/Huntly/Taupiri – Medium-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2030 Demand	2030 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	400	500	500	400	-	-	-	400	-100	73%
$200k to $300k	1,400	1,800	1,900	1,400	-	-	-	1,400	-500	73%
$300k to $400k	2,000	2,600	2,700	2,000	-	-	-	2,000	-700	73%
$400k to $500k	1,100	1,400	1,500	1,100	-	-	-	1,100	-400	73%
$500k to $600k	600	700	800	600	100	2,700	2,800	3,100	2,300	399%
$600k to $700k	300	400	400	300	100	700	900	1,400	1,000	356%
$700k to $800k	80	100	100	80	40	400	400	500	400	441%
$800k to $900k	20	30	30	20	-	-	-	20	-10	73%
$900k to $1m	10	10	10	10	-	-	-	10	0	102%
$1m+	10	10	10	10	-	-	-	10	0	109%
TOTAL	**5,800**	**7,600**	**8,000**	**5,800**	**300**	**3,800**	**4,000**	**9,900**	**1,900**	**124%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	400	500	500	400	-	-	-	400	-100	73%
$200k to $300k	1,400	1,800	1,900	1,400	-	-	-	1,400	-500	73%
$300k to $400k	2,000	2,600	2,700	2,000	-	-	-	2,000	-700	73%
$400k to $500k	1,100	1,400	1,500	1,100	-	-	-	1,100	-400	73%
$500k to $600k	600	700	800	600	500	3,000	3,500	3,600	2,900	473%
$600k to $700k	300	400	400	300	700	1,300	2,000	2,400	2,000	608%
$700k to $800k	80	100	100	80	200	-	200	300	200	289%
$800k to $900k	20	30	30	20	-	-	-	20	-10	73%
$900k to $1m	10	10	10	10	-	-	-	10	0	102%
$1m+	10	10	10	10	-	-	-	10	0	109%
TOTAL	**5,800**	**7,600**	**8,000**	**5,800**	**1,400**	**4,200**	**5,700**	**11,300**	**3,300**	**142%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-6: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Raglan – Medium-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2030 Demand	2030 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	-	-	-	-	-	-	-	-	0	69%
$200k to $300k	70	90	100	70	-	-	-	70	-30	69%
$300k to $400k	200	200	300	200	-	-	-	200	-80	69%
$400k to $500k	400	600	700	400	-	-	-	400	-200	69%
$500k to $600k	400	500	500	400	-	-	-	400	-200	69%
$600k to $700k	300	400	400	300	-	-	-	400	-80	82%
$700k to $800k	200	200	300	200	70	-	70	400	90	137%
$800k to $900k	100	100	200	100	60	900	1,000	900	800	577%
$900k to $1m	70	100	100	70	-	-	-	70	-30	69%
$1m+	100	200	200	100	-	-	-	100	-50	69%
TOTAL	**1,800**	**2,500**	**2,700**	**1,800**	**100**	**900**	**1,000**	**2,900**	**200**	**108%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	-	-	-	-	-	-	-	-	0	69%
$200k to $300k	70	90	100	70	-	-	-	70	-30	69%
$300k to $400k	200	200	300	200	-	-	-	200	-80	69%
$400k to $500k	400	600	700	400	-	-	-	400	-200	69%
$500k to $600k	400	500	500	400	-	-	-	400	-200	69%
$600k to $700k	300	400	400	300	-	-	-	400	-80	82%
$700k to $800k	200	200	300	200	300	1,000	1,300	1,400	1,200	553%
$800k to $900k	100	100	200	100	300	-	300	400	300	272%
$900k to $1m	70	100	100	70	-	-	-	70	-30	69%
$1m+	100	200	200	100	-	-	-	100	-50	69%
TOTAL	**1,800**	**2,500**	**2,700**	**1,800**	**600**	**1,000**	**1,600**	**3,500**	**800**	**129%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

The sufficiency in these dwelling value bands ranges from 65% to 73% across the districts main urban areas. The overall capacity surpluses across these areas are driven by surpluses in the upper mid dwelling value bands. Nearly all of the feasible greenfield capacity in these areas is estimated to occur within these value bands. In Pōkeno/Tuakau and Raglan, greenfield capacity is projected to be feasible and RER in the $700k to $900k range. In the mid-district urban areas, greenfield capacity is projected to be feasible and RER in the $500k to $800k range under the current prices scenario.

A comparison to the total feasible capacity for each area is also included in the tables for the current prices scenario. These tables show that there is limited potential for the market to meet the shortfalls in demand in the lower dwelling value bands. There is no projected additional feasible capacity within the lower dwelling value bands.

Although outside the scope of the NPS-UD parameters, the assessment indicates that a portion of the capacity shortfalls within the lower dwelling value bands are reduced if gradual growth in the market is assessed over the medium-term. While additional capacity does not become feasible in the lower dwelling value bands, a share of the households shift up the value profile through growth in household income, thus reducing the shortfalls in the lower dwelling value bands.

5.3.4 Long-Term Sufficiency: 2050

The long-term sufficiency by dwelling value band is shown for each of the reported scenarios for each of the district's main urban areas in Table 5-7 to Table 5-15 at the end of this sub-section. At the total level, there are capacity surpluses across all of the main urban areas, even under the current prices scenario. This is predominately due to the large increase in supply of infrastructure-served greenfield areas.

It is important to note that the increase in greenfield supply of these areas does not reduce the value bands of feasible capacity. Rather, it increases the range of locations which are likely to be feasible to develop. The value bands of the feasible capacity are limited by the total development costs of the capacity, including the cost to urbanise the land.

In the long-term, the sufficiency of capacity within Pōkeno/Tuakau is estimated at 219% to 257%. In the mid-district urban areas, the sufficiency is between 141% to 181%. The supply of infrastructure-served greenfield capacity far exceeds the projected demand across the same timeframe.

In Raglan, the surplus is smaller, with sufficiency between 118% and 121%. This equates to a surplus of between 700 and 800 dwellings in the long-term. However, some of this capacity may be constrained by local conditions and constraints, which were not available at the time of modelling.

Despite the large total surpluses in capacity, the assessment suggests that there are likely to continue to be shortfalls in capacity across the lower dwelling value bands across some of the district's main urban areas under some growth scenarios. Under the current prices and lower growth scenarios, the shortfalls across the lower to mid value bands are projected to be largest. The main area of shortfall is projected to occur within the mid-district urban areas, where a higher share of the household base is in the lower to mid dwelling value bands. A smaller shortfall is projected to occur across the lower to mid value bands is also projected to occur within Pōkeno/Tuakau, however, it is likely that the actual dwelling value demand profile will be higher due to higher income overflow demand from the Auckland Region.

Under Growth Scenario 2, the shortfalls in capacity within many of the urban areas are projected to partly resolve in the long-term. This is due to the household income growth applied across existing households within the growth scenario, where demand gradually shifts up in value bands. The largest shortfalls across the low to mid value bands remain in the mid district areas. Under this scenario, there are also shortfalls in Pōkeno/Tuakau and Raglan within the $900k to $1m dwelling value band, however, some of this may be able to be met through the large surplus in capacity in the adjacent higher dwelling value band.

As stated in Section 5.2, the nature of a snapshot sufficiency assessment is such that capacity within lower to mid dwelling value bands is likely to be under-stated, correspondingly overstating shortfalls within these bands. Under a growth modelling approach (outside the scope of the NPS-UD sufficiency assessment), the capacity would be gradually taken up through time, with a share of capacity at lower prices towards the start of the assessment period.

Table 5-7: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Pōkeno/Tuakau – Long-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	70	100	200	70	-	-	-	70	-90	46%
$200k to $300k	70	100	200	70	-	-	-	70	-90	46%
$300k to $400k	100	200	300	100	-	-	-	100	-100	46%
$400k to $500k	500	1,000	1,100	500	-	-	-	500	-600	46%
$500k to $600k	600	1,200	1,300	600	-	-	-	600	-700	46%
$600k to $700k	600	1,100	1,200	600	-	400	400	1,100	-100	89%
$700k to $800k	600	1,300	1,400	600	400	9,000	9,500	10,000	8,600	721%
$800k to $900k	60	100	100	60	20	10	20	100	-20	85%
$900k to $1m	10	30	30	10	-	-	-	10	-20	46%
$1m+	10	10	10	10	-	-	-	10	-10	46%
TOTAL	**2,600**	**5,300**	**5,700**	**2,600**	**400**	**9,500**	**9,900**	**12,500**	**6,800**	**219%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	70	100	200	70	-	-	-	70	-90	46%
$200k to $300k	70	100	200	70	-	-	-	70	-90	46%
$300k to $400k	100	200	300	100	-	-	-	100	-100	46%
$400k to $500k	500	1,000	1,100	500	-	-	-	500	-600	46%
$500k to $600k	600	1,200	1,300	600	-	500	500	1,000	-300	79%
$600k to $700k	600	1,100	1,200	600	-	-	-	700	-500	58%
$700k to $800k	600	1,300	1,400	600	1,100	9,900	11,000	11,500	10,100	829%
$800k to $900k	60	100	100	60	40	-	40	100	0	101%
$900k to $1m	10	30	30	10	-	-	-	10	-20	46%
$1m+	10	10	10	10	-	-	-	10	-10	46%
TOTAL	**2,600**	**5,300**	**5,700**	**2,600**	**1,100**	**10,400**	**11,500**	**14,100**	**8,400**	**246%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-8: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Pōkeno/Tuakau – Long-Term – Growth Scenario 1

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	70	100	100	60	-	-	-	70	-50	55%
$200k to $300k	70	40	40	20	-	-	-	30	-10	82%
$300k to $400k	100	90	100	60	-	-	-	60	-40	56%
$400k to $500k	500	70	70	100	-	-	-	70	0	99%
$500k to $600k	600	200	300	300	-	-	-	300	70	129%
$600k to $700k	600	500	500	300	-	-	-	400	-100	74%
$700k to $800k	600	500	600	500	-	-	-	400	-200	67%
$800k to $900k	60	1,100	1,200	400	-	-	-	500	-700	41%
$900k to $1m	10	500	500	400	-	400	400	1,100	600	211%
$1m+	10	2,200	2,300	400	500	10,800	11,300	11,500	9,100	492%
TOTAL	**2,600**	**5,300**	**5,700**	**2,600**	**500**	**11,300**	**11,800**	**14,400**	**8,600**	**251%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	70	100	100	60	-	-	-	70	-50	55%
$200k to $300k	70	40	40	20	-	-	-	30	-10	82%
$300k to $400k	100	90	100	60	-	-	-	60	-40	56%
$400k to $500k	500	70	70	100	-	-	-	70	0	99%
$500k to $600k	600	200	300	300	-	-	-	300	70	129%
$600k to $700k	600	500	500	300	-	-	-	400	-100	74%
$700k to $800k	600	500	600	500	-	-	-	400	-200	67%
$800k to $900k	60	1,100	1,200	400	-	-	-	500	-700	41%
$900k to $1m	10	500	500	400	-	500	500	1,100	600	219%
$1m+	10	2,200	2,300	400	1,200	11,900	13,100	13,200	10,900	568%
TOTAL	**2,600**	**5,300**	**5,700**	**2,600**	**1,200**	**12,400**	**13,600**	**16,200**	**10,500**	**283%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-9: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Pōkeno/Tuakau – Long-Term – Growth Scenario 2

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	70	70	70	50	-	-	-	60	-20	75%
$200k to $300k	70	80	80	20	-	-	-	10	-70	15%
$300k to $400k	100	-	-	20	-	-	-	50	40	1167%
$400k to $500k	500	40	40	50	-	-	-	40	0	103%
$500k to $600k	600	100	100	80	-	-	-	60	-60	47%
$600k to $700k	600	40	40	40	-	-	-	100	90	310%
$700k to $800k	600	200	200	500	-	-	-	300	80	137%
$800k to $900k	60	50	60	200	-	-	-	300	200	514%
$900k to $1m	10	900	1,000	400	-	-	-	400	-600	39%
$1m+	10	3,800	4,100	1,300	700	11,400	12,100	13,400	9,300	330%
TOTAL	**2,600**	**5,300**	**5,700**	**2,600**	**700**	**11,400**	**12,100**	**14,700**	**9,000**	**257%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	70	70	70	50	-	-	-	60	-20	75%
$200k to $300k	70	80	80	20	-	-	-	10	-70	15%
$300k to $400k	100	-	-	20	-	-	-	50	40	1167%
$400k to $500k	500	40	40	50	-	-	-	40	0	103%
$500k to $600k	600	100	100	80	-	-	-	60	-60	47%
$600k to $700k	600	40	40	40	-	-	-	100	90	310%
$700k to $800k	600	200	200	500	-	-	-	300	80	137%
$800k to $900k	60	50	60	200	-	-	-	300	200	514%
$900k to $1m	10	900	1,000	400	-	-	-	400	-600	39%
$1m+	10	3,800	4,100	1,300	1,700	12,500	14,200	15,500	11,400	382%
TOTAL	**2,600**	**5,300**	**5,700**	**2,600**	**1,700**	**12,500**	**14,200**	**16,800**	**11,100**	**294%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-10: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Kauwhata/Ngāruawāhia/Huntly/Taupiri – Long-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	400	600	700	400	-	-	-	400	-300	53%
$200k to $300k	1,400	2,400	2,600	1,400	-	-	-	1,400	-1,200	53%
$300k to $400k	2,000	3,500	3,800	2,000	-	-	-	2,000	-1,800	53%
$400k to $500k	1,100	1,900	2,100	1,100	100	-	100	1,200	-900	59%
$500k to $600k	600	1,000	1,100	600	200	20	200	1,700	600	158%
$600k to $700k	300	500	500	300	300	2,900	3,100	3,500	2,900	640%
$700k to $800k	80	100	200	80	60	6,000	6,100	5,200	5,100	3291%
$800k to $900k	20	30	40	20	-	-	-	20	-20	53%
$900k to $1m	10	10	10	10	-	-	-	10	0	74%
$1m+	10	10	10	10	-	-	-	10	0	79%
TOTAL	**5,800**	**10,300**	**10,900**	**5,800**	**700**	**8,900**	**9,500**	**15,400**	**4,400**	**141%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	400	600	700	400	-	-	-	400	-300	53%
$200k to $300k	1,400	2,400	2,600	1,400	-	-	-	1,400	-1,200	53%
$300k to $400k	2,000	3,500	3,800	2,000	-	-	-	2,000	-1,800	53%
$400k to $500k	1,100	1,900	2,100	1,100	400	1,700	2,100	2,900	800	140%
$500k to $600k	600	1,000	1,100	600	500	1,000	1,500	2,700	1,700	256%
$600k to $700k	300	500	500	300	700	7,200	7,900	7,800	7,300	1447%
$700k to $800k	80	100	200	80	200	10	200	400	200	223%
$800k to $900k	20	30	40	20	-	-	-	20	-20	53%
$900k to $1m	10	10	10	10	-	-	-	10	0	74%
$1m+	10	10	10	10	-	-	-	10	0	79%
TOTAL	**5,800**	**10,300**	**10,900**	**5,800**	**1,700**	**10,000**	**11,700**	**17,600**	**6,600**	**161%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-11: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Kauwhata/Ngāruawāhia/Huntly/Taupiri – Long-Term – Growth Scenario 1

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	400	500	500	300	-	-	-	300	-200	65%
$200k to $300k	1,400	200	200	300	-	-	-	600	400	319%
$300k to $400k	2,000	1,500	1,600	1,200	-	-	-	1,000	-600	62%
$400k to $500k	1,100	1,100	1,200	1,700	-	-	-	1,200	70	106%
$500k to $600k	600	3,400	3,600	800	-	-	-	1,300	-2,300	36%
$600k to $700k	300	900	1,000	600	-	-	-	700	-300	67%
$700k to $800k	80	1,000	1,100	500	200	2,000	2,100	2,700	1,700	252%
$800k to $900k	20	900	1,000	200	200	800	1,000	1,600	600	163%
$900k to $1m	10	200	300	100	200	1,300	1,400	1,600	1,400	639%
$1m+	10	500	600	80	400	8,400	8,800	8,100	7,600	1452%
TOTAL	**5,800**	**10,300**	**10,900**	**5,800**	**900**	**12,400**	**13,400**	**19,200**	**8,300**	**176%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	400	500	500	300	-	-	-	300	-200	65%
$200k to $300k	1,400	200	200	300	-	-	-	600	400	319%
$300k to $400k	2,000	1,500	1,600	1,200	-	-	-	1,000	-600	62%
$400k to $500k	1,100	1,100	1,200	1,700	-	-	-	1,200	70	106%
$500k to $600k	600	3,400	3,600	800	-	-	-	1,300	-2,300	36%
$600k to $700k	300	900	1,000	600	-	-	-	700	-300	67%
$700k to $800k	80	1,000	1,100	500	500	2,100	2,600	3,100	2,000	288%
$800k to $900k	20	900	1,000	200	500	1,100	1,600	2,300	1,300	228%
$900k to $1m	10	200	300	100	400	1,300	1,800	2,100	1,900	840%
$1m+	10	500	600	80	1,000	9,400	10,500	9,600	9,100	1720%
TOTAL	**5,800**	**10,300**	**10,900**	**5,800**	**2,500**	**13,900**	**16,400**	**22,300**	**11,300**	**204%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-12: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Kauwhata/Ngāruawāhia/Huntly/Taupiri – Long-Term – Growth Scenario 2

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	400	300	300	200	-	-	-	300	-40	88%
$200k to $300k	1,400	300	300	100	-	-	-	60	-300	17%
$300k to $400k	2,000	20	20	400	-	-	-	800	800	4812%
$400k to $500k	1,100	600	700	1,000	-	-	-	800	80	112%
$500k to $600k	600	1,800	1,900	1,300	-	-	-	800	-1,100	41%
$600k to $700k	300	600	600	700	-	-	-	1,200	600	205%
$700k to $800k	80	3,000	3,200	1,100	-	-	-	700	-2,500	22%
$800k to $900k	20	100	100	100	-	-	-	500	400	429%
$900k to $1m	10	1,800	2,000	400	200	-	200	600	-1,300	31%
$1m+	10	1,700	1,800	400	1,100	12,700	13,800	14,100	12,300	775%
TOTAL	**5,800**	**10,300**	**10,900**	**5,800**	**1,300**	**12,700**	**14,000**	**19,800**	**8,900**	**181%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	400	300	300	200	-	-	-	300	-40	88%
$200k to $300k	1,400	300	300	100	-	-	-	60	-300	17%
$300k to $400k	2,000	20	20	400	-	-	-	800	800	4812%
$400k to $500k	1,100	600	700	1,000	-	-	-	800	80	112%
$500k to $600k	600	1,800	1,900	1,300	-	-	-	800	-1,100	41%
$600k to $700k	300	600	600	700	-	-	-	1,200	600	205%
$700k to $800k	80	3,000	3,200	1,100	-	-	-	700	-2,500	22%
$800k to $900k	20	100	100	100	-	-	-	600	500	524%
$900k to $1m	10	1,800	2,000	400	500	2,100	2,600	3,000	1,100	154%
$1m+	10	1,700	1,800	400	3,000	12,100	15,100	15,300	13,500	841%
TOTAL	**5,800**	**10,300**	**10,900**	**5,800**	**3,500**	**14,200**	**17,700**	**23,500**	**12,600**	**215%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-13: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Raglan – Long-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	-	-	-	-	-	-	-	-	0	48%
$200k to $300k	70	100	100	70	-	-	-	70	-70	48%
$300k to $400k	200	300	400	200	-	-	-	200	-200	48%
$400k to $500k	400	900	900	400	-	-	-	400	-500	48%
$500k to $600k	400	700	800	400	-	-	-	400	-400	48%
$600k to $700k	300	600	600	300	-	-	-	400	-300	57%
$700k to $800k	200	300	400	200	100	-	100	400	50	114%
$800k to $900k	100	200	200	100	100	2,400	2,500	2,500	2,200	1095%
$900k to $1m	70	100	100	70	-	-	-	70	-80	48%
$1m+	100	200	300	100	-	-	-	100	-100	48%
TOTAL	**1,800**	**3,600**	**3,800**	**1,800**	**200**	**2,400**	**2,700**	**4,500**	**700**	**118%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	-	-	-	-	-	-	-	-	0	48%
$200k to $300k	70	100	100	70	-	-	-	70	-70	48%
$300k to $400k	200	300	400	200	-	-	-	200	-200	48%
$400k to $500k	400	900	900	400	-	-	-	400	-500	48%
$500k to $600k	400	700	800	400	-	-	-	400	-400	48%
$600k to $700k	300	600	600	300	-	-	-	400	-300	57%
$700k to $800k	200	300	400	200	300	2,700	3,000	3,000	2,700	827%
$800k to $900k	100	200	200	100	300	-	300	500	200	210%
$900k to $1m	70	100	100	70	-	-	-	70	-80	48%
$1m+	100	200	300	100	-	-	-	100	-100	48%
TOTAL	**1,800**	**3,600**	**3,800**	**1,800**	**600**	**2,700**	**3,300**	**5,100**	**1,300**	**134%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-14: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Raglan – Long-Term – Growth Scenario 1

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	-	-	-	-	-	-	-	-	0	58%
$200k to $300k	70	-	-	10	-	-	-	30	20	2569%
$300k to $400k	200	80	90	60	-	-	-	60	-20	72%
$400k to $500k	400	70	70	100	-	-	-	100	30	141%
$500k to $600k	400	300	300	200	-	-	-	300	-30	91%
$600k to $700k	300	400	400	300	-	-	-	300	-200	66%
$700k to $800k	200	500	500	300	-	-	-	200	-200	49%
$800k to $900k	100	700	700	200	-	-	-	200	-500	33%
$900k to $1m	70	300	300	100	-	-	-	200	-60	80%
$1m+	100	1,300	1,400	400	300	2,400	2,700	3,000	1,700	218%
TOTAL	**1,800**	**3,600**	**3,800**	**1,800**	**300**	**2,400**	**2,700**	**4,500**	**700**	**119%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	-	-	-	-	-	-	-	-	0	58%
$200k to $300k	70	-	-	10	-	-	-	30	20	2569%
$300k to $400k	200	80	90	60	-	-	-	60	-20	72%
$400k to $500k	400	70	70	100	-	-	-	100	30	141%
$500k to $600k	400	300	300	200	-	-	-	300	-30	91%
$600k to $700k	300	400	400	300	-	-	-	300	-200	66%
$700k to $800k	200	500	500	300	-	-	-	200	-200	49%
$800k to $900k	100	700	700	200	-	-	-	200	-500	33%
$900k to $1m	70	300	300	100	-	-	-	200	-60	80%
$1m+	100	1,300	1,400	400	600	2,700	3,400	3,700	2,300	266%
TOTAL	**1,800**	**3,600**	**3,800**	**1,800**	**600**	**2,700**	**3,400**	**5,200**	**1,400**	**136%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-15: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Raglan – Long-Term – Growth Scenario 2

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	-	-	-	-	-	-	-	-	0	79%
$200k to $300k	70	-	-	-	-	-	-	-	0	16%
$300k to $400k	200	-	-	20	-	-	-	40	40	39660%
$400k to $500k	400	30	40	50	-	-	-	50	20	147%
$500k to $600k	400	100	100	100	-	-	-	70	-30	66%
$600k to $700k	300	50	60	60	-	-	-	200	100	266%
$700k to $800k	200	300	300	400	-	-	-	300	-30	91%
$800k to $900k	100	50	50	100	-	-	-	200	200	440%
$900k to $1m	70	800	900	300	-	-	-	300	-600	29%
$1m+	100	2,200	2,400	800	400	2,500	2,800	3,600	1,200	150%
TOTAL	**1,800**	**3,600**	**3,800**	**1,800**	**400**	**2,500**	**2,800**	**4,700**	**800**	**121%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	-	-	-	-	-	-	-	-	0	79%
$200k to $300k	70	-	-	-	-	-	-	-	0	16%
$300k to $400k	200	-	-	20	-	-	-	40	40	39660%
$400k to $500k	400	30	40	50	-	-	-	50	20	147%
$500k to $600k	400	100	100	100	-	-	-	70	-30	66%
$600k to $700k	300	50	60	60	-	-	-	200	100	266%
$700k to $800k	200	300	300	400	-	-	-	300	-30	91%
$800k to $900k	100	50	50	100	-	-	-	200	200	440%
$900k to $1m	70	800	900	300	-	-	-	300	-600	29%
$1m+	100	2,200	2,400	800	900	2,700	3,600	4,400	2,000	184%
TOTAL	**1,800**	**3,600**	**3,800**	**1,800**	**900**	**2,700**	**3,600**	**5,500**	**1,600**	**143%**

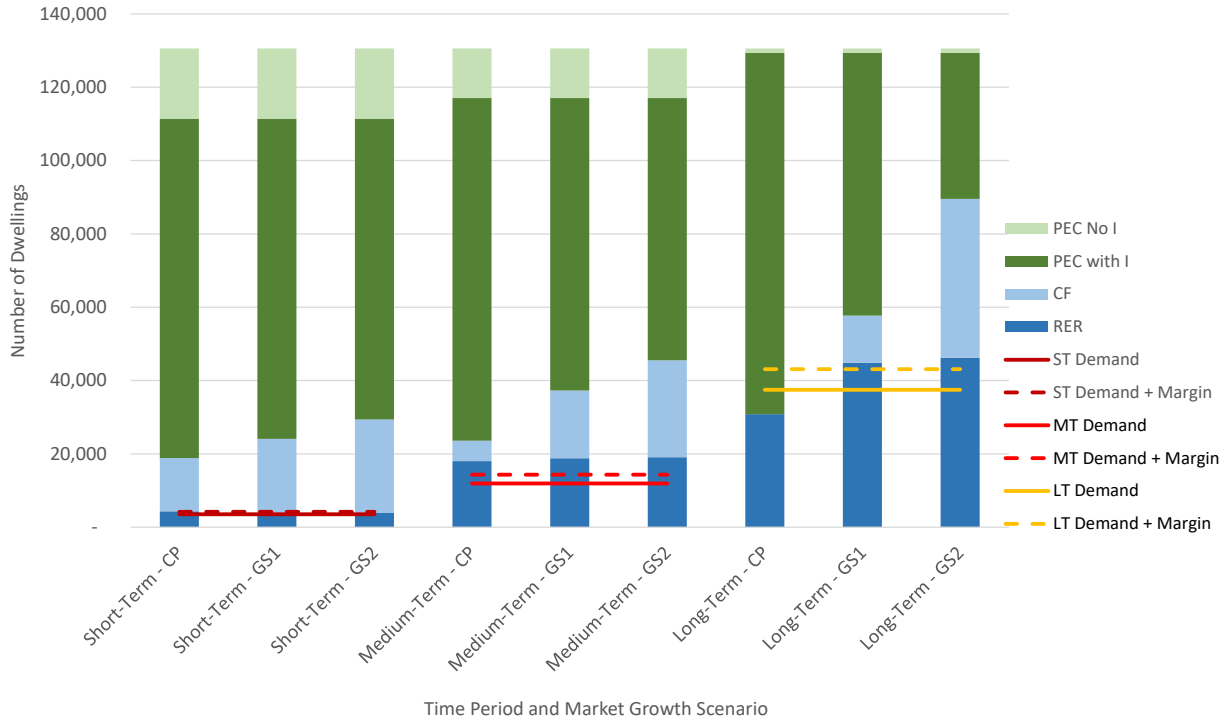
Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

5.4 Hamilton City Sufficiency Assessment

5.4.1 City Level Summary

The graph below (Figure 5-2) summarises the sufficiency of potential future dwelling capacity for Hamilton City in the short, medium and long-term. It includes the capacity across both the existing urban and potential future greenfield areas. The bars show the estimated additional future capacity, while the lines show the projected net increase in dwelling demand. The three modelled scenarios (current prices, growth scenario 1, and growth scenario 2) are shown for each time period. However, in accordance with the NPS-UD requirements, sufficiency is assessed only in relation to the current prices scenario for the short and medium-term. The other scenarios have been shown for information purposes.

Figure 5-2: Projected Urban Residential Dwelling Capacity and Urban Dwelling Demand in Hamilton City by Market Growth Scenario: Short, Medium and Long-Term



Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

The capacity bars in the graph follow the same structure as the capacity graphs in Section 4.The full extent of the bars show the total plan-enabled capacity across the greenfield and existing urban areas combined. The bars are disaggregated into different categories of capacity, which are additive to the full extent of the bar (i.e. the total capacity enabled under the Plan). The light green portions of the bars show the capacity that is enabled under the Plan, but is not served by infrastructure. The dark green sections show the plan-enabled capacity that is served by infrastructure[54], but is not estimated to be commercially feasible to develop. The light blue sections show the plan-enabled capacity that is estimated to be commercially feasible to develop, but does not fall within the reasonably expected to be realised (RER) estimate. The dark blue sections of the bars show the component of the feasible capacity that is estimated to be RER.

The lines on the graph show the projected demand for dwellings across each time period. The solid lines show the net increase in demand across the time period (from 2020). The dashed lines show the net increase in demand together with the margin required on the NPS-UD. A 20% margin is applied in the short and medium-terms, while a 15% margin is applied across the long-term.

The sufficiency assessment compares the demand plus a margin with the RER capacity within each time period.

In the short-term, the assessment indicates that Hamilton City has a small capacity surplus of around 600 dwellings. When considered together with the total dwelling estate (i.e. existing estate plus potential future estate vs. current plus potential future households), this represents a sufficiency level of 100%. There is a

[54] Refer to Section 4.1.3 for more detail.

total demand for an additional 3,500 dwellings. With a margin applied, this becomes 4,200 additional dwellings. There is an estimated RER capacity for an additional 4,300 dwellings within the short-term.

Figure 5-2 shows that there is a large amount of development opportunities that are projected to be feasible in the short-term within Hamilton. There is an estimated further feasible development capacity of around 14,500 dwellings beyond the component which is estimated to be RER within the short-term. Beyond that, there are a further 92,600 dwellings which are enabled by the Plan in areas served by infrastructure[55]. This suggests that there is no significant constraint to the capacity arising from the development opportunities provided by the Plan.

The RER capacity estimate across the entire urban area is limited by the extent of the greenfield plan-enabled capacity that already has infrastructure in place. As set out in Section 4.1.5, the RER capacity assumes that the infill take up will be relatively equal to the greenfield take-up within the short-term. While there is only capacity for 2,500 dwellings within the greenfield areas that already have infrastructure in place, there are a large number of feasible development options within the existing urban area. These represent a sizeable number of feasible development options within the existing urban area. Moreover, there are significant additional areas of greenfield capacity that will be served by infrastructure by the end of the short-term. However, these are not included within the short-term assessment in line with the policy requirements.

In the medium-term Hamilton's RER capacity exceeds the demand (+ margin), resulting in a capacity surplus of around 3,700 dwellings. When considered at the total estate level, this equates to a sufficiency level of 105%. There is a total demand for 11,900 additional dwellings in medium-term (2020-2030), which becomes 14,300 additional dwellings when a margin is applied. This compares to an estimated RER capacity of around 18,000 dwellings. There is further 5,800 feasible dwelling capacity within the existing urban area beyond the RER estimate, and a further 93,500 dwellings enabled by the Plan in areas served by infrastructure[56].

If the market is held constant at current prices for the next 30 years (while simultaneously increasing the number of households), then there is a projected shortfall of around 12,300 dwellings in Hamilton in the long-term under the current prices scenario. For this to occur, only the development opportunities that are currently feasible (in 2020) would be feasible in 2050, with no further development opportunities becoming feasible. The 2050 RER within the urban area is therefore constrained to only the development options that were feasible within 2020.

The additional scenarios (growth scenarios 1 and 2) instead show the projected capacity when a gradual level of growth is applied within the market. Under these scenarios, there is a projected surplus of around 1,700 to 3,100 dwellings in the long-term, equating to a total sufficiency of 102% to 103%. This amounts to a RER capacity of 7,400 to 8,700 dwellings above the projected long-term net increase in demand. There is a further capacity of around 13,000 to 43,000 dwellings within Hamilton that represent feasible development opportunities beyond the estimated RER capacity. Beyond this, there is a further infrastructure-served, plan-enabled capacity of 72,000 to 40,000 additional dwellings[57].

[55] Refer to Section 4.1.3 for more detail.

[56] Ibid.

[57] Ibid.

The following sub-sections provide further examination of the sufficiency of capacity by dwelling value band in the short, medium and long-term.

5.4.2 Short-Term Sufficiency: 2023

The sufficiency of capacity by dwelling value band is shown in Table 5-16 below. Each row of the table represents a dwelling value band. As set out in Section 5.2, it is important to assess the total dwelling stock (current plus potential future estate) in relation to the total household demand (current plus potential future households) when assessing sufficiency by dwelling value band. The upper part of the tables where RER feasible capacity is displayed form the sufficiency assessment requirements.

The first part of the table (yellow columns) show the total and potential future demand (including the margin) for dwellings within each of the dwelling value bands. The middle (blue columns) section of the table shows the total dwelling capacity across Hamilton City. The first column shows the existing base, while the middle four columns show the potential additional dwelling capacity (RER component), with the final blue column showing the current and potential future dwelling estate combined. This final blue column is compared to the final yellow column (demand plus margin) to produce the final sufficiency (orange section) part of the table. The sufficiency section shows the net difference between the total potential capacity and potential demand within each value band (first column), with this number expressed as a percentage of the total dwelling stock in the final column.

Table 5-16: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Hamilton City – Short-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)						SUFFICIENCY	
Dwelling Value Band	Existing Households	2023 Demand	2023 Demand (with margin)	Existing Base	City Centre	Other Existing Urban Area	Greenfield	Total Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	500	600	600	500	-	-	-	-	500	-100	78%
$200k to $300k	800	1,400	1,400	800	-	-	-	-	800	-600	57%
$300k to $400k	5,300	6,200	6,200	5,300	-	-	-	-	5,300	-1,000	84%
$400k to $500k	12,700	13,100	13,200	12,700	200	100	-	300	13,000	-200	99%
$500k to $600k	13,600	13,800	14,000	13,600	40	500	70	600	14,100	100	101%
$600k to $700k	10,600	11,400	11,500	10,600	30	300	10	300	10,900	-600	95%
$700k to $800k	9,800	9,500	9,700	9,800	10	200	600	800	10,600	900	110%
$800k to $900k	2,900	3,300	3,400	2,900	-	200	1,200	1,400	4,300	900	127%
$900k to $1m	1,800	1,900	1,900	1,800	-	200	-	200	1,900	-20	99%
$1m+	2,800	3,000	3,000	2,800	-	200	600	800	3,600	600	120%
TOTAL	**60,800**	**64,300**	**65,000**	**60,800**	**300**	**1,600**	**2,500**	**4,300**	**65,100**	**90**	**100%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**						**SUFFICIENCY**	
Up to $200k	500	600	600	500	-	-	-	-	500	-100	78%
$200k to $300k	800	1,400	1,400	800	-	-	-	-	800	-600	57%
$300k to $400k	5,300	6,200	6,200	5,300	-	-	-	-	5,300	-1,000	84%
$400k to $500k	12,700	13,100	13,200	12,700	3,200	900	-	4,100	16,800	3,600	127%
$500k to $600k	13,600	13,800	14,000	13,600	600	3,500	70	4,100	17,700	3,700	127%
$600k to $700k	10,600	11,400	11,500	10,600	400	2,300	10	2,700	13,200	1,700	115%
$700k to $800k	9,800	9,500	9,700	9,800	90	1,300	600	2,000	11,800	2,100	122%
$800k to $900k	2,900	3,300	3,400	2,900	-	1,500	1,200	2,700	5,700	2,300	168%
$900k to $1m	1,800	1,900	1,900	1,800	-	1,200	-	1,200	3,000	1,000	152%
$1m+	2,800	3,000	3,000	2,800	-	1,300	600	2,000	4,800	1,800	159%
TOTAL	**60,800**	**64,300**	**65,000**	**60,800**	**4,300**	**12,000**	**2,600**	**18,800**	**79,600**	**14,600**	**122%**

Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

In the short-term, there is a small overall surplus of around 90 dwellings for Hamilton City. When assessed by dwelling value band, there are shortfalls in capacity that predominantly occur within the lower dwelling value bands (up to $500k). Within these bands, there is a projected shortfall of around 1,900 dwellings. There is also a shortfall of around 600 dwellings within the $600k to $700k dwelling value bands, however, it is likely that demand within this band could be met through the surpluses in adjacent dwelling value bands. Under this scenario, there are surpluses of capacity within the mid and high dwelling value bands as most of the potential additional future capacity is supplied within these dwelling value ranges.

The RER greenfield capacity is mostly in the dwelling value bands of $700k or over. Capacity within the existing urban area accounts for most of the potential additional stock below $700k, where a greater range of smaller, higher density development options are feasible. Under this scenario, the City Centre makes only a small contribution to the overall RER capacity, but is concentrated into the lower dwelling value bands.

Although not part of the sufficiency assessment, it is important also to understand the value band distribution of the total feasible capacity as this estimates the potentially feasible development option for the commercial market. The lower sections of the tables below include the results for the total feasible capacity.

When all feasible development options are considered, there are sizeable surpluses across all dwelling value bands over $400k. The shortfall in the lower dwelling value bands remain, but narrows to dwellings under $400k. Most of the feasible capacity within the lower dwelling value band of $400k to $500k occurs as apartments within the City Centre, with a significant, albeit smaller, number of options within the rest of the existing urban area.

It is important to note that the current prices scenario also holds the dwelling value demand of each household constant through time. It assumes a 0% rate of household income growth, which affects the value of dwellings demanded. While outside the parameters of the NPS-UD, when household incomes gradually increase through time under growth scenarios 1 and 2, on balance[58], the shortfall of potential feasible capacity within the lower dwelling value bands decreases. While no additional supply is feasible within the lower dwelling value bands (up to $400k), a share of the households within these dwelling value bands shift up to higher dwelling value bands as their total household incomes increase.

5.4.3 Medium-Term Sufficiency: 2030

The medium-term sufficiency by dwelling value band in Hamilton City is shown in Table 5-17 for the current prices scenario. Overall, it shows a surplus of around 3,700 dwellings at the total level, equating to a sufficiency of 105%. However, there are projected shortfalls across the lower dwelling value bands, and surpluses within the higher value bands. There is a projected shortfall of around 5,500 dwellings within the lower bands up to $500k. The sufficiency across these value bands amounts to 79%.

[58] Gradual market growth within these scenarios applies to both household incomes (demand) as well as the value of dwelling capacity (supply).

Table 5-17: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Hamilton City – Medium-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)						SUFFICIENCY	
	Existing Households	2030 Demand	2030 Demand (with margin)	Existing Base	City Centre	Other Existing Urban Area	Greenfield	Total Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	500	900	1,000	500	-	-	-	-	500	-500	51%
$200k to $300k	800	2,300	2,300	800	-	-	-	-	800	-1,500	34%
$300k to $400k	5,300	7,700	8,000	5,300	-	-	-	-	5,300	-2,700	66%
$400k to $500k	12,700	14,800	15,300	12,700	1,200	700	-	1,900	14,500	-700	95%
$500k to $600k	13,600	15,100	15,600	13,600	200	2,600	2,500	5,800	18,700	3,100	120%
$600k to $700k	10,600	12,300	12,700	10,600	100	1,700	800	2,700	13,100	400	103%
$700k to $800k	9,800	10,300	10,600	9,800	30	900	300	1,300	11,400	800	108%
$800k to $900k	2,900	3,900	4,000	2,900	-	1,100	300	1,400	5,100	1,100	128%
$900k to $1m	1,800	2,200	2,300	1,800	-	900	400	1,300	3,000	700	130%
$1m+	2,800	3,300	3,400	2,800	-	1,000	2,300	3,700	6,400	3,000	189%
TOTAL	**60,800**	**72,700**	**75,100**	**60,800**	**1,600**	**8,900**	**6,500**	**18,000**	**78,800**	**3,700**	**105%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**						**SUFFICIENCY**	
Up to $200k	500	900	1,000	500	-	-	-	-	500	-500	51%
$200k to $300k	800	2,300	2,300	800	-	-	-	-	800	-1,500	34%
$300k to $400k	5,300	7,700	8,000	5,300	-	-	-	-	5,300	-2,700	66%
$400k to $500k	12,700	14,800	15,300	12,700	3,200	900	-	4,100	17,000	1,700	111%
$500k to $600k	13,600	15,100	15,600	13,600	600	3,500	2,900	7,000	20,300	4,700	130%
$600k to $700k	10,600	12,300	12,700	10,600	400	2,300	900	3,500	14,100	1,400	111%
$700k to $800k	9,800	10,300	10,600	9,800	90	1,300	300	1,700	11,600	1,000	109%
$800k to $900k	2,900	3,900	4,000	2,900	-	1,500	300	1,800	5,000	1,000	125%
$900k to $1m	1,800	2,200	2,300	1,800	-	1,200	400	1,600	3,300	1,100	147%
$1m+	2,800	3,300	3,400	2,800	-	1,300	2,600	3,900	6,600	3,200	193%
TOTAL	**60,800**	**72,700**	**75,100**	**60,800**	**4,300**	**12,000**	**7,400**	**23,600**	**84,300**	**9,300**	**112%**

Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

It is likely that some of the shortfall in the upper part of the lower value dwelling bands could be met through the surplus (+3,100 dwellings) in the adjacent $500k to $600k dwelling value band. The surplus in this band occurs from both capacity in the existing urban and greenfield areas.

Under this scenario, there are surpluses across all other dwelling value bands over $500k. Most of the capacity occurs in value bands above $400k. Greenfield capacity is spread across a range of dwelling value bands, including the lower value bands through the provision of smaller dwellings. A significant proportion of the lower value greenfield dwelling capacity in the medium-term is projected to occur within Peacocke.

The table also contains the rest of the feasible development options within each dwelling value band. If this capacity is included, it removes the shortfall in the $400k to $500k dwelling value band. This predominantly occurs through the presence of feasible development options within the City Centre.

If gradual growth is allowed to occur in the market, then the shortfall of capacity within the lower value bands decreases. This occurs through a combination of household income growth and an increase in the number of development options that become feasible. Under these scenarios (growth scenarios 1 and 2), the City Centre accounts for a large share of the lower value ($400k to $600k) additional dwelling capacity. Larger amounts of additional development options become feasible within the City Centre with market growth.

5.4.4 Long-Term Sufficiency: 2050

The long-term sufficiency by dwelling value band is shown for each of the reported scenarios in Table 5-18 to Table 5-20. When the market is held constant, a shortfall of around 12,300 dwellings occurs in the long-term overall. This equates to an overall sufficiency of 88%. If growth gradually occurs within the market, then a surplus of between 1,700 and 3,100 dwellings occurs over the long-term (an overall sufficiency of 102% to 103%).

Table 5-18: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Hamilton City – Long-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)						SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Base	City Centre	Other Existing Urban Area	Greenfield	Total Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	500	1,800	1,900	500	-	-	-	-	500	-1,400	26%
$200k to $300k	800	4,800	5,100	800	-	-	-	-	800	-4,300	16%
$300k to $400k	5,300	12,400	13,100	5,300	-	-	-	-	5,300	-7,800	40%
$400k to $500k	12,700	20,000	21,100	12,700	3,200	900	-	4,100	16,400	-4,700	78%
$500k to $600k	13,600	18,900	20,000	13,600	600	3,500	200	4,300	19,400	-600	97%
$600k to $700k	10,600	15,300	16,100	10,600	400	2,300	2,800	5,400	15,500	-700	96%
$700k to $800k	9,800	12,500	13,200	9,800	90	1,300	6,600	7,900	15,900	2,600	120%
$800k to $900k	2,900	5,400	5,700	2,900	-	1,500	4,200	5,700	8,100	2,500	143%
$900k to $1m	1,800	3,100	3,200	1,800	-	1,200	600	1,800	3,600	400	111%
$1m+	2,800	4,200	4,400	2,800	-	1,400	300	1,600	6,200	1,700	139%
TOTAL	**60,800**	**98,300**	**103,900**	**60,800**	**4,300**	**12,000**	**14,600**	**30,800**	**91,600**	**-12,300**	**88%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**						**SUFFICIENCY**	
Up to $200k	500	1,800	1,900	500	-	-	-	-	500	-1,400	26%
$200k to $300k	800	4,800	5,100	800	-	-	-	-	800	-4,300	16%
$300k to $400k	5,300	12,400	13,100	5,300	-	-	-	-	5,300	-7,800	40%
$400k to $500k	12,700	20,000	21,100	12,700	3,200	900	-	4,100	17,500	-3,700	83%
$500k to $600k	13,600	18,900	20,000	13,600	600	3,500	200	4,200	19,400	-600	97%
$600k to $700k	10,600	15,300	16,100	10,600	400	2,300	2,700	5,300	15,600	-600	96%
$700k to $800k	9,800	12,500	13,200	9,800	90	1,300	6,400	7,700	15,400	2,200	117%
$800k to $900k	2,900	5,400	5,700	2,900	-	1,500	4,100	5,600	7,500	1,800	132%
$900k to $1m	1,800	3,100	3,200	1,800	-	1,200	600	1,700	3,600	400	112%
$1m+	2,800	4,200	4,400	2,800	-	1,300	300	1,600	5,600	1,200	126%
TOTAL	**60,800**	**98,300**	**103,900**	**60,800**	**4,300**	**12,000**	**14,100**	**30,400**	**91,100**	**-12,800**	**88%**

Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-19: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Hamilton City – Long-Term – Growth Scenario 1

Dwelling Value Band	DEMAND			CAPACITY (RER)						SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Base	City Centre	Other Existing Urban Area	Greenfield	Total Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	500	600	700	400	-	-	-	-	500	-200	67%
$200k to $300k	800	1,100	1,200	200	-	-	-	-	300	-900	28%
$300k to $400k	5,300	2,900	3,100	700	-	-	-	-	1,300	-1,700	43%
$400k to $500k	12,700	5,200	5,500	4,400	-	-	-	-	2,800	-2,700	50%
$500k to $600k	13,600	9,400	9,900	6,900	-	-	-	-	9,600	-300	97%
$600k to $700k	10,600	14,600	15,500	8,100	2,800	70	-	2,900	12,500	-3,000	81%
$700k to $800k	9,800	14,000	14,800	12,100	3,900	2,100	90	6,100	14,200	-600	96%
$800k to $900k	2,900	12,700	13,500	8,300	10	4,700	200	4,900	13,100	-300	97%
$900k to $1m	1,800	9,400	9,900	6,400	-	4,300	100	4,400	11,400	1,500	115%
$1m+	2,800	28,300	29,900	13,200	20	11,600	14,900	26,500	40,000	10,000	133%
TOTAL	**60,800**	**98,300**	**103,900**	**60,800**	**6,700**	**22,900**	**15,200**	**44,900**	**105,600**	**1,800**	**102%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**						**SUFFICIENCY**	
Up to $200k	500	600	700	400	-	-	-	-	500	-200	67%
$200k to $300k	800	1,100	1,200	200	-	-	-	-	300	-900	28%
$300k to $400k	5,300	2,900	3,100	700	-	-	-	-	1,300	-1,700	43%
$400k to $500k	12,700	5,200	5,500	4,400	-	-	-	-	2,800	-2,700	50%
$500k to $600k	13,600	9,400	9,900	6,900	-	-	-	-	10,400	500	105%
$600k to $700k	10,600	14,600	15,500	8,100	6,600	90	-	6,700	16,500	1,000	107%
$700k to $800k	9,800	14,000	14,800	12,100	9,100	2,500	90	11,700	19,100	4,300	129%
$800k to $900k	2,900	12,700	13,500	8,300	20	5,600	200	5,800	14,000	500	104%
$900k to $1m	1,800	9,400	9,900	6,400	10	5,100	100	5,200	12,200	2,300	123%
$1m+	2,800	28,300	29,900	13,200	50	13,700	14,500	28,300	41,400	11,500	138%
TOTAL	**60,800**	**98,300**	**103,900**	**60,800**	**15,900**	**26,900**	**14,900**	**57,700**	**118,500**	**14,600**	**114%**

Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-20: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Hamilton City – Long-Term – Growth Scenario 2

Dwelling Value Band	DEMAND			CAPACITY (RER)						SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Base	City Centre	Other Existing Urban Area	Greenfield	Total Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	500	500	500	300	-	-	-	-	400	-100	77%
$200k to $300k	800	300	300	200	-	-	-	-	80	-200	31%
$300k to $400k	5,300	1,100	1,200	300	-	-	-	-	500	-700	43%
$400k to $500k	12,700	1,500	1,600	500	-	-	-	-	1,300	-300	83%
$500k to $600k	13,600	3,900	4,100	3,300	-	-	-	-	1,800	-2,300	44%
$600k to $700k	10,600	6,000	6,400	1,900	-	-	-	-	4,600	-1,800	72%
$700k to $800k	9,800	8,500	9,000	12,700	-	-	-	-	8,800	-200	98%
$800k to $900k	2,900	10,000	10,600	3,600	5,600	-	-	5,600	12,200	1,600	115%
$900k to $1m	1,800	12,000	12,700	10,000	4,500	400	-	4,900	14,200	1,500	112%
$1m+	2,800	54,500	57,600	27,900	10	20,000	15,700	35,700	63,100	5,500	109%
TOTAL	**60,800**	**98,300**	**103,900**	**60,800**	**10,100**	**20,400**	**15,700**	**46,200**	**107,000**	**3,100**	**103%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**						**SUFFICIENCY**	
Up to $200k	500	500	500	300	-	-	-	-	400	-100	77%
$200k to $300k	800	300	300	200	-	-	-	-	80	-200	31%
$300k to $400k	5,300	1,100	1,200	300	-	-	-	-	500	-700	43%
$400k to $500k	12,700	1,500	1,600	500	-	-	-	-	1,300	-300	83%
$500k to $600k	13,600	3,900	4,100	3,300	-	-	-	-	1,900	-2,200	45%
$600k to $700k	10,600	6,000	6,400	1,900	-	-	-	-	4,800	-1,600	75%
$700k to $800k	9,800	8,500	9,000	12,700	-	-	-	-	10,000	1,000	111%
$800k to $900k	2,900	10,000	10,600	3,600	20,500	10	-	20,500	26,100	15,600	247%
$900k to $1m	1,800	12,000	12,700	10,000	16,300	700	-	17,000	25,200	12,500	198%
$1m+	2,800	54,500	57,600	27,900	20	36,500	15,500	52,100	80,100	22,500	139%
TOTAL	**60,800**	**98,300**	**103,900**	**60,800**	**36,800**	**37,200**	**15,500**	**89,600**	**150,300**	**46,500**	**145%**

Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Under all scenarios, there are large shortfalls in capacity across the lower dwelling value bands. Under the current prices scenario, there is a shortfall of around 19,500 dwellings in the value bands up to $700k. The dwelling value band range of the shortfall increases under the growth scenarios to occur across dwellings in value bands up to $800k to $900k. However, the overall size of the shortfall across these bands decreases to between 5,500 to 9,700 dwellings as a greater range of development options become feasible. Under all scenarios there are surpluses in capacity within the higher dwelling value bands. Capacity within the greenfield areas is concentrated into the higher dwelling value bands under the growth scenarios, with the City Centre accounting for large shares of the lower value capacity.

As stated in Section 5.2, the nature of a snapshot sufficiency assessment is such that capacity within lower to mid dwelling value bands is likely to be under-stated, correspondingly overstating shortfalls within these bands. Under a growth modelling approach (outside the scope of the NPS-UD sufficiency assessment), the capacity would be gradually taken up through time, with a share of capacity at lower prices towards the start of the assessment period.

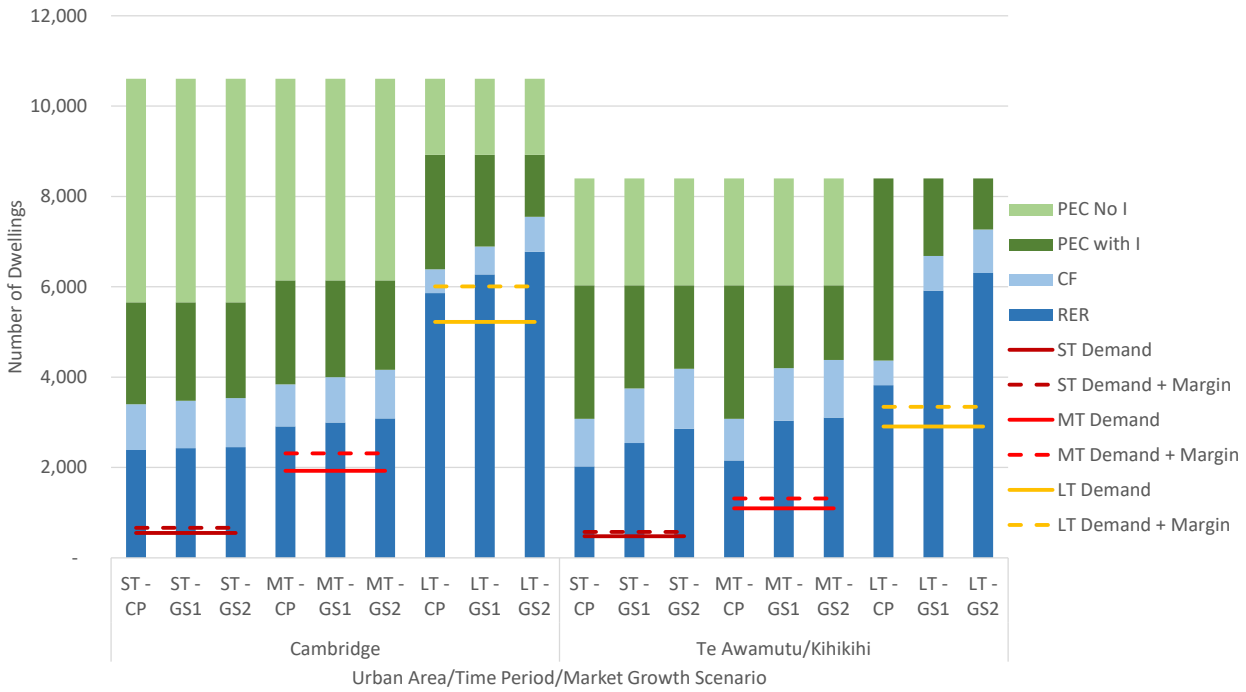
The tables above also examine the total capacity by value band that is projected to represent feasible development options. If total feasible capacity is considered, then some of the shortfalls within the mid dwelling value bands is removed under the current prices and lower growth scenarios. Under the growth scenarios, the shortfall in capacity would reduce to around 5,000 to 5,500 dwellings, and would occur across a smaller range of dwelling value bands (up to $500k to $700k). It is important to note however, that a substantial share of the additional feasible development capacity within the lowest end of the market occurs within the City Centre.

5.5 Waipā District Sufficiency Assessment

5.5.1 District Level Urban Summary

The graph below (Figure 5-3) summarises the sufficiency of potential future dwelling capacity across the Waipā District's two main urban areas (Cambridge and Te Awamutu/Kihikihi) in the short, medium and long-term. It includes the capacity across both the existing urban and potential future greenfield areas. The bars show the estimated additional future capacity, while the lines show the projected net increase in dwelling demand. The three modelled scenarios (current prices, growth scenario 1, and growth scenario 2) are shown for each time period. However, in accordance with the NPS-UD requirements, sufficiency is assessed only in relation to the current prices scenario for the short and medium-term. The other scenarios have been shown for information purposes.

Figure 5-3: Projected Urban Residential Dwelling Capacity and Urban Dwelling Demand by Waipā District Urban Area and Market Growth Scenario: Short, Medium and Long-Term



Source: M.E FPP Dwelling Capacity Model, 2020 and Housing Demand Model,

The capacity bars in the graph follow the same structure as the capacity graphs in Section 4.The full extent of the bars show the total plan-enabled capacity across the greenfield and existing urban areas combined. The bars are disaggregated into different categories of capacity, which are additive to the full extent of the bar (i.e. the total capacity enabled under the Plan). The light green portions of the bars show the capacity that is enabled under the Plan, but is not served by infrastructure. The dark green sections show the plan-enabled capacity that is served by infrastructure, but is not estimated to be commercially feasible to develop. The light blue sections show the plan-enabled capacity that is estimated to be commercially feasible to develop, but does not fall within the reasonably expected to be realised (RER) estimate. The dark blue sections of the bars show the component of the feasible capacity that is estimated to be RER.

The lines on the graph show the projected demand for dwellings across each time period. The solid lines show the net increase in demand across the time period (from 2020). The dashed lines show the net increase in demand together with the margin required on the NPS-UD. A 20% margin is applied in the short and medium-terms, while a 15% margin is applied across the long-term.

The sufficiency assessment compares the demand plus a margin with the RER capacity within each time period.

In the short-term, the sufficiency assessment suggests that there are large surpluses of potential future capacity across both of the main urban areas. In Cambridge, the there is a surplus capacity of around 1,700 dwellings, with sufficiency at 121% of the total potential future dwelling demand base. A similar surplus is projected for Te Awamutu/Kihikihi, where there is a surplus of around 1,400 dwellings (with sufficiency at 122%).

The short-term surpluses in these areas are largely driven by the large availability of infrastructure-served greenfield capacity, with further capacity available within the existing urban areas. Across the two urban centres, there is greenfield land currently served by infrastructure with a plan-enabled capacity of around 7,100 dwellings. Most of this land is estimated to represent feasible development options (capacity of around 5,900 dwellings), with a RER yield of around 4,200 dwellings taking into account likely development yields and densities. This compares to a demand for around 1,200 additional dwellings across the urban areas.

There are also sizeable surpluses projected for the medium-term across both of the main urban areas. The currently feasible capacity on the infrastructure-served greenfield areas (taking into account likely yields) also substantially exceeds the projected medium-term demand. In the medium-term, there is a projected surplus of around 1,400 dwellings across the areas combined, under the current prices scenario. Although outside of the NPS-UD medium-term sufficiency assessment, if gradual market growth were modelled, then the surplus would increase to around 2,400 to 2,600 dwellings.

In the long-term, there are predominantly still significant capacity surpluses within the modelling. The modelling suggests that there is a surplus of between 500 to 3,000 dwellings in Te Awamutu/Kihikihi. The lower end of this range occurs in the current prices scenario, where no growth in the market is allowed to occur. This scenario assumes that only capacity that is feasible in 2020 will be feasible in 2050. Conversely, if gradual growth is modelled to occur in the market through time, then there is a projected surplus of around 2,600 to 3,000 dwellings.

In Cambridge, the surpluses are projected to be smaller, largely due to the higher projected demand. Under the current prices scenario, there is a small projected shortfall of around 150 dwellings. However, the RER capacity still significantly exceeds the projected demand, with the shortfall occurring when the margin is applied. Moreover, this scenario assumes no change in the market over the long-term. Under the modelled scenarios of gradual market growth, a surplus of around 300 to 800 dwellings is projected to occur in the long-term.

The following sub-sections provide further examination of the sufficiency of capacity by dwelling value band in the short, medium and long-term.

5.5.2 Short-Term Sufficiency: 2023

The sufficiency of capacity by dwelling value band is shown in Table 5-21 and Table 5-22 below. Each row of the table represents a dwelling value band. As set out in Section 5.2, it is important to assess the total dwelling stock (current plus potential future estate) in relation to the total household demand (current plus potential future households) when assessing sufficiency by dwelling value band. The upper part of the tables where RER feasible capacity is displayed form the sufficiency assessment requirements.

While not included as part of the sufficiency assessment, the comparison of demand to the total projected feasible development capacity options are also shown. These follow the same structure as the sufficiency assessment tables. It is important also to understand the value band distribution of the total feasible capacity as this estimates the potentially feasible development option for the commercial market. These are displayed in the lower half of the tables below.

The first part of the tables (yellow columns) show the total and potential future demand (including the margin) for dwellings within each of the dwelling value bands. The middle (blue columns) section of the table shows the total dwelling capacity across each of the district's main urban areas. The first column shows the existing base, while the middle three columns show the potential additional dwelling capacity (RER component), with the final blue column showing the current and potential future dwelling estate combined. This final blue column is compared to the final yellow column (demand plus margin) to produce the final sufficiency (orange section) part of the table. The sufficiency section shows the net difference between the total potential capacity and potential demand within each value band (first column), with this number expressed as a percentage of the total dwelling stock in the final column.

Table 5-21: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Cambridge – Short-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2023 Demand	2023 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	50	50	50	50	-	-	-	50	0	92%
$200k to $300k	200	200	200	200	-	-	-	200	-20	92%
$300k to $400k	300	300	300	300	-	-	-	300	-30	92%
$400k to $500k	700	800	800	700	-	-	-	700	-60	92%
$500k to $600k	1,300	1,400	1,500	1,300	-	-	-	1,300	-100	92%
$600k to $700k	1,400	1,500	1,600	1,400	-	-	-	1,400	-100	92%
$700k to $800k	1,100	1,200	1,200	1,100	40	400	500	1,600	400	133%
$800k to $900k	900	1,000	1,000	900	40	1,300	1,300	2,300	1,200	220%
$900k to $1m	500	600	600	500	-	600	600	1,100	500	191%
$1m+	800	800	800	800	-	-	-	800	-70	92%
TOTAL	**7,400**	**7,900**	**8,000**	**7,400**	**90**	**2,300**	**2,400**	**9,800**	**1,700**	**121%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	50	50	50	50	-	-	-	50	0	92%
$200k to $300k	200	200	200	200	-	-	-	200	-20	92%
$300k to $400k	300	300	300	300	-	-	-	300	-30	92%
$400k to $500k	700	800	800	700	-	-	-	700	-60	92%
$500k to $600k	1,300	1,400	1,500	1,300	-	-	-	1,300	-100	92%
$600k to $700k	1,400	1,500	1,600	1,400	-	-	-	1,400	-100	92%
$700k to $800k	1,100	1,200	1,200	1,100	300	600	900	1,900	800	163%
$800k to $900k	900	1,000	1,000	900	300	2,200	2,500	3,500	2,400	337%
$900k to $1m	500	600	600	500	30	10	30	600	-20	97%
$1m+	800	800	800	800	-	-	-	800	-70	92%
TOTAL	**7,400**	**7,900**	**8,000**	**7,400**	**600**	**2,800**	**3,400**	**10,800**	**2,700**	**134%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-22: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Awamutu/Kihikihi – Short-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2023 Demand	2023 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	50	100	100	50	-	-	-	100	-10	91%
$200k to $300k	200	100	100	200	-	-	-	100	-10	91%
$300k to $400k	300	1,100	1,100	300	-	-	-	1,000	-100	91%
$400k to $500k	700	2,200	2,300	700	-	-	-	2,100	-200	91%
$500k to $600k	1,300	1,500	1,500	1,300	60	20	80	1,500	-50	96%
$600k to $700k	1,400	800	800	1,400	60	1,900	1,900	2,600	1,900	344%
$700k to $800k	1,100	300	300	1,100	-	-	-	300	-30	91%
$800k to $900k	900	100	100	900	-	-	-	100	-10	91%
$900k to $1m	500	40	40	500	-	-	-	30	0	91%
$1m+	800	80	80	800	-	-	-	70	-10	91%
TOTAL	**7,400**	**6,300**	**6,400**	**7,400**	**100**	**1,900**	**2,000**	**7,900**	**1,400**	**122%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	50	100	100	50	-	-	-	100	-10	91%
$200k to $300k	200	100	100	200	-	-	-	100	-10	91%
$300k to $400k	300	1,100	1,100	300	-	-	-	1,000	-100	91%
$400k to $500k	700	2,200	2,300	700	-	-	-	2,100	-200	91%
$500k to $600k	1,300	1,500	1,500	1,300	400	30	400	1,800	300	118%
$600k to $700k	1,400	800	800	1,400	400	2,300	2,700	3,400	2,600	438%
$700k to $800k	1,100	300	300	1,100	10	-	10	300	-20	93%
$800k to $900k	900	100	100	900	-	-	-	100	-10	91%
$900k to $1m	500	40	40	500	-	-	-	30	0	91%
$1m+	800	80	80	800	-	-	-	70	-10	91%
TOTAL	**7,400**	**6,300**	**6,400**	**7,400**	**800**	**2,300**	**3,100**	**8,900**	**2,500**	**139%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-21 and Table 5-22 show that although both of the main urban areas have overall projected surpluses in the short-term, each area is projected to have shortfalls in capacity across the lower to mid dwelling value bands. In Cambridge, there is a projected shortfall of up to 400 dwellings cross the value bands up to $700k. Sufficiency across these bands equates to 92% of the total market demand. It is likely however, that some of the demand within the mid value bands ($500k to $700k) could be met through the large surplus in the adjacent upper-mid value bands. The feasible capacity is concentrated in value bands above $700k in Cambridge, with the broader HBA assessment finding that a share of the development market is focussed on providing higher quality dwellings to meet the inflow of higher income retirement demand.

Shortfalls are also projected to occur across the lower to lower-mid value bands (up to $600k) within Te Awamutu/Kihikihi in the short-term. Feasible development capacity is projected to be concentrated into the $600k to $700k dwelling value band. The provision of cheaper feasible dwelling capacity is partly limited by the provisions within the Plan which tend toward medium-sized standalone dwellings on full sites.

The modelling suggests that capacity shortfalls are still likely to occur within these value bands, even when considering the overall scale of feasible capacity. Feasible capacity is focussed in the upper mid value bands, with some in the $500k to $600k value bands within Te Awamutu/Kihikihi's existing urban area.

It is important to note that the short-term assessment current prices scenario does not include any provision for household income growth (in accordance with the NPS-UD requirements). Although outside of the scope of the policy requirements, if household income growth were assumed across the short-term,

then the projected shortfalls across the lower value bands would decrease as household demand shifts upward into higher value bands.

5.5.3 Medium-Term Sufficiency: 2030

The modelling shows that the projected shortfalls in the lower to lower-mid value bands are projected to increase across both of the main urban areas into the medium-term under the current prices scenario (see Table 5-23 and Table 5-24). This occurs as no further capacity is projected to be feasible within these value bands, while the demand in these bands continues to grow.

Table 5-23: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Cambridge – Medium-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2030 Demand	2030 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	50	60	60	50	-	-	-	50	-10	76%
$200k to $300k	200	300	300	200	-	-	-	200	-70	76%
$300k to $400k	300	400	400	300	-	-	-	300	-90	76%
$400k to $500k	700	900	900	700	-	-	-	700	-200	76%
$500k to $600k	1,300	1,700	1,800	1,300	-	-	-	1,300	-400	76%
$600k to $700k	1,400	1,800	1,900	1,400	-	-	-	1,400	-400	76%
$700k to $800k	1,100	1,400	1,400	1,100	70	500	500	1,600	200	115%
$800k to $900k	900	1,200	1,200	900	70	2,200	2,300	3,100	1,900	250%
$900k to $1m	500	700	700	500	10	80	90	700	40	105%
$1m+	800	1,000	1,000	800	-	-	-	800	-200	76%
TOTAL	**7,400**	**9,300**	**9,700**	**7,400**	**200**	**2,800**	**2,900**	**10,300**	**600**	**106%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	50	60	60	50	-	-	-	50	-10	76%
$200k to $300k	200	300	300	200	-	-	-	200	-70	76%
$300k to $400k	300	400	400	300	-	-	-	300	-90	76%
$400k to $500k	700	900	900	700	-	-	-	700	-200	76%
$500k to $600k	1,300	1,700	1,800	1,300	-	-	-	1,300	-400	76%
$600k to $700k	1,400	1,800	1,900	1,400	-	-	-	1,400	-400	76%
$700k to $800k	1,100	1,400	1,400	1,100	300	600	900	2,000	500	137%
$800k to $900k	900	1,200	1,200	900	300	2,700	3,000	3,900	2,600	314%
$900k to $1m	500	700	700	500	30	10	30	600	-100	81%
$1m+	800	1,000	1,000	800	-	-	-	800	-200	76%
TOTAL	**7,400**	**9,300**	**9,700**	**7,400**	**600**	**3,200**	**3,800**	**11,200**	**1,500**	**116%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-24: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Awamutu/Kihikihi – Medium-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2030 Demand	2030 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	50	100	100	100	-	-	-	100	-20	82%
$200k to $300k	200	100	100	100	-	-	-	100	-30	82%
$300k to $400k	300	1,200	1,200	1,000	-	-	-	1,000	-200	82%
$400k to $500k	700	2,400	2,500	2,100	-	-	-	2,100	-500	82%
$500k to $600k	1,300	1,600	1,700	1,400	80	30	100	1,500	-200	88%
$600k to $700k	1,400	800	900	700	100	1,900	2,000	2,800	1,900	322%
$700k to $800k	1,100	400	400	300	-	-	-	300	-70	82%
$800k to $900k	900	100	200	100	-	-	-	100	-30	82%
$900k to $1m	500	40	40	30	-	-	-	30	-10	82%
$1m+	800	90	90	70	-	-	-	70	-20	82%
TOTAL	**7,400**	**7,000**	**7,200**	**5,900**	**200**	**2,000**	**2,200**	**8,000**	**800**	**112%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	50	100	100	100	-	-	-	100	-20	82%
$200k to $300k	200	100	100	100	-	-	-	100	-30	82%
$300k to $400k	300	1,200	1,200	1,000	-	-	-	1,000	-200	82%
$400k to $500k	700	2,400	2,500	2,100	-	-	-	2,100	-500	82%
$500k to $600k	1,300	1,600	1,700	1,400	400	30	400	1,800	100	106%
$600k to $700k	1,400	800	900	700	400	2,300	2,700	3,400	2,500	393%
$700k to $800k	1,100	400	400	300	10	-	10	300	-60	83%
$800k to $900k	900	100	200	100	-	-	-	100	-30	82%
$900k to $1m	500	40	40	30	-	-	-	30	-10	82%
$1m+	800	90	90	70	-	-	-	70	-20	82%
TOTAL	**7,400**	**7,000**	**7,200**	**5,900**	**800**	**2,300**	**3,100**	**8,900**	**1,800**	**125%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

In Cambridge, the shortfalls are projected to increase to around 1,300 dwellings in the low to mid dwelling value bands (up to $700k), with overall sufficiency decreasing to 76% across these value bands. Feasible capacity is projected to occur in value bands over $700k, meaning that there is limited scope for the market to meet demand in the lower dwelling value bands. It is likely that market could meet some of the demand in the mid value bands ($500k to $700k) through the surpluses in the adjacent value bands. Around two-thirds of the shortfall is projected to occur in the $500k to $700k value bands.

The lower value band shortfalls in Cambridge have been modelled under the current prices scenario where it is assumed there is no growth in the dwelling demand value profile as household incomes are held constant. Although it is outside of the NPS-UD assessment criteria, it is important to understand how the shortfalls across these value bands may change if a gradual increase in household income were applied through time.

The modelling suggests that if household incomes increased, then the shortfalls across the lower to lower-mid value bands would become minor. This would occur as a substantial share of the Cambridge household demand is currently located within the mid value bands. This would shift upward to the upper-mid value bands where feasible capacity is focussed, with demand from the lower value bands being met by the existing housing stock dwellings in the mid value bands.

The projected shortfalls in the lower dwelling value bands are also projected to increase within Te Awamutu/Kihikihi into the medium-term. Under the current prices scenario, the shortfall is projected to

increase to around 900 dwellings in value bands up to $600k. This equates to a sufficiency of 84% of total market demand across these value bands.

Some of this shortfall could be met through the large projected surplus in the adjacent $600k to $700k value band, where feasible supply is focussed. However, there is less scope for this to occur within the Te Awamutu/Kihikihi market due to the existing lower value band profile of demand, where a higher share of demand occurs within the lower value bands.

Although outside the parameters of the NPS-UD policy requirements, if gradual growth were modelled in household income, then the shortfalls across the lower dwelling value bands would become minor as households shifted up the dwelling value band demand profile.

5.5.4 Long-Term Sufficiency: 2050

In the long-term, the surpluses are projected to predominantly occur across both urban areas. Both urban areas have substantial amounts of additional infrastructure served greenfield capacity planned for the long-term. There is also significant potential for intensification within the existing urban area, although a conservative approach has been taken within the modelling to assume that only a minor portion of this capacity as realised.

Overall surpluses are projected to increase in Te Awamutu/Kihikihi under the growth scenarios to between 2,600 and 3,000 dwellings (and is estimated at 500 dwellings if prices are held constant). This equates to a sufficiency of 105% to 132%. Much of the projected surplus increase is due to further greenfield development options becoming feasible where the estimated sales price exceeds the cost of redeveloping existing lifestyle properties.

In Cambridge, the projected surplus is smaller. If prices are held constant, and long-term demand is compared to the currently feasible development options, then a slight shortfall of 100 dwellings is projected. Under the growth scenarios, the projected surplus equates to between 300 and 800 dwellings. The projected increases between the growth scenarios are smaller in Cambridge as much of the greenfield area is projected to represent feasible development options under the current prices and lower growth scenario.

The sufficiency assessment by value bands is shown in Table 5-25 to Table 5-30 (at the end of this sub-section) for Cambridge and Te Awamutu. In the long-term assessment, additional tables are provided to show the outputs of the three growth scenarios modelled. The tables also show the total projected feasible capacity.

In Cambridge, the shortfalls across the lower dwelling value bands are projected to increase under the current prices scenario. The shortfall is projected to increase to 3,400 dwellings across the lower to mid dwelling value bands (up to $800k). This occurs under this scenario as it assumes no increase in the value of dwellings demanded from existing households. The growth scenarios include a level of household income growth together with growth in the dwelling market. Under the growth scenarios, the shortfalls in the lower dwelling value bands largely resolve.

A similar situation is also projected to occur within Te Awamutu/Kihikihi in the long-term. Shortfalls in the lower to mid value bands (up to $600k) are projected to increase to around 2,500 dwellings under the current prices scenario. Under the growth scenarios, the shortfalls across the lower to mid value bands (up to around $600k to $700k) are projected to largely resolve. However, under the lower growth scenario, there is a projected shortfall (-2,300 dwellings) under the upper mid value bands ($600k to $900k). While the additional feasible capacity is concentrated into the upper value bands, it is likely that this will primarily meet demand from existing households moving up the value bands.

As stated in Section 5.2, the nature of a snapshot sufficiency assessment is such that capacity within lower to mid dwelling value bands is likely to be under-stated, correspondingly overstating shortfalls within these bands. Under a growth modelling approach (outside the scope of the NPS-UD sufficiency assessment), the capacity would be gradually taken up through time, with a share of capacity at lower prices towards the start of the assessment period.

Table 5-25: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Cambridge – Long-Term – Current Prices Scenario

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	50	80	90	50	-	-	-	50	-40	55%
$200k to $300k	200	400	400	200	-	-	-	200	-200	55%
$300k to $400k	300	500	500	300	-	-	-	300	-200	55%
$400k to $500k	700	1,200	1,300	700	-	-	-	700	-600	55%
$500k to $600k	1,300	2,300	2,400	1,300	-	-	-	1,300	-1,100	55%
$600k to $700k	1,400	2,400	2,600	1,400	-	-	-	1,400	-1,200	55%
$700k to $800k	1,100	1,900	2,000	1,100	200	500	700	1,900	-50	97%
$800k to $900k	900	1,600	1,700	900	200	5,000	5,100	5,800	4,100	338%
$900k to $1m	500	900	1,000	500	20	10	30	700	-200	75%
$1m+	800	1,300	1,400	800	-	-	-	800	-600	55%
TOTAL	**7,400**	**12,600**	**13,400**	**7,400**	**400**	**5,500**	**5,900**	**13,200**	**-100**	**99%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	50	80	90	50	-	-	-	50	-40	55%
$200k to $300k	200	400	400	200	-	-	-	200	-200	55%
$300k to $400k	300	500	500	300	-	-	-	300	-200	55%
$400k to $500k	700	1,200	1,300	700	-	-	-	700	-600	55%
$500k to $600k	1,300	2,300	2,400	1,300	-	-	-	1,300	-1,100	55%
$600k to $700k	1,400	2,400	2,600	1,400	-	-	-	1,400	-1,200	55%
$700k to $800k	1,100	1,900	2,000	1,100	300	600	900	2,100	100	108%
$800k to $900k	900	1,600	1,700	900	300	5,200	5,500	6,300	4,500	366%
$900k to $1m	500	900	1,000	500	30	10	30	600	-400	59%
$1m+	800	1,300	1,400	800	-	-	-	800	-600	55%
TOTAL	**7,400**	**12,600**	**13,400**	**7,400**	**600**	**5,800**	**6,400**	**13,800**	**400**	**103%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-26: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Cambridge – Long-Term – Growth Scenario 1

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	50	60	60	40	-	-	-	40	-20	68%
$200k to $300k	200	20	20	40	-	-	-	100	80	459%
$300k to $400k	300	200	300	200	-	-	-	200	-70	73%
$400k to $500k	700	200	200	200	-	-	-	200	30	118%
$500k to $600k	1,300	500	500	400	-	-	-	700	200	137%
$600k to $700k	1,400	600	600	500	-	-	-	1,100	500	174%
$700k to $800k	1,100	600	700	1,200	-	-	-	1,000	300	143%
$800k to $900k	900	2,200	2,300	1,100	-	-	-	1,000	-1,300	43%
$900k to $1m	500	1,000	1,100	800	-	-	-	900	-200	85%
$1m+	800	7,200	7,700	2,900	500	5,800	6,300	8,500	800	110%
TOTAL	**7,400**	**12,600**	**13,400**	**7,400**	**500**	**5,800**	**6,300**	**13,600**	**300**	**102%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	50	60	60	40	-	-	-	40	-20	68%
$200k to $300k	200	20	20	40	-	-	-	100	80	459%
$300k to $400k	300	200	300	200	-	-	-	200	-70	73%
$400k to $500k	700	200	200	200	-	-	-	200	30	118%
$500k to $600k	1,300	500	500	400	-	-	-	700	200	137%
$600k to $700k	1,400	600	600	500	-	-	-	1,100	500	174%
$700k to $800k	1,100	600	700	1,200	-	-	-	1,000	300	143%
$800k to $900k	900	2,200	2,300	1,100	-	-	-	1,000	-1,300	43%
$900k to $1m	500	1,000	1,100	800	-	-	-	900	-100	87%
$1m+	800	7,200	7,700	2,900	800	6,100	6,900	9,100	1,400	118%
TOTAL	**7,400**	**12,600**	**13,400**	**7,400**	**800**	**6,100**	**6,900**	**14,300**	**900**	**107%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-27: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Cambridge – Long-Term – Growth Scenario 2

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	50	40	40	30	-	-	-	40	0	98%
$200k to $300k	200	40	40	20	-	-	-	10	-40	19%
$300k to $400k	300	-	-	70	-	-	-	200	200	8825%
$400k to $500k	700	100	100	100	-	-	-	100	50	144%
$500k to $600k	1,300	300	300	200	-	-	-	200	-90	70%
$600k to $700k	1,400	80	80	100	-	-	-	500	400	644%
$700k to $800k	1,100	400	400	700	-	-	-	800	400	197%
$800k to $900k	900	60	70	400	-	-	-	700	700	1048%
$900k to $1m	500	1,200	1,200	1,000	-	-	-	900	-300	74%
$1m+	800	10,400	11,100	4,800	700	6,100	6,800	10,600	-500	95%
TOTAL	**7,400**	**12,600**	**13,400**	**7,400**	**700**	**6,100**	**6,800**	**14,100**	**800**	**106%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	50	40	40	30	-	-	-	40	0	98%
$200k to $300k	200	40	40	20	-	-	-	10	-40	19%
$300k to $400k	300	-	-	70	-	-	-	200	200	8825%
$400k to $500k	700	100	100	100	-	-	-	100	50	144%
$500k to $600k	1,300	300	300	200	-	-	-	200	-90	70%
$600k to $700k	1,400	80	80	100	-	-	-	500	400	644%
$700k to $800k	1,100	400	400	700	-	-	-	800	400	197%
$800k to $900k	900	60	70	400	-	-	-	700	700	1048%
$900k to $1m	500	1,200	1,200	1,000	-	-	-	900	-300	74%
$1m+	800	10,400	11,100	4,800	1,200	6,400	7,500	11,300	300	102%
TOTAL	**7,400**	**12,600**	**13,400**	**7,400**	**1,200**	**6,400**	**7,500**	**14,900**	**1,500**	**112%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-28: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Awamutu/Kihikihi – Long-Term – Current Prices Scenario

Dwelling Value Band	DEMAND			CAPACITY (RER)					SUFFICIENCY	
	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	100	200	200	100	-	-	-	100	-60	64%
$200k to $300k	100	200	200	100	-	-	-	100	-60	64%
$300k to $400k	1,000	1,500	1,600	1,000	-	-	-	1,000	-600	64%
$400k to $500k	2,100	3,100	3,200	2,100	-	-	-	2,100	-1,200	64%
$500k to $600k	1,400	2,100	2,200	1,400	200	30	200	1,600	-600	73%
$600k to $700k	700	1,000	1,100	700	200	3,400	3,600	4,300	3,200	394%
$700k to $800k	300	400	500	300	-	-	-	300	-200	64%
$800k to $900k	100	200	200	100	-	-	-	100	-70	64%
$900k to $1m	30	50	50	30	-	-	-	30	-20	64%
$1m+	70	100	100	70	-	-	-	70	-40	64%
TOTAL	**5,900**	**8,800**	**9,200**	**5,900**	**400**	**3,400**	**3,800**	**9,700**	**500**	**105%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	100	200	200	100	-	-	-	100	-60	64%
$200k to $300k	100	200	200	100	-	-	-	100	-60	64%
$300k to $400k	1,000	1,500	1,600	1,000	-	-	-	1,000	-600	64%
$400k to $500k	2,100	3,100	3,200	2,100	-	-	-	2,100	-1,200	64%
$500k to $600k	1,400	2,100	2,200	1,400	400	30	400	1,800	-300	85%
$600k to $700k	700	1,000	1,100	700	400	3,500	3,900	4,600	3,500	419%
$700k to $800k	300	400	500	300	10	-	10	300	-200	65%
$800k to $900k	100	200	200	100	-	-	-	100	-70	64%
$900k to $1m	30	50	50	30	-	-	-	30	-20	64%
$1m+	70	100	100	70	-	-	-	70	-40	64%
TOTAL	**5,900**	**8,800**	**9,200**	**5,900**	**800**	**3,600**	**4,400**	**10,200**	**1,000**	**111%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-29: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Awamutu/Kihikihi – Long-Term – Growth Scenario 1

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	100	100	100	90	-	-	-	90	-30	77%
$200k to $300k	100	40	40	30	-	-	-	50	10	124%
$300k to $400k	1,000	100	100	90	-	-	-	200	100	210%
$400k to $500k	2,100	100	100	800	-	-	-	500	400	353%
$500k to $600k	1,400	1,400	1,500	1,100	-	-	-	1,500	20	101%
$600k to $700k	700	1,500	1,500	1,200	-	-	-	1,200	-300	80%
$700k to $800k	300	1,600	1,700	1,200	-	-	-	800	-900	49%
$800k to $900k	100	2,000	2,000	600	200	30	200	900	-1,100	45%
$900k to $1m	30	500	500	300	50	-	50	700	200	136%
$1m+	70	1,500	1,500	400	300	5,300	5,600	5,700	4,200	374%
TOTAL	**5,900**	**8,800**	**9,200**	**5,900**	**600**	**5,300**	**5,900**	**11,800**	**2,600**	**128%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	100	100	100	90	-	-	-	80	-40	65%
$200k to $300k	100	40	40	30	-	-	-	40	0	104%
$300k to $400k	1,000	100	100	90	-	-	-	200	90	177%
$400k to $500k	2,100	100	100	800	-	-	-	400	300	297%
$500k to $600k	1,400	1,400	1,500	1,100	-	-	-	1,300	-200	85%
$600k to $700k	700	1,500	1,500	1,200	-	-	-	1,000	-500	69%
$700k to $800k	300	1,600	1,700	1,200	-	-	-	700	-1,000	44%
$800k to $900k	100	2,000	2,000	600	400	30	500	1,200	-800	60%
$900k to $1m	30	500	500	300	90	-	90	900	400	175%
$1m+	70	1,500	1,500	400	500	5,600	6,100	5,700	4,100	372%
TOTAL	**5,900**	**8,800**	**9,200**	**5,900**	**1,100**	**5,600**	**6,700**	**11,600**	**2,400**	**126%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

Table 5-30: Sufficiency of Projected Dwelling Capacity by Dwelling Value Band: Te Awamutu/Kihikihi – Long-Term – Growth Scenario 2

	DEMAND			CAPACITY (RER)					SUFFICIENCY	
Dwelling Value Band	Existing Households	2050 Demand	2050 Demand (with margin)	Existing Estate	Existing Urban Area	Greenfield	Additional Future Potential	Total Potential Future Estate	Net Difference to Demand	% of Demand
Up to $200k	100	70	70	70	-	-	-	80	0	105%
$200k to $300k	100	80	80	30	-	-	-	20	-60	21%
$300k to $400k	1,000	-	-	40	-	-	-	70	70	1777%
$400k to $500k	2,100	40	50	80	-	-	-	200	200	518%
$500k to $600k	1,400	100	100	600	-	-	-	300	200	251%
$600k to $700k	700	200	200	400	-	-	-	800	600	325%
$700k to $800k	300	1,300	1,300	2,100	-	-	-	1,300	-40	97%
$800k to $900k	100	200	200	400	-	-	-	900	700	526%
$900k to $1m	30	2,900	3,100	1,000	-	-	-	900	-2,100	31%
$1m+	70	3,900	4,100	1,200	800	5,500	6,300	7,500	3,400	184%
TOTAL	**5,900**	**8,800**	**9,200**	**5,900**	**800**	**5,500**	**6,300**	**12,200**	**3,000**	**132%**
	DEMAND			**CAPACITY (COMMERCIALLY FEASIBLE)**					**SUFFICIENCY**	
Up to $200k	100	70	70	70	-	-	-	60	-10	88%
$200k to $300k	100	80	80	30	-	-	-	10	-70	17%
$300k to $400k	1,000	-	-	40	-	-	-	60	60	1495%
$400k to $500k	2,100	40	50	80	-	-	-	200	200	436%
$500k to $600k	1,400	100	100	600	-	-	-	300	100	211%
$600k to $700k	700	200	200	400	-	-	-	700	400	273%
$700k to $800k	300	1,300	1,300	2,100	-	-	-	1,100	-200	82%
$800k to $900k	100	200	200	400	-	-	-	800	600	447%
$900k to $1m	30	2,900	3,100	1,000	-	-	-	800	-2,200	26%
$1m+	70	3,900	4,100	1,200	1,500	5,800	7,300	8,300	4,200	202%
TOTAL	**5,900**	**8,800**	**9,200**	**5,900**	**1,500**	**5,800**	**7,300**	**12,200**	**3,000**	**133%**

Source: M.E. FPP Dwelling Capacity Model, 2020 and Housing Demand Model, 2021.

6 Impact of Planning

6.1 Introduction

This section draws together the analysis of housing demand and feasibility and sufficiency of supply together with other information from developers and selected groups within the housing market. It contains the assessment of how the FPP's planning decisions and provision of infrastructure is likely to affect the competitiveness of the FPP area housing market, and how that may impact on housing affordability in the future. A key requirement is to distinguish between the effects of planning and infrastructure provision, and other influences on affordability.

Our assessment begins by considering the approach to assessing the effects of planning on the housing market competitiveness, setting out how planning may affect the commercial market (Section 6.2). The following sub-sections assess the information sources and assessment within this context. Section 6.3 contains the outputs from M.E's Housing Affordability Model using inputs from the capacity and demand assessments. Information from the Developer Sector survey is contained in Section 6.4. Information on Māori housing is contained in Section 6.5, which will be supplemented by further information obtained by FPP following consultation with Iwi. Section 6.6 then provides the housing market indicators contained in the Ministry for the Environment Urban Development Dashboard.

6.2 Planning and Land and Development Markets

6.2.1 Approach

A key requirement of the NPS-UD work (clause 3.23) is to identify how planning and provision of infrastructure can be expected to affect the affordability of housing.

Housing prices and affordability are affected by a wide range of influences, local, regional and national.

Within those influences, the effects of councils' planning and infrastructure are predominantly local to the district. This is because many arise from the scale, location and timing of land supply for housing, all directly affected by zoning and other plan provisions, and the provision of infrastructure. The Randerson report identifies this 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."*[59]

[59] Randerson Report, para 130, p353.

While somewhat simplified, since it can be difficult to separate out the effects of regulatory stringency from other effects on supply and development, that is nonetheless useful because it helps place the focus on local (district level) conditions in the first instance.

The challenge is that there is considerable potential for the assessment of affordability to show the effects of regional and national influences, often not directly affected by local planning provisions or infrastructure but which may be the key determinants of housing affordability at the local level – compounding or offsetting the effects of planning and infrastructure provision.

This makes it important to understand the likely effects of planning and infrastructure in and of themselves, to ensure that plan provisions do not impact negatively on housing affordability, while at the same time recognising they may be in the "necessary but not sufficient conditions" category.

To minimise this effect, a two-step assessment structure is undertaken here.

Step 1

Step 1 focuses on the most direct effects of planning and infrastructure provision, and consider these first. Usefully, these arise out of the feasibility assessment required by the NPS-UD, to address both feasibility and sufficiency of housing supply in the short, medium and long terms.

The most immediate effects on the prices of new housing are for the most part reflected in the key assumptions for feasibility and RER assessments. That feasibility analysis requires information on land values, construction costs, housing typologies and sizes, and expected market values, and the effects of location on all of these.

It also establishes the key parameters of the planning outcomes, in terms of zoned and infrastructure capacity in each location. These are critical matters because the most direct effect of planning on housing supply and prices is through the amount and location of land supply, together with the plan provisions of what is enabled on the land, affecting the nature and therefore the cost of new dwelling supply.

Research into urban economies, including previous studies on development feasibility, have established that market growth is commonly associated with growth in the costs and final prices of new housing. A key consequence is that development feasibility tends to improve over time, as cities grow, the existing estate ages, household incomes increase and accumulated wealth improves for substantial segments of the market. To take account of the underlying drivers in the economy, feasibility assessment includes allowance for changes in prices, costs and values which is broadly commensurate with market change.

This means that the feasibility and sufficiency assessment directly identifies by how much new housing prices would need to change from the current values, over short, medium and long terms. That is a critical indicator, because it helps establish the scale of the required change in housing prices. Since the feasibility assessment generally also offers detail on the housing typologies, their location, costs and estimated market values, that information become the key inputs to the affordability analysis.

Most critically, it is the key mechanism to show the effect of the required price shifts on housing affordability, which may be attributed to planning and infrastructure provision.

This may be undertaken by considering the key effects at the local level – taking account of what can be feasible to develop in terms of dwelling options (size and typology), land values, construction, infrastructure and other costs – in terms of the minimum changes required in each. That sets the minimum price growth for feasible sufficiency, taking account of land supply, location and plan provisions. These are the main, local effects of planning and infrastructure.

Step 2

The second, subsequent step is recognition of how wider influences may affect housing affordability, over and above the effects of planning provisions and infrastructure. This can take into account the other influences on affordability, including to illustrate the potential for such wider influences to have effect on affordability irrespective of the plan and infrastructure effects.

We now consider the specific provisions of the NPS-UD.

6.2.2 Competitive Land and Development Markets

NPS-UD Provisions

A key aspect of the NPS-UD is the requirement to support and contribute to "*competitive land and development markets*". That requirement is set out at objective and policy level, and 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.*

There are two key elements in Objective 2. First, the core expectation is that planning decisions are able to improve housing affordability. Second, the process for such improvement is supporting land and

development markets to be competitive. Importantly, the NPS-UD wording implies that the main or the only apparent route through which planning decisions may improve housing affordability is by supporting[60] markets to be competitive.

Planning and (Urban) Economies

In order to assess the role and effects of planning in an urban economy, it is important to understand first how that economy functions, and then identify how planning – directly and indirectly – may affect that.

Urban economies are spatial by their nature. Location is never neutral. Nor is time. Economies are characterised by multiple activities, with multiple flow-on and feed-back effects, occurring through time, and across space. Co-location of activity is an essential component of urban economies, yet most activities require their own space, and competition for space and location are critical aspects of how cities function. Cities are characterised by multiple externalities, and activities incur substantial transaction costs including the costs of movement to enable business and social interactions. And the urban part of the economy is characteristically the hub of a wider spatial economy which extends across the hinterland toward other cities.

The operation of urban economies is complex. It is subject to a wide range of influences including social, economic (private and public sector) cultural and especially environmental aspects, at local, regional and national levels.

One component of those influences is the regulatory filter, affecting those social, economic, cultural and environmental aspects both directly and indirectly.

The NPS-UD requires assessment of "planning decisions". Planning and regulation is multi-layered, and applies at local, regional and national levels.

This complexity with multiple influences occurring across space and through time highlight the importance of understanding the ways in which "planning" may have effect and which aspects of "planning" need to be assessed to comply with the NPS-UD provisions. Within those broad effects the requirement is to identify and examine how "planning" may have effects on housing affordability, and the competitiveness of local land markets.

There are two main routes through which "planning" affects affordability and competitiveness, both are through enabling and supporting land use. The nature, scale and location of land uses which make up an (urban) economy are key to the efficiency and sustainability of that economy, and planning has a key role in enabling where and when activity may occur. The spatial (and temporal) efficiency of that activity is a critical influence on productive efficiency and sustainability. The second route is directly related, effectively that from "disenablement" from inefficiencies in the provision for economic activity, primarily from constraints on capacity, and/or poor location. Constraints on capacity typically place upward pressure on the price of land and other resources, with obvious negative effects on affordability (regulatory stringency).

Planning also has a core role in supporting land use by minimising or avoiding externalities; minimising or avoiding transaction costs (especially costs of movement of people and goods); enabling economies of scale

[60] The term *supporting* is not defined, although it presumably equates with 'contributing positively to', or 'having a positive effect on'.

and scope which are essential for efficient urban economies; and seeking efficient use of urban infrastructure (3 waters, transport, social infrastructure).

These are important aspects that substantially affect the efficiency and functioning of urban land markets. The operation of the commercial market plays a core role within the overall land development and housing sector. It is critical to recognise that it is situated within a wider urban market context where effects on urban efficiency go well beyond competitive commercial markets. The role of planning within the market can act to set some of the wider parameters, within which the commercial market can operate. The planning parameters can manage the externalities and efficiencies that are unable to be managed by the commercial market alone.

Defining a Competitive Urban Land Market

The NPS-UD does not contain a definition of competitive land markets, nor is there definition in the documents which support the NPS. However, there is scope for councils to define and develop appropriate methods and practices to achieve NPS-UD compliance. That approach is followed here.

The review of the Resource Management Act does offer a useful definition. That definition is adopted here for the assessment, 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 Randerson review acknowledges 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)

We have considered carefully the definition in the Randerson review, and we consider that it offers a sound basis. In particular, it acknowledges how urban economies function, and how council planning may affect

competition within the market. Of particular note, it acknowledges that competition is an important aspect, but it does not seek to place reliance for urban planning on the operation of competitive markets alone. Therefore, it is important to adopt a wider view of a competitive development market.

There are many factors that affect the competitiveness of land/housing markets, and the overall delivery of housing. A competitive land market is one influence among many influences on housing affordability. These include both planning and non-planning factors. Examples of non-planning factors include wider economic factors (e.g. macroeconomic factors, patterns of demand, immigration), conditions within the construction sector and labour market, access to finance, level of overseas demand, etc. A critical matter is that planning decisions are one localised influence among many influences on housing affordability, many of which apply at regional, national or international level.

Distinguishing the influence of local planning decisions on housing affordability is a challenging task. However, focusing on the role of Council, there are several ways through which district plan provisions directly and indirectly affect housing prices and affordability. These include:

a. effects on the value of land for housing, which are beyond those effects which arise from the potential use of land and its location
b. the costs of providing housing which are affected by statutory requirements such as building standards, site coverage, building height maxima and bulk and location criteria
c. the volume of housing supply, potentially affected by zoned and serviced land area influencing potential dwelling numbers
d. the location and timing of capacity, as affected especially by zoning and the provision of infrastructure.

The following sub-sections contain information on aspects of our assessment that inform the above effects of planning within the market. These are followed by the presentation of the MfE housing dashboard indicators.

6.3 Future Housing Affordability

6.3.1 Modelling Approach

The analysis above provides important context for examining and understanding the likely future affordability of housing in the FPP area.

Any assessment of future housing affordability must be undertaken with high levels of care and caution. Future projections need to be driven by estimates and projections of the key factors which will drive change in affordability. It is important to recognise that several factors will have effect in combination, and that each factor may have significant influence even on its own. This means that future estimates of housing affordability are necessarily sensitive to the individual assumptions and combinations which are applied.

That is important because of the NPS-UD requirement to look into the long term future (30+ years). Simple projected rates of annual change will compound over time, so that later in the planning period the annual increments can become very large even from apparently modest annual changes. For this reason, the

modelling includes some dampening to limit the effects of growth rates compounding into the medium and long term.

Housing affordability at any point in the future depends on housing values which are driven primarily by the combined effects of changes in land value, improvement (dwelling) value, and housing construction costs. These changes are likely to vary over the planning period. Affordability also depends on household income levels as these affect ability to save for deposits and servicing loans, and accumulated wealth especially any increases in dwelling equity over time for households which are already owners.

All that said, the affordability assessment itself is reasonably straightforward. The numbers of dwellings in each value band (as estimated above) can be calculated according to real change in land and improvement prices, housing construction costs, and allowance for the current and future dwelling estates to age and potentially depreciate (at least relative to land values).

This provides estimates of the value of existing and future dwellings in real $ terms in each year, and accordingly a distribution of values across the dwelling estate at each point in time (future year).

The ability of households to afford to purchase a dwelling is based on their income levels at each point in time (future year) according to projected real change in incomes. The calculation of affordability is described above, for non-owner households.

Through this process, the projections therefore show the numbers of dwellings in each value band, and the numbers of households of each type and income band which are able to afford to purchase those dwellings. The future dollar amounts are inflated for household incomes, and for dwelling values. These income and dwelling value bands are referenced back to the $2020 values, so that future numbers of dwellings and households which can afford to purchase are able to be shown in the base year $2020 terms. The analysis is detailed in terms of the numbers of different dwelling value bands and different household types, but the calculation is fairly straightforward and transparent.

6.3.2 Assessing Affordability within the FPP Area

The assessment of affordability within the FPP area has been undertaken at the city and district total urban level to reflect the data available and provide overall assessments of affordability for each area. Local information on the urban capacity modelling has been combined with the available TLA level information on factors affecting household demand. The dwelling value band profile of the potential future dwelling estate was determined within the capacity assessment[61]. This has been compared to the household income distribution of urban households and the dwelling values affordable to each income band.

The affordability assessment shows the share of the (current and potential future) dwelling stock which is affordable to each household income band. The key outputs of this assessment for each of the growth scenarios are shown in the following sub-sections for each FPP area and future scenario in Figure 6-1 to Figure 6-9. Each line on the graph represents the outputs from a different time period of the assessment.

[61] The future potential dwelling estate value band profile contains further modelling of the capacity assessment outputs. The capacity assessment required a comparison of feasible capacity, as calculated at a point in time, with demand by dwelling value band. Further modelling within the housing affordability assessment allows capacity to be constructed through time at different points and corresponding value bands within the assessment period.

The value of each point on the line shows the share of dwellings of the current (year 2020) or potential future estate (years 2023 to 2050) that are affordable to households within each income bracket.

Changes in the position of the lines show changes in housing affordability through time. A shift of the curves to the left suggests increasing housing affordability as it results in a higher share of the dwelling stock affordable at each household income band. Conversely, a shift of the curves to the right suggests decreasing housing affordability as it results in decreasing shares of the dwelling stock affordable at each household income band.

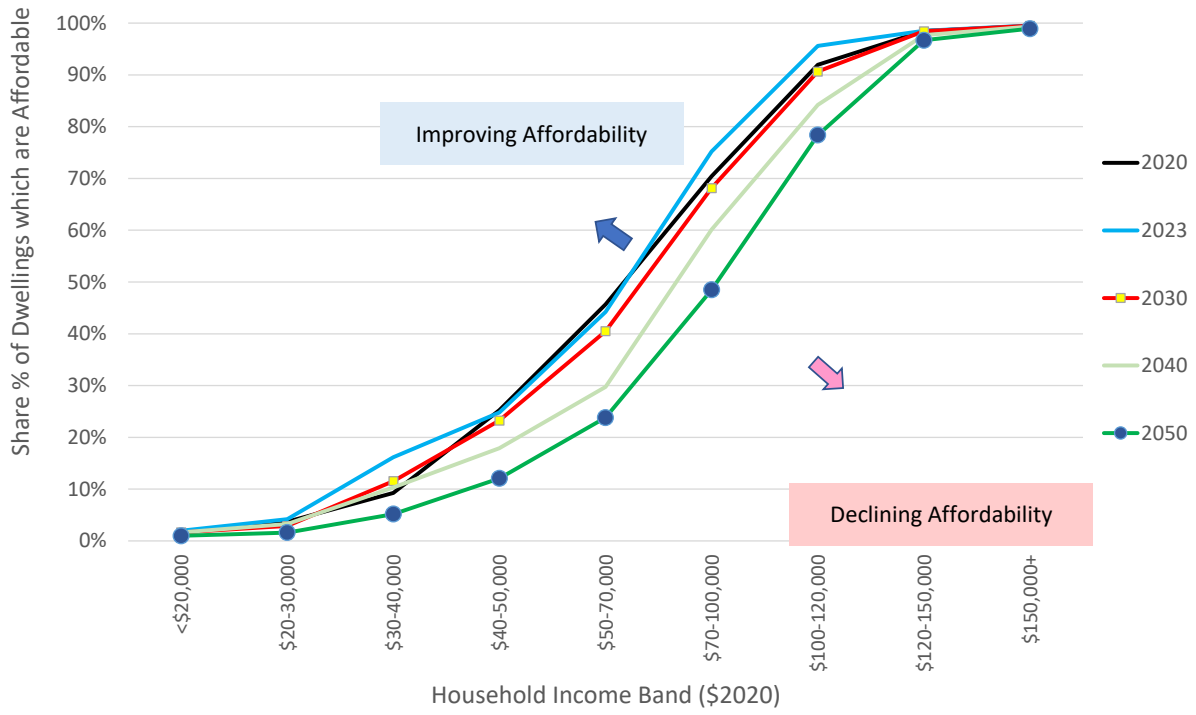
Waikato District Urban Area

The assessment shows that housing affordability generally decreases through time within the urban areas of Waikato District. Under the Current Prices scenario, housing affordability is similar to the current situation in both the short and medium-term, with higher affordability within the short-term. This is because the current prices scenario holds prices constant with affordability being influenced by the part of the dwelling value curve where feasible capacity is taken up as part of the potential future estate (which largely remains fixed through time). In the long-term, affordability declines as additional capacity at higher value bands is added, largely within the greenfield areas, which become served by infrastructure through time.

Housing affordability decreases under growth scenarios 1 and 2, with the largest decreases in growth scenario 2. Price increases in these scenarios mean that decreased shares of the potential future dwelling stock are affordable at each household income band through time.

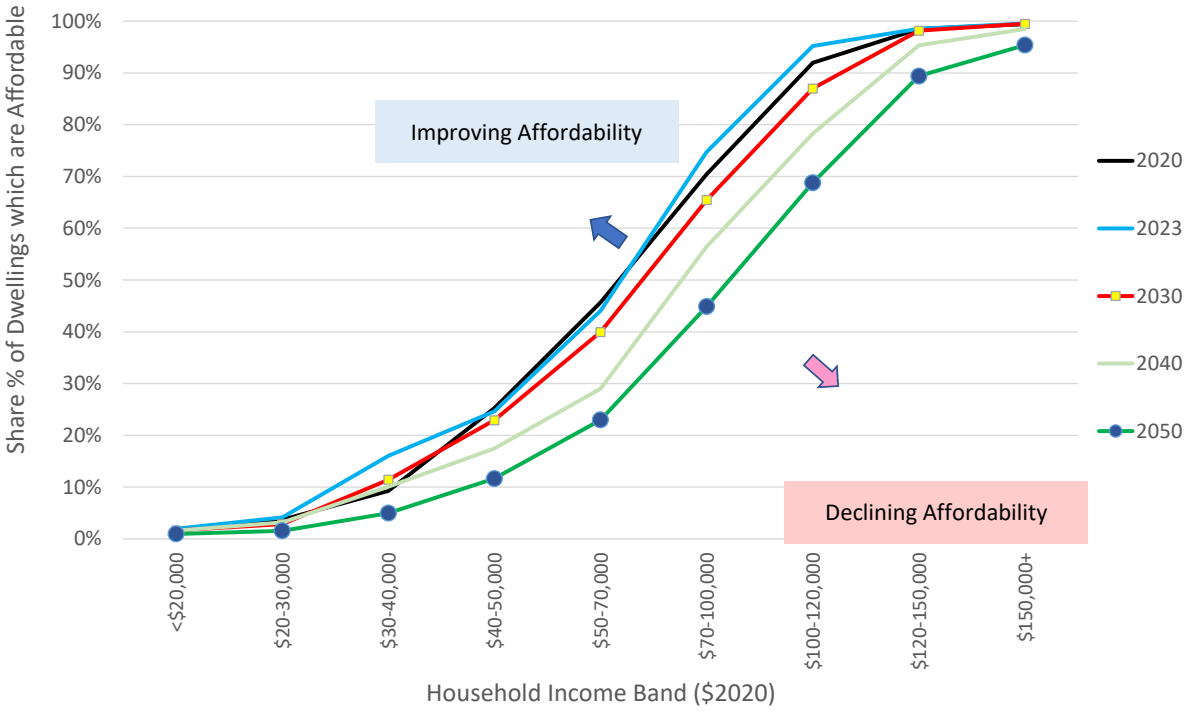
The assessment shows that although affordability decreases through time, Waikato District's urban areas have higher levels of affordability, in the long-term, than in other parts of the FPP area. This is due to the overall value band distribution of the potential future estate. Lower value locations, particularly within the mid parts of the district, mean that higher shares of the potential future state are calculated to be affordable within each household income band.

Figure 6-1: Urban Waikato District Housing Affordability by Household Income Band, 2020-2050: Current Prices Scenario



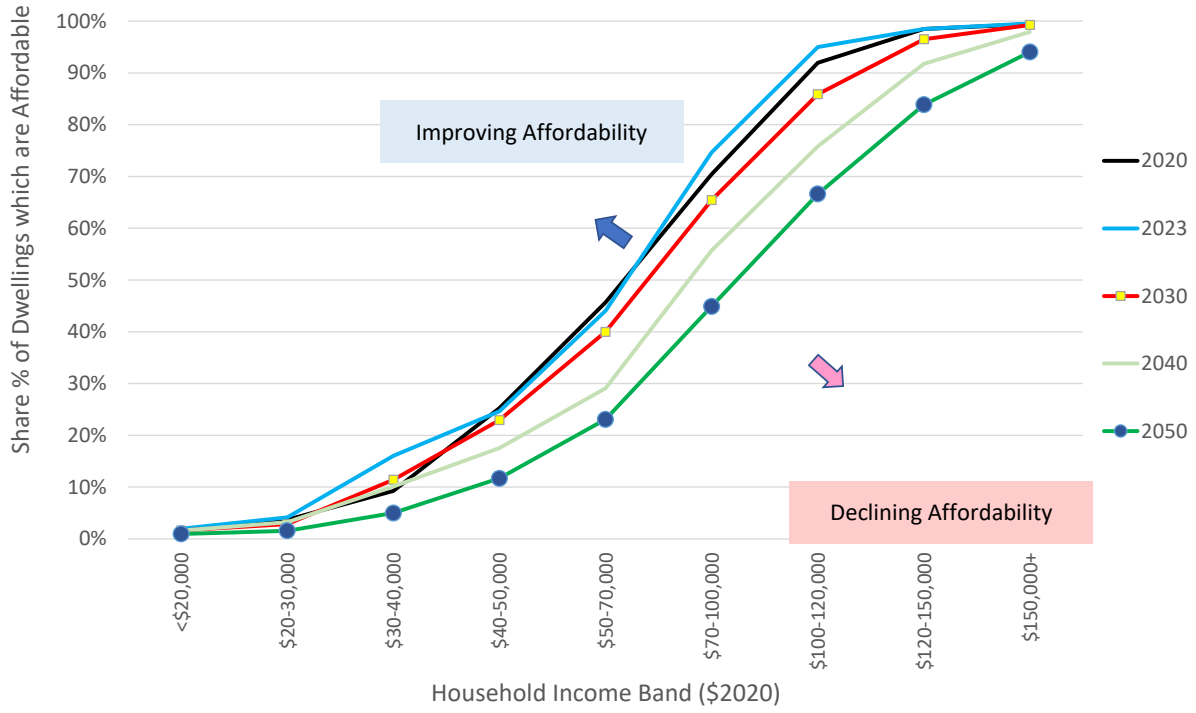
Source: M.E Housing Demand and Affordability Model, 2021.

Figure 6-2: Urban Waikato District Housing Affordability by Household Income Band, 2020-2050: Growth Scenario 1



Source: M.E Housing Demand and Affordability Model, 2021.

Figure 6-3: Urban Waikato District Housing Affordability by Household Income Band, 2020-2050: Growth Scenario 2



Source: M.E Housing Demand and Affordability Model, 2021.

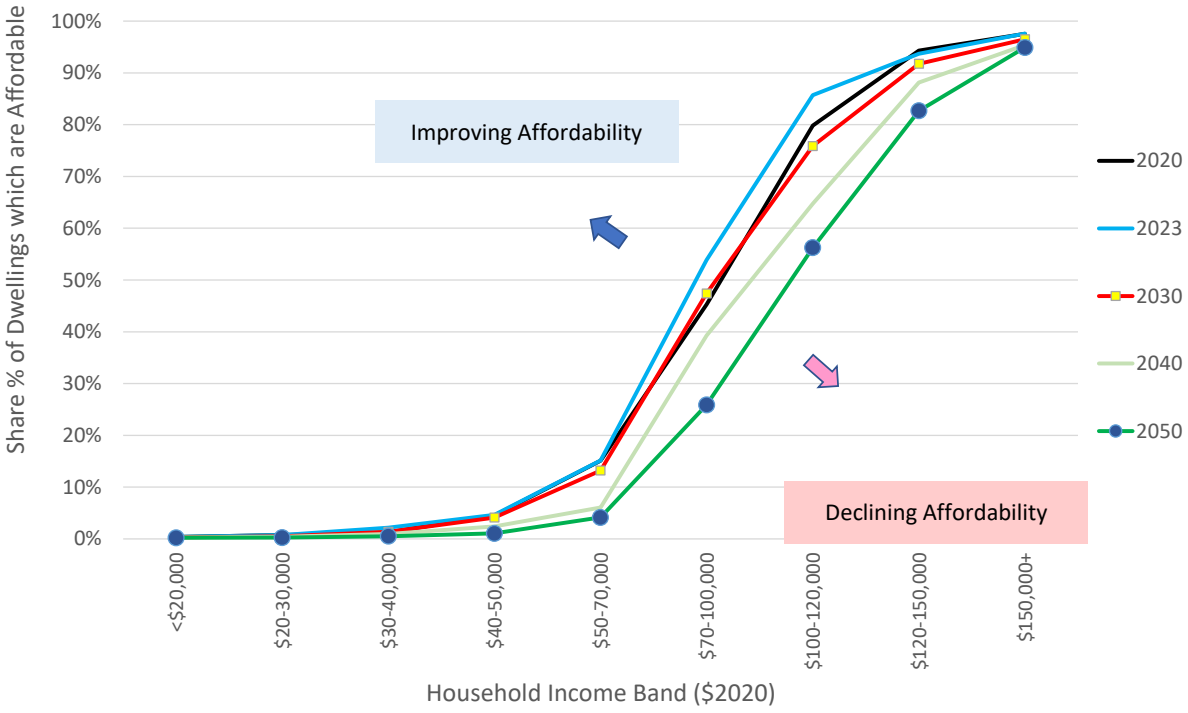
Hamilton City

The assessment shows that housing affordability generally decreases through time within Hamilton City. Under the Current Prices scenario, housing affordability is similar to the current situation in both the short and medium-term, with higher affordability within the short-term. This is because the current prices scenario holds prices constant with affordability being influenced by the part of the dwelling value curve where feasible capacity is taken up as part of the potential future estate (which largely remains fixed through time). In the long-term, affordability declines as additional capacity at higher value bands is added, largely within the greenfield areas, which become served by infrastructure through time.

Housing affordability decreases under growth scenarios 1 and 2, with the largest decreases in growth scenario 2. Price increases in these scenarios mean that decreased shares of the potential future dwelling stock are affordable at each household income band through time.

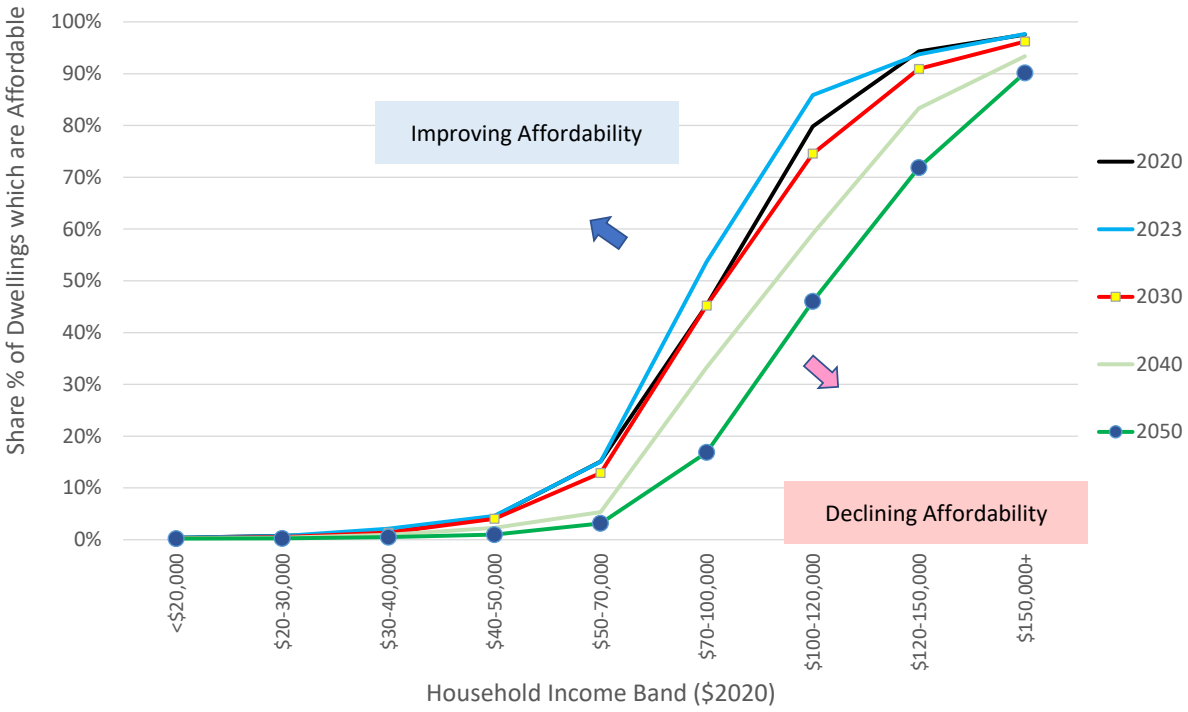
Housing affordability levels within Hamilton City, in the long-term, sit between those of Waikato and Waipā district's urban areas. While dwellings in Hamilton City are more expensive as part of the FPP's main urban area, there are a wider range of potential dwelling development options available. Further differences in the final value distribution also occur due to differences in the rate of take-up across different FPP areas through time.

Figure 6-4: Hamilton City Housing Affordability by Household Income Band, 2020-2050: Current Prices Scenario



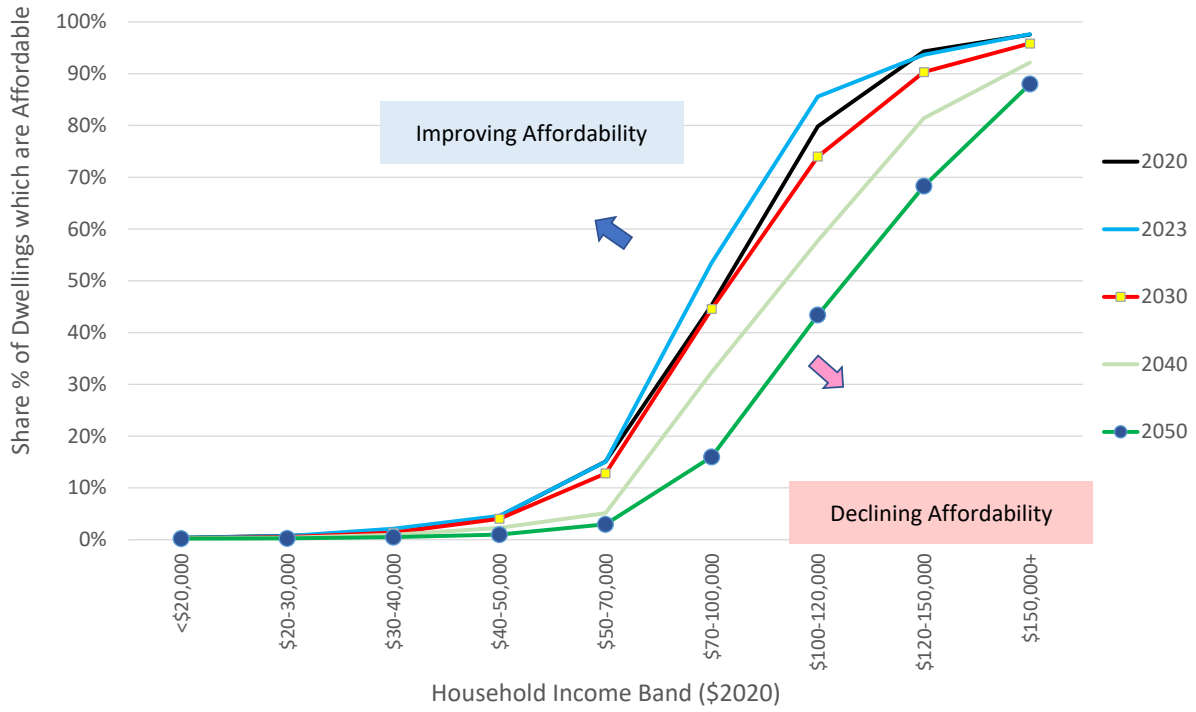
Source: M.E Housing Demand and Affordability Model, 2021.

Figure 6-5: Hamilton City Housing Affordability by Household Income Band, 2020-2050: Growth Scenario 1



Source: M.E Housing Demand and Affordability Model, 2021.

Figure 6-6: Hamilton City Housing Affordability by Household Income Band, 2020-2050: Growth Scenario 2



Source: M.E Housing Demand and Affordability Model, 2021.

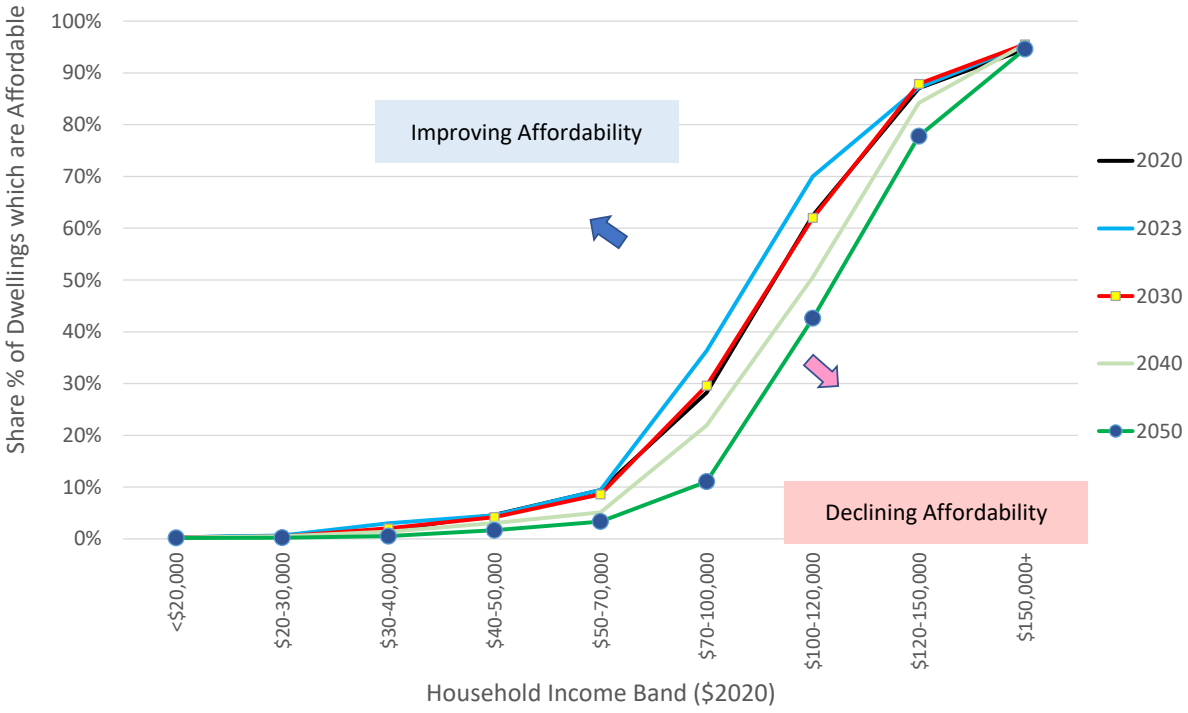
Waipā District Urban Area

The assessment shows that housing affordability generally decreases through time within the urban areas of Waipā District. Under the Current Prices scenario, housing affordability is similar to the current situation in both the short and medium-term, with higher affordability within the short-term. This is because the current prices scenario holds prices constant with affordability being influenced by the part of the dwelling value curve where feasible capacity is taken up as part of the potential future estate (which largely remains fixed through time). In the long-term, affordability declines as additional capacity at higher value bands is added, largely within the greenfield areas, which become served by infrastructure through time.

Housing affordability decreases under growth scenarios 1 and 2, with the largest decreases in growth scenario 2. Price increases in these scenarios mean that decreased shares of the potential future dwelling stock are affordable at each household income band through time.

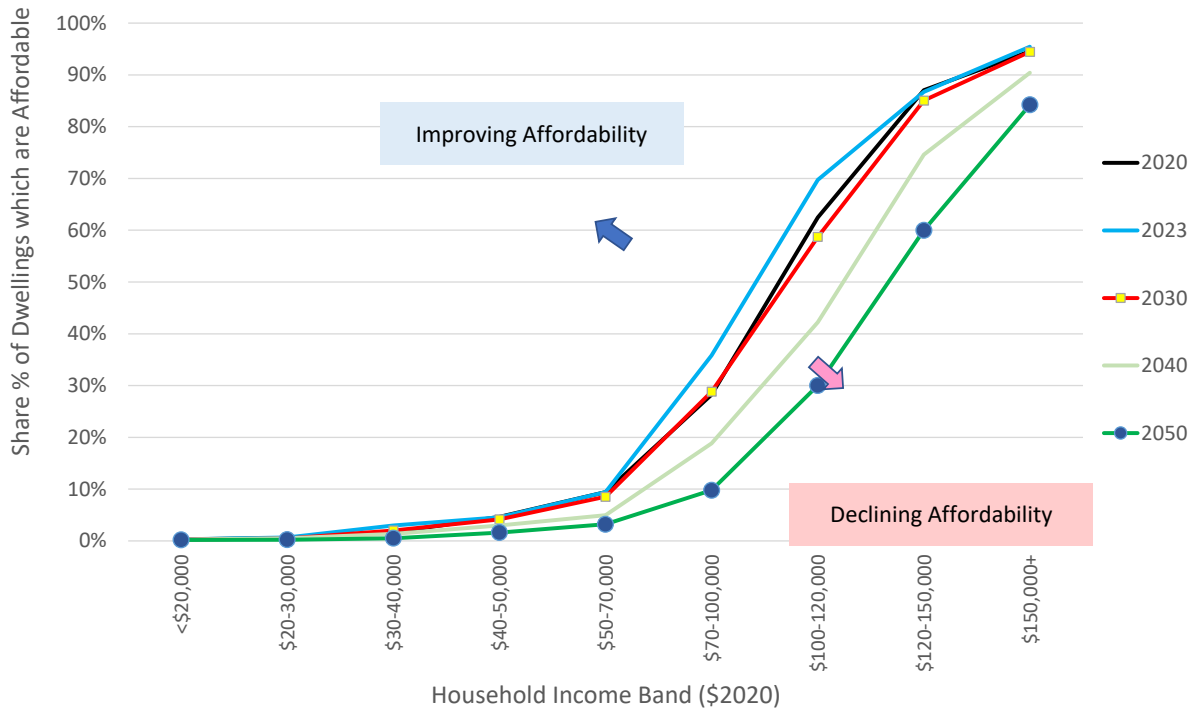
In the long-term, the modelling shows that housing affordability is projected to be generally lower within Waipā District's urban area in comparison to the rest of the FPP area. Part of this is likely to be due to the addition of future dwelling stock within the mid to higher parts of the dwelling value profile. The capacity assessment has found that larger minimum lot sizes combined with higher value demand from outside of the district is likely to result in future potential stock being concentrated into the higher dwelling value bands.

Figure 6-7: Urban Waipā District Housing Affordability by Household Income Band, 2020-2050: Current Prices Scenario



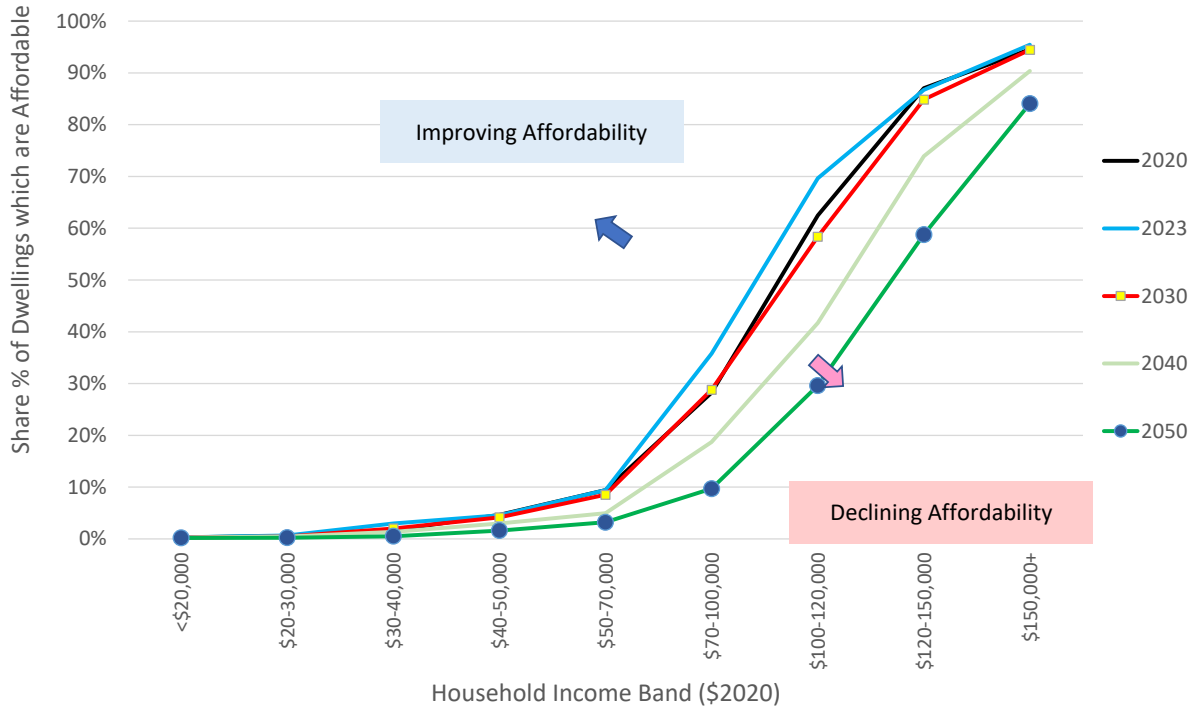
Source: M.E Housing Demand and Affordability Model, 2021.

Figure 6-8: Urban Waipā District Housing Affordability by Household Income Band, 2020-2050: Growth Scenario 1



Source: M.E Housing Demand and Affordability Model, 2021.

Figure 6-9: Urban Waipā District Housing Affordability by Household Income Band, 2020-2050: Growth Scenario 2



Source: M.E Housing Demand and Affordability Model, 2021.

6.4 Developer Sector Survey

Information was obtained from the commercial residential development sector undertaking activity across the FPP area. Responses were obtained from 21 respondents (19 developers and 2 consultancies providing services to developers) through an online survey sent directly to known property developers by each FPP council[62]. The survey outlined the purpose of the NPS-UD assessment and sought information on a range of different factors affecting the development process.

A copy of the developer survey is contained in the Appendix (Section 8.2). The first part of the survey collected information on the type, scale and location of activity of each developer within each of the FPP areas. Respondents were then asked to rate the importance of a range of factors affecting the residential

[62] An online survey was identified as an appropriate approach to obtain the information. Previous workshops held during the 2017 NPS-UDC, between Council's and developers, faced barriers due to Council staff and developer availability; and the reluctance of developers to provide information to Council officers in the presence of other developers, in part, due to commercial competition. An online survey instead enabled developers to provide information within their available time. It also ensured a consistent set of questions were provided to each developer. Importantly, the questions enabled a range of factors to be presented simultaneously to developers, which meant that responses were therefore able to indicate the relative importance of different factors. Developers were able to provide responses anonymously, if desired.

development process. The importance of each factor was rated as 'no effect', 'minor effect', 'some effect', 'large effect' and 'very large effect'. The factors included:

- Access to labour
- Availability of sub-contractors
- Prices within the construction sector (materials and labour)
- Access to finance
- Interest rates/holding costs
- Council fees (e.g. development contributions, consent fees)
- Quantity of zoned land
- Existing land ownership structures
- Provision of infrastructure (three-waters/transport)
- Access to amenities
- Market demand for dwellings
- Patterns of purchaser demand (e.g. type, size and location of dwellings)
- Planning provisions (e.g. dwelling typologies and minimum site sizes)
- Scale of the development
- Competition with other developers
- Wider economic conditions

The survey then asked for further information through open ended questions for respondents to expand on their rated importance of factors, any anticipated changes to their development patterns and the key drivers of change, and the required profit margins.

There were a wide range of responses between developers with differences in the degree to which each factor affected different developers. In some cases a factor had a very large effect on one developer, compared to a minor effect on another. The survey information is summarised for each of the FPP areas in the following sub-sections.

6.4.1 Waikato District

There were nine responses to the Waikato District survey. These included eight developers and one consultancy that provides services to the residential development sector. Most of the respondents undertook greenfield development of various scales (25 to 200 lots/dwellings), with two developers undertaking brownfield development. Nearly all of the developers constructed standalone dwellings, with a three (plus the consultancy) also undertaking higher density dwelling typologies (duplexes and terraced housing/town houses). Most of the developers also have activity within other parts of the Waikato Region and New Zealand.

The respondents collectively undertook development across a wide range of the main urban areas in the district. Several were activity within the main urban centres in the north of the district (Pōkeno and Tuakau) and Te Kauwhata, with responses also covering the other urban areas of Raglan, Taupiri, Ngāruawāhia and Huntly, as well as one developer in Tamahere/Matangi.

The survey yielded varying responses across the main areas, with the level of importance of each factor differing substantially between developers. The key findings by each area are:

- Construction sector factors (labour access, subcontractors and prices) were generally found to have some effect on developers. Construction prices tended to have the largest effect where two-

thirds of respondents reported a large or very large effect. One respondent stated that construction sector prices directly affected the viability of projects.

- Financial factors (access finance and interest rates/holding costs) were also found to have a significant effect on the development process, and to a greater extent generally than construction sector factors. Around two-thirds of respondents stated they had a large or very large effect. Some developers identified that financial factors were affected by the time component of obtaining a resource consent for development.
- Council controlled aspects (fees, zoned land, infrastructure and planning provisions) were reported as one of the largest effects for most developers. All respondents identified the provision of infrastructure as a key requirement for the development process, with some respondents reporting the absence of infrastructure as having been a constraint to development.

  Nearly all respondents also identified the provision of zoned land as a key factor affecting development. Some respondents stated the provision of zoned land was a constraint (one in relation to requested zoning changes) and that this affected the viability of development through land prices.

  Around two-thirds of respondents stated that Council fees and planning provisions had a large or very large effect. The respondents subsequently highlighted the key issues as:
    - Delays in the timeframes of obtaining resource consents (5 respondents), which increased the costs of development.
    - Uncertainty in the interpretation and implementation of planning provisions (5 respondents).
    - Overly restrictive planning provisions (three respondents). It was not clear from the responses which aspects of the provisions these related to.
- Nearly all of the respondents identified demand for dwellings as having a large or very large effect, with most also signalling the high importance of the patterns of demand. Many respondents highlighted the high anticipated growth of the district driving the development process, including the growth pressures from the spill over demand from Auckland.
- There were mixed responses from developers on the effects of land ownership patterns, access to amenities, the scale of development and competition with other developers. Nearly all respondents indicated these factors had at least some effect, with an overall similar level of effect as the construction sector factors. The further responses clarified that these issues affected development, but did not specifically identify them as constraints.
- Wider economic conditions were rated as having a large or very large effect by over half of the respondents. These affected the level of demand and costs, which therefore affects the margins.

Many of the respondents anticipated a move toward higher development densities through a combination of smaller site sizes and higher density dwelling typologies (duplexes, terraced housing and apartments). Respondents stated that these needed to be constructed using good design criteria (such as integrated developments in accessible areas) and close to areas of high amenity. However, in some instances, these were constrained by the existing planning provisions, which they considered did not adequately reflect the higher density requirements.

Some developers indicated they would continue to deliver dwellings at lower densities (600m^2+ site sizes) due to the continued demand for these types of dwellings. Part of this is due to household composition as well as the need to accommodate onsite parking as many of the urban areas are not well served by public transport.

Changes in the development patterns over the short to medium-term are driven by the high growth pressures in the district. Part of this effect is due to demand across this part of the country generally given its' location between the key urban centres of Auckland, Hamilton and Tauranga.

Housing affordability was also a key issue with households seeking more affordable housing options. The underlying demand is for larger sections, but this may need to be met with higher density options due to lack of affordability.

Developers identified a range of different acceptable profit margins. These generally ranged from 15% to 33%, with one developer requiring 40% during favourable economic conditions to cover the effect of poorer conditions. Respondents stated that margins depended on the level of risk and timeframes involved, stating that high margins were required as it is a high risk sector.

6.4.2 Hamilton City

Six developers within Hamilton City responded to the survey, which included a range of greenfield and brownfield (predominantly, redevelopment) developers. Most of the respondents developed around 25 to 100 lots/dwellings per annum within Hamilton, with most also developing more within other parts of the Waikato Region and the rest of New Zealand. Respondents developed a wide range of dwelling typologies. All developed duplex dwellings, with most also developing standalone dwellings and half developing higher density terraced housing or apartments. The respondents undertook development across an extensive range of the Hamilton urban area, with most respondents undertaking activity within the main greenfield areas of Peacocke, Rotokauri and Rototuna.

There was a large amount of variation in the patterns of responses between developers. The responses in each of the key areas are summarised as follows:

- Construction sector factors (labour access, subcontractors and prices) had a variable effect on developers. Some developers rated their effect as minor, while others considered they had a very large effect.
- Financial factors (access finance and interest rates/holding costs) also had a variable effect on developers. Access to finance was a large/very large issue for only half of the respondents, while interest rates and holding costs had at least some effect for most of the respondents.
- Council controlled aspects (fees, zoned land, infrastructure and planning provisions) was reported as a key area of effect for most developers, with most developers reporting an effect on at least one aspect. However, the effect of each individual factor varies among developers, with some reporting large effects, while some reported only minor effects.

  Council fees, the provision of zoned land and the effect of planning provisions contained the largest number of respondents reporting a large or very large effect, with the greatest consistency in responses across the council fees and planning provisions. Respondents expanded on this to state that planning provisions did not adequately reflect the need for higher density. They asserted that minimum site sizes were too large, resulting in more expensive dwellings. Compliance issues and extended timeframes were also identified as aspects affecting the development process.

While only half of the respondents rated the provision of infrastructure as having a large or very large effect, most identified the provision of serviced, zoned land as a key requirement to the development process.

- Dwelling demand factors (total demand and purchaser patterns) and wider economic conditions also had mixed responses, although wider economic conditions were further mentioned as important in the open-ended responses by several developers.
- Lesser importance, overall, was placed by developers on the scale of development, competition with other developers, amenity access and land ownership patterns (although these were very important to some developers). Developers did note the effect of scale on margins, where larger projects often either required larger margins (due to higher risk), or were able to achieve higher margins due to the scale economies able to be achieved within the development costs.

There was a strong pattern toward continued shifts toward higher density development types across nearly all of the respondents. This is anticipated to occur through a combination of smaller lot sizes as well as the delivery of higher density (vertical) dwelling typologies. Developers stated that increasing costs meant that dwellings were becoming more expensive to construct. In response, developers needed to construct smaller dwellings on smaller lot sizes. This would enable developers to achieve higher yields within subdivisions (and therefore increase margins) as well as provide smaller, more affordable dwellings to the market. Housing affordability was also identified as a key driver of this trend as the cost growth of larger dwellings is above the rate of household income growth.

Respondents also mentioned the desire to deliver more sustainable and affordable dwellings, which could be achieved through higher density. In some cases, this was limited by the effect of planning provisions on higher density developments.

In contrast, one respondent considered that creating urban spread with lower density dwelling typologies on larger sections would enable people to meet all their needs within their communities. This would eliminate the need to travel into town. They considered that alignment with house price budgets could be achieved through the provision of smaller houses on large sites.

Developers identified a range of acceptable profit margins. These ranged from 12% to 30%, with most towards the lower to mid part of the range (15% to 20%). Respondents reported that acceptable margins depended upon the level of risk and funding availability with many funding sources requiring minimum margins.

6.4.3 Waipā District

Six responses were received to the survey in Waipā District, including one from a consultancy providing services to the development sector (with the remaining five from developers). All of the developers were greenfield developers constructing/lots with standalone dwellings at up to 50 dwellings per year. Most of the developers were active only within the Waipā District, with two active within the wider Waikato Region and one in Auckland. Within the Waipā District, all the developers' activity was focussed on the main urban centres of Cambridge and Te Awamutu (including Kihikihi).

A varied range of responses were received in relation to the factors affecting residential development activity. The responses in each of the key areas are summarised as follows:

- Developers reported limited effect from the construction sector (labour access, subcontractors and prices) and finance (access and interest rates/holding costs) factors, with only one respondent reporting these factors had a large effect. Most respondents reported that access to labour had only a minor impact. Access to subcontractors and construction prices were reported to have some effect, with two respondents stating they had only a minor effect.
- Respondents identified the Council controlled aspects (fees, zoned land, infrastructure and planning provisions) as the main area of effect. In particular, nearly all of the respondents rated the provision of zoned land as having a large or very large effect. However, when further expanded upon, the open-ended responses yielded a range of views. Some developers stated that having zoned land was a core requirement for the development process, but did not state whether this was currently a constraint within the Waipā development market.

  In contrast, two respondents stated that they considered that a potential oversupply of zoned land could have a large effect on the feasibility of residential development within the district. They stated that too much land supply would reduce the potential sale prices and thus reduce feasibility. Another developer considered that the land surplus (indicated as the recent additional supply through the growth cells) would put pressure on Council infrastructure.

  Council fees and infrastructure provision were also considered important aspects affecting the development process. These were further mentioned within the open-ended responses.

  Some developers considered that planning regulations restricted their ability to develop smaller lot sizes. The existing focus on larger lot sizes does not adequately reflect more recent demand for smaller, more affordable dwellings, and increase the propensity for urban sprawl. Regulations are making it difficult to undertake brownfield infill development within the existing urban area.

- The results indicated there is a significant level of competition among developers within the market as three developers identified competition with other developers as having a very large effect.
- Other aspects (demand, land ownership, amenities, competition and wider economic conditions) generated varying responses from developers. These ranged from having a minor impact, to a very large effect.

Responses from some developers indicated that a significant portion of the development market within Waipā's main urban areas is driven by retirement demand. This generates demand for higher quality dwellings on sites of at least 600m^2 to 800m^2. Several of the developers indicated they would continue to provide dwellings at these lower densities and higher quality to continue to meet this demand.

In contrast, other developers stated that demand is increasing for smaller dwellings. This is driven by housing affordability issues, and is important to reduce urban sprawl. However, they stated that Council planning regulations were constraining the delivery of smaller lot sizes and better reflected past patterns of development.

Waipā developers provided limited responses on the required margins. They ranged from between 10% to 15%. Margins are higher for larger scale developments and are affected by the level of risk.

6.4.4 Summary – Developer Survey Impact of Planning

Developers identified a range of factors that affected the commercial residential development process. These included factors in the construction sector, financial and economic conditions, council planning and

infrastructure provision, characteristics of population demand, competition within the sector, and local geographic aspects of the market.

The aspects that were directly controlled by Council were identified as key factors affecting the development process across all three areas. Developers consistently identified the provision of zoned and infrastructure serviced land as a fundamental and necessary component that enabled development to occur. Developers stated that the viability of development was sensitive to these factors, and that infrastructure provision needed to align with growth in demand by location. This corresponds to the survey respondents' development patterns, where they are predominantly greenfield developers.

There were mixed responses in relation to whether these aspects were a constraint (as distinct from a necessary component for development to occur). Some developers, within each territorial area, identified constraints in the provision of zoned land (particularly within the Waikato District), with some of this relating to the ability to bring about a plan change for additional zoned land. Conversely, a subset of the Waipā District developers considered that too much land was supplied, bringing down the achievable prices and therefore reducing the feasibility of development. Many of the responses did not specify whether the existing (or future anticipated) level of zoned land provision was a constraint.

Some of the respondents identified the provision and timing of infrastructure as limiting the residential development process. The sensitivity of development activity to infrastructure provision was highlighted, particularly within the Waikato District. Some of the developers within the Waikato District's main urban centres stated that this had become a constraint to development.

Respondents across the FPP area considered that Council planning provisions did not adequately reflect the increasing shift in demand to higher density development patterns. These related to a combination of allowable densities (through minimum lot sizes) and site/dwelling design aspects around higher density typologies. They expressed concern that the existing provisions would constrain their future development intentions across the short to medium-term as they anticipated increasing the density of their development both in relation to lot sizes and dwelling typologies.

Reported constraints to higher density were more pronounced within Hamilton City and Waikato District where growth pressures and housing affordability issues are greater within the FPP area. Respondents within Hamilton mainly mentioned minimum lot sizes where developers needed to achieve higher overall subdivision yields and produce smaller dwellings that households could afford. Respondents within Waikato reported a combination of lot sizes and the lack of provisions for higher density types of (integrated) developments where the plan needed to allow the market to deliver higher density, more affordable dwellings.

Waipā developers also stated that minimum lot sizes limited some development due to affordability issues. However, Waipā developers also reported an intention to continue to deliver larger dwellings and lot sizes a substantial component of the market was driven by retirement demand where households sought higher quality dwellings on larger ($600m^2$+) sites.

Many of the respondents stated that Council planning processes increased the cost of development. This occurs through the application of fees (resource consenting, development contributions, etc) and the impact of the planning process on timing (including the cost of uncertainty in the planning process). Many

developers reported to Councils that they considered the fees were too high. This was consistent across all three Council areas in response to the Council surveys.

Developers more specifically stated that Council planning process timeframes had a significant impact on development costs. They stated that delays in the consenting process generated substantive financial impacts for developers in relation to land holding costs and delays in obtaining revenue from the development. This issue was particularly highlighted within the Waikato District where two-thirds of the respondents stated that Council delays in the resource consenting process were increasing the cost of development.

Several Waikato District respondents reported that delays occurred with uncertainties in the planning process. They stated that planning regulations were implemented inconsistently, and there was a level of uncertainty on the development process.

6.5 Māori Housing Market

The NPS-UD requires assessment of the housing demand for Māori as a group within the community. This section analyses the underlying household structure of Māori and how this generates demand for different types of housing currently and into the future. The first sub-section identifies the underlying patterns of household characteristics within Māori and total urban households that are important influencers of housing demand. The second section then shows the demand for dwellings by tenure and dwelling type for households by ethnicity.

6.5.1 Household Composition

The M.E Housing Demand model uses customised data obtained from the most recent 2018 Census to identify the structure and scale of household demand within each sub-sector of households. The 2018 Census information provides household information by ethnicity, enabling specific analyses of the household structural drivers of dwelling demand for Māori across the FPP urban area.

Household composition and income are important drivers of dwelling demand. Table 6-1 to Table 6-3 show the distribution of Māori and total urban households within each FPP area (urban households) by income and household composition. The upper section of each table shows the distribution of Māori households while the lower section shows the total urban households across each area.

There are an estimated 12,000 Māori households across the FPP urban area, accounting for 14% of the FPP areas total urban households. The largest number of Māori households are within Hamilton City (8,900 households), where they account for 15% of households. Māori households form a lower share (9%) of total households within Waipā's urban area, with an estimated 1,300 households.

Within each area, a higher share of Māori households are larger family households and have a lower household income distribution than the total households. A smaller share of Māori households are 1-2 person households, which account for around half of the total FPP urban households overall. Between half and two-thirds (59%) of the FPP area Māori households are family households, compared to only 44% of total households.

Table 6-1: Māori and Total Households by Household Composition and Income: Waikato District Urban 2020

Household Type	Household Income								
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total	Share %
Maori									
One Person Hhld	200	60	40	30	10	-	-	**300**	*19%*
Couple Hhld	20	40	50	60	50	40	50	**300**	*17%*
2 Parents 1-2chn	10	20	40	80	40	50	80	**300**	*18%*
2 Parents 3+chn	10	10	20	30	30	30	30	**200**	*9%*
1 Parent Family	200	100	80	60	30	10	10	**500**	*27%*
Multi-Family Hhld	-	10	20	30	10	20	50	**100**	*7%*
Non-Family Hhld	10	10	10	10	-	-	-	**50**	*3%*
Total	**400**	**300**	**300**	**300**	**200**	**100**	**200**	**1,800**	***100%***
Share %	*25%*	*15%*	*14%*	*17%*	*9%*	*8%*	*13%*	*100%*	
Total Households									
One Person Hhld	1,100	400	300	200	50	20	30	**2,200**	*20%*
Couple Hhld	200	600	500	600	500	400	700	**3,400**	*31%*
2 Parents 1-2chn	50	100	200	500	400	400	800	**2,400**	*22%*
2 Parents 3+chn	20	40	90	200	100	100	300	**800**	*8%*
1 Parent Family	400	300	200	200	100	40	50	**1,400**	*13%*
Multi-Family Hhld	-	10	30	50	40	60	200	**400**	*4%*
Non-Family Hhld	20	40	50	50	30	10	20	**200**	*2%*
Total	**1,800**	**1,600**	**1,400**	**1,800**	**1,200**	**1,000**	**2,100**	**10,800**	***100%***
Share %	*17%*	*14%*	*13%*	*16%*	*11%*	*9%*	*19%*	*100%*	

Source: ME Housing Demand Model 2021

Table 6-2: Māori and Total Households by Household Composition and Income: Hamilton City 2020

Household Type	Household Income								
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total	Share %
Maori									
One Person Hhld	1,000	300	200	100	20	10	20	**1,700**	*20%*
Couple Hhld	80	200	200	300	200	200	200	**1,400**	*15%*
2 Parents 1-2chn	60	100	200	300	200	200	300	**1,400**	*16%*
2 Parents 3+chn	30	50	90	200	100	90	100	**700**	*7%*
1 Parent Family	1,000	600	400	400	200	60	60	**2,600**	*30%*
Multi-Family Hhld	20	30	60	70	70	100	200	**500**	*6%*
Non-Family Hhld	100	100	100	100	60	50	50	**600**	*7%*
Total	**2,300**	**1,400**	**1,300**	**1,400**	**800**	**700**	**1,000**	**8,900**	***100%***
Share %	*26%*	*16%*	*14%*	*16%*	*9%*	*8%*	*11%*	*100%*	
Total Households									
One Person Hhld	7,100	2,600	1,900	1,300	300	80	200	**13,600**	*22%*
Couple Hhld	1,000	2,700	2,300	2,900	2,200	1,900	2,900	**16,000**	*26%*
2 Parents 1-2chn	500	900	1,500	2,600	2,000	2,100	3,200	**12,700**	*21%*
2 Parents 3+chn	200	300	400	700	500	500	900	**3,500**	*6%*
1 Parent Family	2,600	2,100	1,700	1,500	700	200	300	**9,100**	*15%*
Multi-Family Hhld	60	80	200	300	300	300	900	**2,100**	*4%*
Non-Family Hhld	500	600	600	600	400	300	500	**3,600**	*6%*
Total	**12,100**	**9,200**	**8,600**	**10,000**	**6,500**	**5,500**	**8,900**	**60,800**	***100%***
Share %	*20%*	*15%*	*14%*	*16%*	*11%*	*9%*	*15%*	*100%*	

Source: ME Housing Demand Model 2021

Table 6-3: Māori and Total Households by Household Composition and Income: Waipā District Urban 2020

Household Type	Household Income								
	<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total	Share %
Maori									
One Person Hhld	100	50	50	20	10	-	-	**300**	*20%*
Couple Hhld	10	30	40	60	50	40	40	**300**	*21%*
2 Parents 1-2chn	10	10	30	60	40	50	60	**300**	*20%*
2 Parents 3+chn	-	10	10	30	20	20	30	**100**	*8%*
1 Parent Family	100	60	60	50	20	10	10	**300**	*23%*
Multi-Family Hhld	-	-	-	10	10	10	20	**60**	*5%*
Non-Family Hhld	-	10	10	10	-	-	-	**40**	*3%*
Total	**300**	**200**	**200**	**200**	**100**	**100**	**200**	**1,300**	***100%***
Share %	*20%*	*14%*	*15%*	*18%*	*11%*	*9%*	*13%*	*100%*	
Total Households									
One Person Hhld	1,800	700	500	300	70	10	30	**3,400**	*24%*
Couple Hhld	300	900	800	900	700	500	800	**4,900**	*34%*
2 Parents 1-2chn	40	100	300	600	500	600	900	**3,000**	*21%*
2 Parents 3+chn	-	40	90	200	100	100	300	**900**	*6%*
1 Parent Family	400	400	300	200	100	40	70	**1,500**	*11%*
Multi-Family Hhld	-	10	20	40	20	60	200	**300**	*2%*
Non-Family Hhld	30	70	60	70	40	30	40	**300**	*2%*
Total	**2,400**	**2,200**	**2,100**	**2,300**	**1,500**	**1,300**	**2,300**	**14,300**	***100%***
Share %	*17%*	*15%*	*15%*	*16%*	*11%*	*9%*	*16%*	*100%*	

Source: ME Housing Demand Model 2021

The distribution of Māori and total urban households by household income group are summarised across the FPP area in Table 6-4. The table shows both the total households and Māori households by household income band for the urban component of each of the FPP areas. The lower section of the table shows the relative concentration of Māori households within each income band. Values above 1 indicate that Māori households are over-represented within that income band.

Table 6-4 shows that Māori households are generally over-represented in the lower household income bands. Over-representation within the lower income bands is highest within Waikato District where Māori households are nearly 1.5 times more likely to be within the lowest income band (up to $30,000) than households overall. Over-representation within the lower income bands is lower within Waipā District.

Table 6-4: Māori and Total Urban Households by Income: Future Proof Area 2020

Area	Household Type	Household Income							
		<$30,000	$30-50,000	$50-70,000	$70-100,000	$100-120,000	$120-150,000	$150,000+	Total
Households									
Waikato District Urban	Maori Households	400	300	300	300	200	100	200	**1,800**
	Total Households	1,800	1,600	1,400	1,800	1,200	1,000	2,100	**10,800**
Hamilton City	Maori Households	2,300	1,400	1,300	1,400	800	700	1,000	**8,900**
	Total Households	12,100	9,200	8,600	10,000	6,500	5,500	8,900	**60,800**
Waipa District Urban	Maori Households	300	200	200	200	100	100	200	**1,300**
	Total Households	2,400	2,200	2,100	2,300	1,500	1,300	2,300	**14,300**
Total FPP Urban	**Maori Households**	**3,000**	**1,800**	**1,700**	**2,000**	**1,100**	**1,000**	**1,300**	**12,000**
	Total Households	**16,300**	**12,900**	**12,200**	**14,100**	**9,200**	**7,900**	**13,300**	**85,900**
Relative Concentration - Maori Households									
Waikato District Urban	Maori Households	**1.49**	**1.08**	**1.11**	**1.02**	0.86	0.83	0.65	**1.00**
Hamilton City	Maori Households	**1.30**	**1.03**	**1.01**	**0.99**	0.88	0.87	0.74	**1.00**
Waipa District Urban	Maori Households	**1.16**	0.90	**1.03**	**1.12**	**1.00**	0.98	0.80	**1.00**
Total FPP Urban	**Maori Households**	**1.31**	**1.02**	**1.02**	**1.01**	0.89	0.88	0.73	**1.00**

Source: ME Housing Demand Model 2021

The patterns of Māori households suggest that they are likely to have a higher demand for larger, more affordable dwellings relative to total households. This may generate affordability or housing space requirement constraints due to the positive correlation between dwelling size and price. This may contribute toward differences in the geographic distribution of Māori households where the combination of larger dwellings within the lower price bands are achieved in lower value areas (as indicated from the supply side within the capacity dwelling value band analysis). However, data is not available on the geographic distribution of Māori households within the total urban area, therefore, the take-up of dwelling capacity cannot be verified. If differences do occur within the geographic distribution of households, then this is likely to result in differences in the level of amenity received by households across different types of area as location is not neutral.

6.5.2 Dwelling Demand

The demand for dwellings by tenure and dwelling typology for households of each ethnic group are displayed for each of the FPP urban areas in Table 6-5 to Table 6-7. The upper section of each table shows the current demand in 2020, while the lower section shows the projected demand for 2050. Within each section, the tables display the estimated households across each combination of dwelling types and ownership, and their percentage share of total dwelling demand. The tables also show the relative concentration within each ethnic group into the dwelling type/tenure combination. Values greater than 1 indicate that a higher relative share (than households overall) of households within the ethnic group are within the dwelling typology/tenure combination.

Māori households tend to have lower rates of home ownership across the FPP area relative to the urban households overall. These are projected to persist into the future, with the highest demand for future additional dwellings occurring in rented detached dwellings. The following paragraphs describe the current and projected future situations for each of the FPP areas.

Waikato District Urban Area

Māori households currently have substantially lower rates of home ownership within the Waikato District relative to urban households overall. In 2020, only 52% of Waikato District Māori households lived in owned dwellings, compared to 71% for households overall. They were correspondingly over-represented in households occupying rented dwellings, with the highest over-representation occurring within detached dwellings. Nearly all (95%) of the Māori household demand is currently for detached dwellings, which is consistent with the district's urban households overall.

The current situation of lower rates of home ownership is projected to continue into the future, where both similar rates and relativities to the total households are projected to occur. The number of Māori households is projected to grow at a slower rate (+80% - +1,500 households - by 2050) than the urban households overall (+90%). The greatest net increase in demand for additional dwellings is projected to occur within detached dwellings, with an additional 1,300 detached dwellings by 2050. Over half of this net increase is for owned detached dwellings. The number of additional attached dwellings is also projected to increase, and at a faster rate, although this increase occurs off a lower base and accounts for around 12% of the demand for additional dwellings from Māori households.

Table 6-5: Dwelling Demand by Tenure and Typology and Household Ethnic Group: Waikato District Urban Area 2020-2050

Household Ethnicity	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
	CURRENT DEMAND - 2020								
European	6,100	200	**6,300**	1,800	200	**2,000**	7,900	400	**8,300**
Māori	900	20	**900**	800	80	**900**	1,700	100	**1,800**
Pacific	100	-	**100**	100	10	**100**	200	10	**200**
Asian	300	10	**300**	100	10	**100**	400	20	**500**
Total	**7,400**	**300**	**7,700**	**2,900**	**300**	**3,200**	**10,300**	**600**	**10,800**
European	56%	2%	**58%**	17%	2%	**19%**	73%	4%	**77%**
Māori	8%	0%	**9%**	8%	1%	**8%**	16%	1%	**17%**
Pacific	1%	0%	**1%**	1%	0%	**1%**	2%	0%	**2%**
Asian	3%	0%	**3%**	1%	0%	**1%**	4%	0%	**4%**
Total	**68%**	**2%**	**71%**	**26%**	**3%**	**29%**	**95%**	**5%**	**100%**
Relative Concentration									
European	**1.07**	**1.16**	**1.07**	0.82	0.88	0.83	1.00	**1.01**	
Māori	0.72	0.43	0.71	**1.71**	**1.53**	**1.70**	1.00	**1.03**	
Pacific	0.68	-	0.66	**1.85**	**1.69**	**1.83**	**1.00**	0.92	
Asian	**1.04**	0.83	**1.03**	0.94	0.78	0.92	**1.01**	0.81	
	FUTURE DEMAND - 2050								
European	11,500	600	**12,200**	3,400	500	**3,900**	14,900	1,100	**16,100**
Māori	1,600	60	**1,700**	1,400	200	**1,600**	3,000	300	**3,300**
Pacific	200	-	**200**	200	10	**200**	400	10	**400**
Asian	600	30	**600**	200	20	**200**	700	50	**800**
Total	**13,900**	**700**	**14,600**	**5,200**	**800**	**6,000**	**19,100**	**1,500**	**20,600**
European	56%	3%	**59%**	16%	3%	**19%**	73%	6%	**78%**
Māori	8%	0%	**8%**	7%	1%	**8%**	15%	1%	**16%**
Pacific	1%	0%	**1%**	1%	0%	**1%**	2%	0%	**2%**
Asian	3%	0%	**3%**	1%	0%	**1%**	4%	0%	**4%**
Total	**68%**	**3%**	**71%**	**25%**	**4%**	**29%**	**93%**	**7%**	**100%**
Relative Concentration									
European	**1.06**	**1.12**	**1.07**	0.83	0.88	0.84	**1.00**	0.99	
Māori	0.72	0.57	0.71	**1.70**	**1.68**	**1.70**	0.99	**1.15**	
Pacific	0.68	-	0.65	**2.04**	0.71	**1.87**	**1.05**	0.37	
Asian	**1.04**	0.95	**1.03**	0.95	0.69	0.92	**1.01**	0.81	

1 Not Owned includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

Hamilton City

There are currently much lower rates of home ownership among Māori households within Hamilton City relative to both the rest of the FPP area and Hamilton City households overall. Only 31% of Hamilton City Māori households currently live in an owned dwelling, compared to 51% of the total households. While home ownership rates are lowest in Hamilton City within the FPP area, the relative difference of home ownership among Māori households (to the total households) is greatest within Hamilton. This is seen in the relative concentration score of 0.56, where Māori home ownership rates are nearly only half of that of households overall.

There is a corresponding over-representation of Māori households within rented dwellings. The over-representation is greatest within detached rented dwellings, reflecting the likely higher underlying demand for larger dwellings among Māori households.

Overall, Māori households are not currently under-represented, relative to the total population, within detached dwellings. However, this demand is largely met through rented, rather than owned, dwellings. Moreover, Māori households may be under-represented within detached dwellings relative to their patterns of demand. This is indicated within the previous section where Māori households typically had larger compositions (i.e. number of people), which correspond to larger dwellings.

A similar situation in relation to Māori household home ownership is projected to occur into the future. In 2050, there is a slight projected increase in home ownership (to 32%), which is consistent with the population overall.

Māori households are projected to grow at a slower rate than total households within Hamilton City. Around four-fifths of the total net increase is projected to occur within detached dwellings (+4,100 dwellings). Over half (60%) of these are projected to occur as rented detached dwellings. The largest growth in demand is projected to occur as rented dwellings, particularly detached rented dwellings.

Table 6-6: Dwelling Demand by Tenure and Typology and Household Ethnic Group: Hamilton City 2020-2050

Household Ethnicity	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
	CURRENT DEMAND - 2020								
European	23,300	2,800	**26,100**	11,200	4,300	**15,500**	34,500	7,100	**41,500**
Māori	2,600	200	**2,800**	4,900	1,300	**6,200**	7,500	1,500	**9,000**
Pacific	500	10	**500**	1,000	300	**1,300**	1,500	300	**1,800**
Asian	4,300	200	**4,500**	2,900	1,000	**3,900**	7,200	1,200	**8,400**
Total	**30,700**	**3,200**	**33,900**	**20,000**	**6,900**	**26,900**	**50,700**	**10,100**	**60,800**
European	38%	5%	**43%**	18%	7%	**25%**	57%	12%	**68%**
Māori	4%	0%	**5%**	8%	2%	**10%**	12%	3%	**15%**
Pacific	1%	0%	**1%**	2%	0%	**2%**	2%	0%	**3%**
Asian	7%	0%	**7%**	5%	2%	**6%**	12%	2%	**14%**
Total	**50%**	**5%**	**56%**	**33%**	**11%**	**44%**	**83%**	**17%**	**100%**
Relative Concentration									
European	**1.11**	**1.27**	**1.13**	0.82	0.91	0.84	1.00	**1.02**	
Māori	0.57	0.41	0.56	**1.65**	**1.31**	**1.56**	1.00	**1.02**	
Pacific	0.52	0.12	0.49	**1.78**	**1.26**	**1.65**	**1.02**	0.90	
Asian	**1.01**	0.51	0.97	**1.04**	**1.06**	**1.04**	**1.02**	0.88	
	FUTURE DEMAND - 2050								
European	39,400	5,400	**44,800**	16,500	7,100	**23,600**	55,900	12,500	**68,400**
Māori	4,200	400	**4,600**	7,400	2,200	**9,500**	11,600	2,500	**14,100**
Pacific	800	10	**800**	1,600	400	**2,000**	2,300	400	**2,800**
Asian	6,600	400	**7,000**	4,400	1,600	**6,000**	11,000	2,000	**13,000**
Total	**51,000**	**6,200**	**57,100**	**29,800**	**11,300**	**41,100**	**80,800**	**17,400**	**98,300**
European	40%	5%	**46%**	17%	7%	**24%**	57%	13%	**70%**
Māori	4%	0%	**5%**	7%	2%	**10%**	12%	3%	**14%**
Pacific	1%	0%	**1%**	2%	0%	**2%**	2%	0%	**3%**
Asian	7%	0%	**7%**	4%	2%	**6%**	11%	2%	**13%**
Total	**52%**	**6%**	**58%**	**30%**	**11%**	**42%**	**82%**	**18%**	**100%**
Relative Concentration									
European	**1.11**	**1.26**	**1.13**	0.80	0.90	0.83	0.99	**1.03**	1.00
Māori	0.58	0.41	0.56	**1.71**	**1.35**	**1.61**	1.00	**1.02**	1.00
Pacific	0.53	0.07	0.48	**1.88**	**1.31**	**1.72**	**1.03**	0.87	1.00
Asian	0.98	0.49	0.93	**1.11**	**1.06**	**1.10**	**1.03**	0.86	1.00

1 Not Owned includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

Waipā District Urban Area

Māori home ownership rates are also currently lower within Waipā District relative to the district's total urban households. Currently around 53% of Māori household's occupy an owned dwelling, compared to 72% of the district's urban households overall. This is similar to that of the Waikato District Māori households.

Overall, Waipā District Māori households are not under-represented within detached dwellings. A slightly higher share (93%) of Māori households are within detached dwellings than urban households overall (91%). However, of these, a much higher share (46%) are rented than for total households within detached dwellings (26%).

Māori households are projected to grow at a slower rate within Waipā district. They are projected to increase by 48% by 2050 (+650 households). This is slower than the projected growth of Māori households in other FPP areas. Although the Waipā District urban households are projected to have slower growth than the rest of the FPP urban area, and Māori households to grow slower generally across the FPP area, the differences to the district growth rate is greatest within Waipā District where they are projected to grow at around four-fifths (82%) of the district's rate. Detached dwellings form the greatest projected net increase in demand for Māori households (+560 dwellings), with over half (58%) as owned detached dwellings.

Table 6-7: Dwelling Demand by Tenure and Typology and Household Ethnic Group: Waipā District Urban Area 2020-2050

Household Ethnicity	Owned or Trust			Not Owned[1]			Total		
	Detached	Attached	Total	Detached	Attached	Total	Detached	Attached	Total
	CURRENT DEMAND - 2020								
European	8,600	700	**9,300**	2,600	500	**3,100**	11,200	1,200	**12,400**
Māori	700	20	**700**	600	70	**600**	1,300	90	**1,300**
Pacific	60	-	**60**	70	-	**70**	100	-	**100**
Asian	200	-	**200**	200	30	**200**	400	30	**400**
Total	**9,500**	**700**	**10,300**	**3,400**	**600**	**4,000**	**12,900**	**1,300**	**14,300**
European	60%	5%	**65%**	18%	4%	**22%**	78%	9%	**87%**
Māori	5%	0%	**5%**	4%	0%	**4%**	9%	1%	**9%**
Pacific	0%	0%	**0%**	1%	0%	**1%**	1%	0%	**1%**
Asian	2%	0%	**2%**	1%	0%	**1%**	3%	0%	**3%**
Total	**67%**	**5%**	**72%**	**24%**	**4%**	**28%**	**91%**	**9%**	**100%**
Relative Concentration									
European	**1.04**	**1.12**	**1.04**	0.88	0.98	0.89	0.99	**1.05**	
Māori	0.76	0.31	0.73	**1.78**	**1.14**	**1.68**	**1.03**	0.69	
Pacific	0.67	-	0.62	**2.32**	-	**1.96**	**1.10**	-	
Asian	0.80	-	0.75	**1.66**	**1.57**	**1.65**	**1.03**	0.73	
	FUTURE DEMAND - 2050								
European	13,300	1,500	**14,900**	3,900	1,100	**5,000**	17,200	2,600	**19,800**
Māori	1,000	40	**1,000**	800	100	**900**	1,800	200	**2,000**
Pacific	90	-	**90**	100	-	**100**	200	-	**200**
Asian	300	10	**300**	200	50	**300**	600	60	**600**
Total	**14,800**	**1,600**	**16,300**	**5,000**	**1,300**	**6,300**	**19,800**	**2,900**	**22,600**
European	59%	7%	**66%**	17%	5%	**22%**	76%	12%	**88%**
Māori	4%	0%	**5%**	4%	1%	**4%**	8%	1%	**9%**
Pacific	0%	0%	**0%**	1%	0%	**1%**	1%	0%	**1%**
Asian	1%	0%	**2%**	1%	0%	**1%**	2%	0%	**3%**
Total	**65%**	**7%**	**72%**	**22%**	**6%**	**28%**	**87%**	**13%**	**100%**
Relative Concentration									
European	**1.03**	**1.11**	**1.04**	0.88	0.98	0.90	0.99	**1.05**	
Māori	0.78	0.26	0.73	**1.83**	**1.18**	**1.70**	**1.05**	0.67	
Pacific	0.68	-	0.61	**2.52**	-	**2.01**	**1.14**	-	
Asian	0.84	0.28	0.78	**1.61**	**1.36**	**1.56**	**1.03**	0.76	

1 Not Owned includes NEI *Note - includes rounding*

Source: ME Housing Demand Model 2021

6.6 Urban Development Dashboard Indicators

This section contains a presentation of the Ministry for the Environment Urban Development Dashboard Indicators for the Greater Hamilton Area. In accordance with the NPS-UD section 3.23, the market and price efficiency indicators are contained in this section. The analysis considers a range of indicators to understand the movement in the Hamilton housing market relative to wider national trends. It is important to consider the broader national pattern of change to understand how patterns within the local market may be affected by the wider economic context beyond the local planning influence.

6.6.1 Dwelling Sales Prices and Rents

The following graphs (Figure 6-10 and Figure 6-11) from the Urban Development Dashboard show the change in dwelling sales prices and rents through time across the NPS-UD high growth urban economies in New Zealand. These indicators provide a broad indication of the overall movement within the different

housing markets. The graphs show that there has been growth in prices through time that have occurred generally across the main housing markets. There has been faster growth in the periods from around 2002 to 2007 and 2014 to 2019, which correspond to periods of higher net migration.

Figure 6-10: New Zealand High Growth Urban Economies – 12-month rolling Dwelling sales prices (actual) (MfE Urban Development Dashboard)

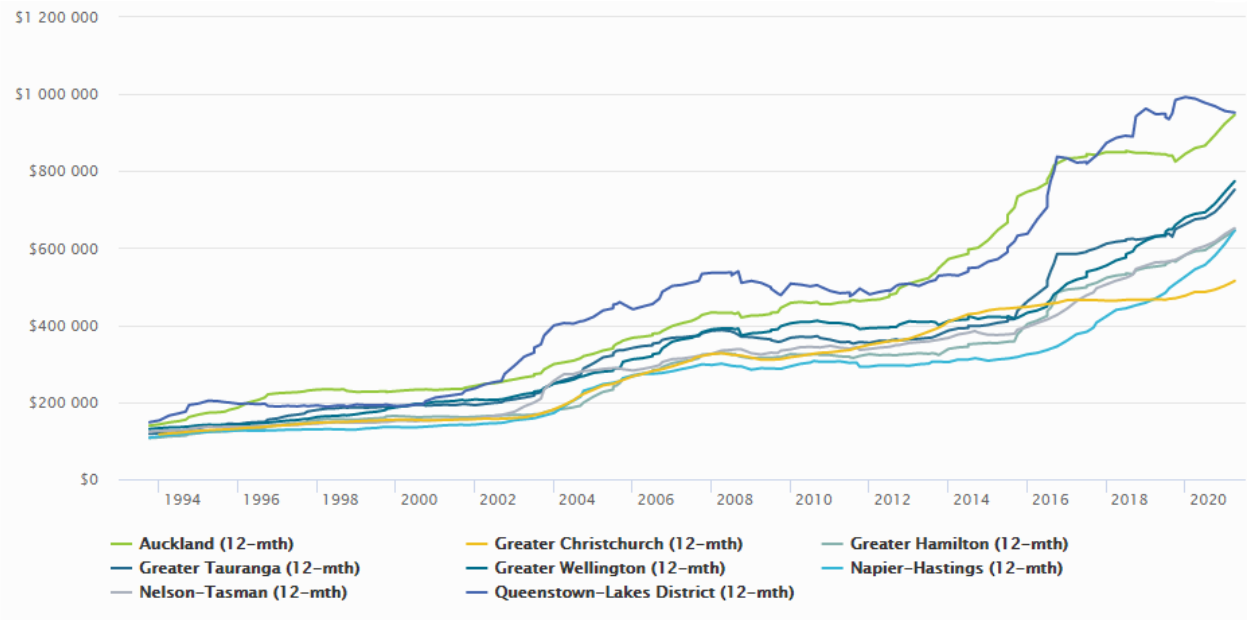
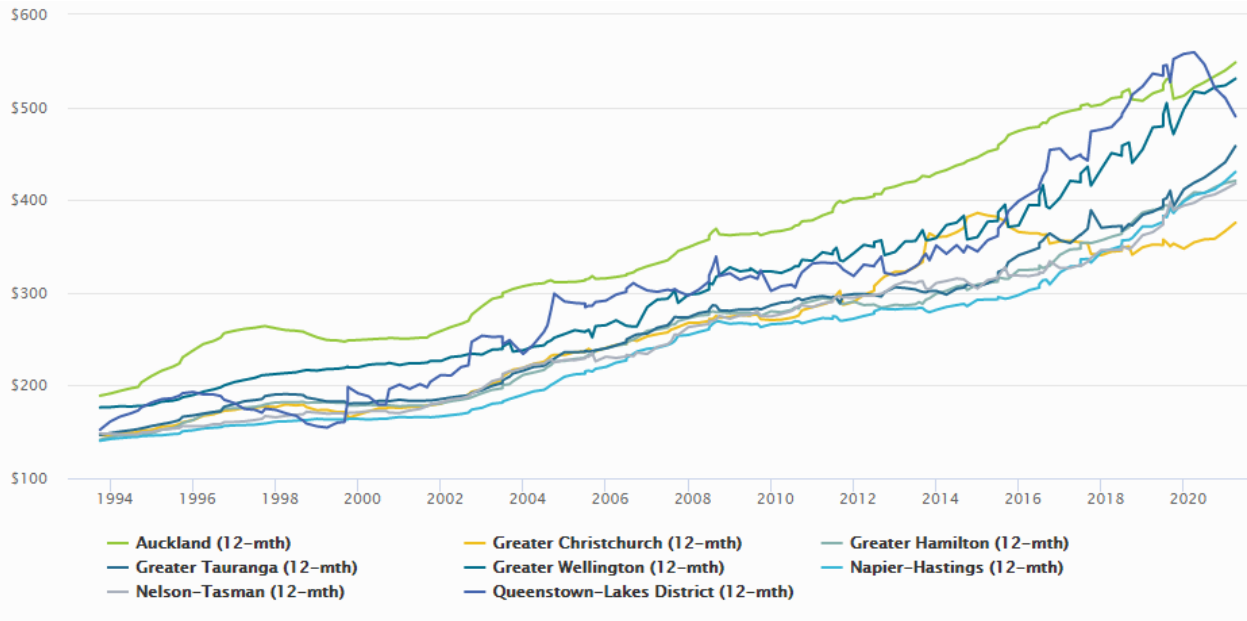


Figure 6-11: New Zealand High Growth Urban Economies – 12-month rolling Dwelling rents (actual) (MfE Urban Development Dashboard)



The percentage changes in Greater Hamilton dwelling prices and rents across the last 5 to 10 years, have been within a similar range to those experienced in other high growth urban economies (with the exception

of Christchurch, where prices have been affected by the 2011 earthquake). Actual sales prices in Hamilton have increased by 102% over the last 10 years. This compares to a range of 91% to 111% across the other cities (excluding Christchurch). In the last five years, Hamilton's increase of 57% compares to a range of 25% to 97% (excluding Christchurch). A similar pattern has occurred with rents, where Hamilton's 10 year increase equates to 43% (compared to a range of 43% to 58%, excluding Christchurch), and 29% across the last five years (compared to a range of 14% to 43%, excluding Christchurch).

It is important to note that these graphs are an aggregation of the total housing market in each location. They are appropriate for informing a broad understanding of the movement of the market in relation to wider national trends. However, more detailed assessment is required to disentangle any effects of local planning.

An important aspect of the effect of local planning would be to understand the patterns of dwelling delivery and sales prices/rents across different dwelling typologies and how these relate to the zoned opportunity. Indicators specifically on new dwellings constructed through time in relation to the zoned opportunity would be useful to consider the effect of local planning provisions.

Planning parameters have an important role in enabling the development of different dwelling typologies at a range of densities and associated prices across different locations within the urban area. Changes in the overall dwelling typology mix are therefore a mechanism through which local planning may affect dwelling market prices.

6.6.2 Land Share of Total Dwelling Value

The graph below (Figure 6-12) shows the land value as a share of capital value across (as an average) across each of the NPS-UD high growth urban economies. A core way in which this measure can be affected by local planning parameters is through the densities enabled under the Plan. This includes the higher density dwelling typologies and level of intensification enabled within the existing urban area as well as densities across new areas of greenfield expansion. These range from minimum lot sizes for standalone dwellings up to the height limits for vertical apartment buildings.

The information is provided for each urban area in aggregate. It shows that the share of total value as land value has generally increased through time across the longer-term in most of the main urban economies. In Hamilton, it has increased from 35.15% in 1994 (at the start of the series) to 54.47% in 2019. The data used to inform the graph shows considerable variation within proximate points in time.

Growth in the share of land value is generally expected through time for cities both in aggregate as well as at the individual property level. This is expected to occur in both markets that are constrained and unconstrained by any local planning provisions. When a dwelling is constructed on a piece of land, the land value continues to rise through time as the relative positioning of the property within the overall market continues to gradually increase through time, and the overall population demand base continues to expand relative to the geographic size of the city. This is an important driver of urban redevelopment processes where it becomes feasible in the future to redevelop parcels to a higher intensity.

This trend is also expected generally at the city level where the measure is conducted across the entire housing stock in aggregate (i.e. the data provided on the Urban Development Dashboard). In any year, the addition of new dwelling stock to an urban economy is only a small share relative to the existing base.

Therefore, the trend in this measure is heavily influenced by the large relative impact of the existing housing stock base.

Over a longer time period, once significant proportions of the existing dwelling stock have been redeveloped or intensified (at significantly higher densities), then negative changes in the share of land value are more likely to be observed. For instance, a high amenity/accessible area historically developed at lower densities (e.g. standalone dwellings) is expected to have increases in the share of value in land through time until it becomes feasible to redevelop the area to higher densities. Once a significant share of the area becomes redeveloped to higher densities (e.g. vertical apartments) (outweighing the influence of the share at lower densities), then the share of value as land can be expected to gradually decrease.

As such, it would be useful to assess the land value share of newly constructed dwellings through time to better understand the impact of local planning conditions. These would need to be assessed in relation to the type and location of dwellings compared to the maximum densities enabled in the same locations by the Plan.

If dwellings are being constructed with high shares of their value as land, and they are being constructed at the highest densities enabled by the Plan, then this would suggest a planning constraint affecting dwelling prices. If a high share of the dwelling sales price is land, but dwellings are being constructed a considerably lower densities than enabled by the Plan (with the enabled densities adequately supported by local amenity/infrastructure), then this would instead suggest an influence on dwelling prices associated with a non-planning component of the market.

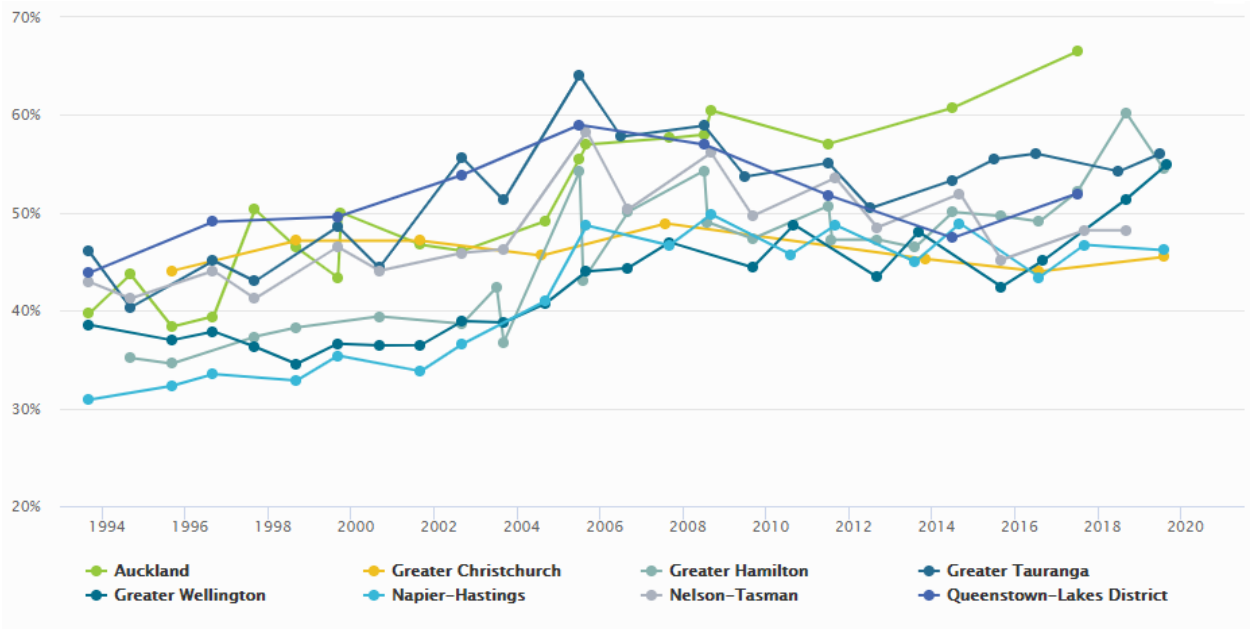
The HBA assessments have found that Hamilton City ODP has enabled significant opportunity for intensification within the City Centre and across much of the general suburban residential area. The highest densities are currently being achieved across some parts of the suburban areas (greenfield and existing urban), but are currently well below the densities enabled within the City Centre zones. The minimum lot sizes for standalone dwellings within the General Residential Zone are relatively high at 400m^2 per dwelling. Higher densities for standalone dwellings (i.e. smaller lot sizes) are currently being achieved in other urban economies, suggesting that these are also likely to be feasible within the Hamilton market if they were enabled. Smaller lot sizes may reduce the land value share of newly constructed standalone dwellings, however, may have mixed effects on the overall share across new dwellings in aggregate. This is because a shift in dwelling typologies (to higher density dwellings) would also have an impact on the overall share of land value, the propensity of which may be affected by the ability to construct standalone dwellings.

Within Waipā District, there is little provision within the Plan for further intensification. The Plan contains minimum lot sizes of around 500m^2 to 600m^2 per dwelling (depending upon the sub-zone), with only limited areas where intensification is enabled. There is no allowance for a smaller section size through the construction of higher density dwelling typologies (i.e. duplexes). Despite the minimum lot size restrictions, there is limited evidence of the provision being a constraint in the current market greenfield areas. Larger lot sizes (than the Plan minimums) are currently being delivered across many of the greenfield areas in response to market demand for larger dwellings.

A similar situation with minimum lot sizes occurs across much of the Waikato District ODP in the short-term. Standalone dwellings are currently being delivered at or close to plan minimums in some of the greenfield areas, particularly in the northern parts of the district. There is currently no increased density

allowance for higher density typologies across many of these areas. Further provision is made for higher density development across parts of the district in the medium and long-term.

Figure 6-12: New Zealand High Growth Urban Economies – Land value as percentage of capital value (MfE Urban Development Dashboard)



6.6.3 Rural Urban Differential

The MfE Urban Development Dashboard contains indicators on the differential in land prices on either side of the rural-urban boundary. Land prices of standalone dwellings within Hamilton's urban area within 2 kilometres of the rural urban boundary (RUB) were compared to the land prices of rural residential (lifestyle) properties outside, but within 2 kilometres, of the RUB. The land 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 MfE assessment has found that, on a per m^2 basis, land is 2.42 times more expensive on the inside (within 2 kilometres) of the RUB, than outside (within 2 kilometres) of the RUB. This equates to around \$227 per m^2, which amounts to \$136,213 for a 600m^2. This is within a similar range of the findings across the other high growth urban economies. Other high growth economies range from \$102 per m^2 to \$345 per m^2.

A land price differential around the RUB is expected to occur within an urban economy. This is expected to occur (under this methodology) both in an economy that is facing a land constraint as well as one that is not facing any constraint in the supply of land for housing.

Urban economies typically have gradients of land uses that occur around the urban edge, which result in different land price differentials. Outside of the urban zoned area, higher proportions of the land is typically used in rural lifestyle properties, with the share as rural uses increasing as distance increases from the urban edge. 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 MfE methodology has controlled for only part of these effects.

Within an urbanised area, a higher share of the developed land area (typically around 30% to 40%) is taken up for roads and reserves than in rural lifestyle areas (around 10% to 15%). Taking this into account, this would generate a differential of 1.5 between the land across suburban and rural lifestyle uses (holding all other values constant).

Beyond this, the value of land per m^2 does not have a linear relationship with land parcel size. A large part of the value of a section occurs through the formation of a section, with value of the section increasing at a slower rate than the size of the section. This is seen in the analysis of land price curves (from the Ratings Database) during the feasibility modelling assessment. Therefore, a comparison of the land values (per m^2) of one predominant section size with a different predominant section size would naturally yield a differential. This would be expected to occur between a suburban section and a lifestyle block. Analysis of the land price curves within Hamilton's Ratings Database suggests that a differential in land values per m^2 of between 2.0 and 3.0 would occur between a $600m^2$ lot and size the minimum Large Lot Zone lot size of $2,500m^2$.

There is a large cost beyond the different section sizes and parcelled land yields associated with the urbanisation of land. This relates to the infrastructure provision as well as the required site preparation work (subdivision earthworks and engineering as well as the individual site landscaping costs) required to urbanise the land. The Urban Dashboard indicators make some allowance for infrastructure costs; and it is suggested this relates to the amount charged for extensions of Council infrastructure. However, it is not clear whether this also includes the subdivision costs beyond (e.g. local roads that are vested back to Council) the main infrastructure extensions that are borne by the developer (and ultimately private land owners) as part of the subdivision development process.

7 Conclusions

The FPP area is expected to experience high levels of growth. The number of households across the total FPP area are projected to increase by 57% in the long-term. Greater urbanisation is anticipated across the area, with the largest share of urban growth occurring in Hamilton City as the main urban centre. Substantial increases in the size of a number of the other main urban centres within the surrounding districts are also expected to occur, resulting in faster growth in these areas and greater rates of urbanisation. Overall, the demand for urban dwellings is projected to increase by around two-thirds in the long-term.

Council's will play a key role in responding to these growth challenges to provide for growth in a way that achieves a well-functioning urban environment. The NPS-UD assessment is undertaken to understand whether planning and infrastructure decisions by local authorities provide for sufficient capacity for the anticipated growth and their effect on the operation of the local housing market. A detailed assessment on the housing market capacity and demand of the FPP area has been undertaken within this report.

The capacity assessment has found there are some capacity shortfalls projected to occur within the short-term across the Waikato District's main urban areas. While there are feasible development options of intensification within the existing urban areas, there are no areas where infrastructure is currently in place to enable greenfield development, which forms the dominant pattern of urban development across the district. Hamilton City has a small projected capacity surplus in the short-term, but has a large range of feasible development options, beyond those projected to be taken up, for intensification within the existing urban area[63]. All other urban areas have projected surpluses of capacity within the short-term.

Substantial infrastructure will be supplied in the medium-term across much of the greenfield zoned land both within Hamilton City and around the main urban centres of the surrounding districts. The Waikato District PDP also provides for significant geographic expansions of the zoned greenfield area. Hamilton City also contains a large number of feasible development options within the existing urban area[64]. There are projected capacity surpluses in the medium-term across all main urban areas.

In the long-term, there are only projected shortfalls in capacity, at the total level, under the current prices scenario where it is assumed that no further development options will become feasible over the next 30 years. At the total level, there are projected capacity surpluses across all urban areas in the long-term within the growth scenario where further development options are modelled to become feasible through time. The assessment finds that there is a very large planned expansion of greenfield infrastructure within the Waikato District's urban areas relative to demand in the long-term. This results in sizeable capacity surpluses. Additional greenfield infrastructure is also planned for Hamilton City and Waipā District's urban areas providing for large areas of feasible development options, together with a large amount of feasible development options within the existing urban area[65]. In most locations, there are large amounts of feasible development options beyond the amount of development that is likely to be taken up by demand.

[63] Refer to Section 4.1.3 for more detail.

[64] Ibid.

[65] Ibid.

Although there are capacity surpluses projected at the total market level, the assessment has found that there are projected shortfalls in capacity within different parts (value bands) of the market. Shortfalls typically occur within the lower to mid value bands of the market as the feasible development options tend to be concentrated into the mid to higher dwelling value bands. This is partly offset by movement within the housing market where a large share of the new dwelling capacity is likely to be occupied by existing households moving upward within the market, consequently freeing up capacity within the lower value parts of the existing stock.

The shortfalls in capacity within the lower dwelling value bands are generally projected to increase through time. This occurs as a result of gradual rises in price through time, but is partly offset by corresponding increases in household incomes. This results in some decreases in housing affordability, within household income bands, across the FPP area within the long-term, beyond the medium-term.

The assessment has found that the FPP area planning decisions may have some impact on affordability within the local housing market, but that there are large impacts from non-planning factors. The capacity feasibility assessment shows that only small increases in price (relative to actual trends observed within the market) are required for an increased range of zoned areas and development options to become feasible. It has also found that there are a large amount of zoned *feasible* development options available beyond the scale of demand within most urban areas. This suggests that there is unlikely to be a constraint, in the long-term, associated with the level of zoned (and infrastructure-served) opportunity available to the market. It is noted, however, that the FPPs will need to make ongoing, sustained investment in infrastructure capacity to support demand growth in infill areas[66].

The assessment has found that the adverse planning effects on the market may instead be related to a combination of specific provisions around the type and location of development options. There are likely to be some limitations on the range of development options provided by the market as a result of the types of development provided by the planning provisions together with the propensity of the market to take up the range of development options provided.

Within Waikato District, there is only limited opportunity for higher density developments provided for by the planning provisions. Although there are some decreases in the minimum site size requirements in the long-term, most of the planning provisions are focussed around providing for standalone dwellings on individual sites. There are very limited provisions for the development of higher density typologies (by way of smaller per dwelling land area requirements with the construction of a different typology) across much of the general urban residential area. We understand there are some options for Medium Density Residential Zone development (beyond the smaller areas in Waikato 2070) considered during the PDP process, however, these are not included within this assessment.

There are significant opportunities for urban intensification through higher density development within Hamilton City, particularly within the existing urban area[67]. The ODP provides for smaller per dwelling site size requirements for higher density typologies across nearly all of the suburban residential area, and has large plan-enabled potential for higher density apartment development across the City Centre. However, the assessment has applied limited uptake of these higher density typologies within the greenfield areas based on the supplied development yield information. The assessment has found that although there is

[66] Refer to Section 4.1.3 for more detail.

[67] Ibid.

large plan enabled capacity within the City Centre, there is limited projected market take-up of this capacity due to market preference factors.

There is some indication that the market may provide smaller lot sizes for standalone dwellings at the urban edge if planning requirements for minimum lot sizes were removed. The predominant existing requirement for 400m^2 per dwelling is currently being achieved in some greenfield areas, with smaller lot sizes being delivered in other similar urban economies for standalone dwellings. However, although removal of this requirement may reduce the standalone dwelling costs, it may reduce the incentive to instead construct higher density (cheaper) typologies which currently have a smaller minimum lot size requirement. This may impact upon the overall value profile of dwellings delivered by the market.

The assessment finds that there is no indication of a constraint for greenfield development within Hamilton City. There is a sizeable amount of infrastructure-served zoned opportunity relative to long-term demand, taking into account the geographic patterns of development across Hamilton City. Most of the greenfield areas are projected to be feasible to develop and are likely to form reasonably expected to be realised capacity.

Within Waipā District's urban areas, there are very limited options for higher density dwelling typologies. The planning framework provides for only very limited opportunity to develop higher density typologies with smaller per unit site area requirements. The assessment finds that these planning provisions have some impact on the affordability of dwellings within Waipā as it is focused on standalone dwellings on larger sites, which are concentrated into the mid to higher dwelling value bands. However, standalone dwellings on larger sites still form a large market preference for developers as they reflect strong patterns of demand within the market, including the exogenous retirement market demand.

The findings from the sufficiency assessment are also reflected in the information obtained from the developer survey. There was a mixed response from developers on the effect of local planning decisions in relation to the zoned land and infrastructure provision. Most developers recognised these as necessary and fundamental components provided by Council's that enabled development to occur. However, only a sub-set of developers, mainly within the Waikato District, considered that there were currently constraints within the market in relation to their supply. This reflects the capacity assessment where there is currently no infrastructure supplied for further development of greenfield areas. However, other developers considered that an oversupply of zoned opportunity and infrastructure could adversely affect the feasibility of development options through the inability to achieve sufficient prices. Many developers considered that current planning provisions did not adequately reflect emerging trends within the market for higher density development options, particularly within the Waikato and Waipā districts.

Other aspects of the planning process, beyond zoned land and infrastructure provision, were reported by developers to impact on the feasibility of development. These related to the transaction costs, resource consenting timeframes and uncertainty of planning decision outcomes. The latter aspects were particularly identified within the Waikato District.

Developers also identified the effects of non-planning factors on the feasible of development and dwelling prices. These included the wider national and global financial and market conditions, construction sector costs and the patterns of demand. These were reported to have a direct and substantial influence on the feasibility of development.

The impact of wider economic conditions is also suggested by the analysis of the urban development dashboard indicators. These showed the alignment of the greater Hamilton area with housing price movements on a national scale. The assessment also found the changes to the ratio of costs to prices occurring through time within Hamilton, which is an important driver of the feasibility of urban intensification processes.

Our approach has highlighted the importance of disentangling the planning effects on the market from this wider set of influences. We consider whether the local planning decisions provide for sufficient capacity, and then the additional level of scope available to the market to operate within these parameters. It then assesses the changes in the market within the context of a wider set of indicators.

There are important aspects of the FPP area's housing market to consider in relation to how well the demand for housing from different groups within the market is met. Māori are an important group to consider within the FPP area that may face different outcomes in the local housing market. The HBA has found that Māori have lower rates of home ownership within the FPP area than households overall, and these are projected to continue into the future. The underlying patterns of Māori household demand suggest they are likely to experience lower levels of housing affordability. On average, Māori households have larger household sizes and lower income profiles. These patterns are likely to translate into demand for larger dwellings in the lower dwelling value bands, which differ to the positive correlations generally between dwelling price and size.

8 Appendices

8.1 Commercial Feasibility Modelling Key Cost and Price Ranges

The following tables contain the key cost and price inputs used within the feasibility modelling. The values are in 2020 year values.

Table 8-1: Financial Rate Assumptions

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

Table 8-2: Base Construction Costs per Square Metre of Dwelling Floorspace

	Base Build Cost per M2[1]	
Area	Min	Max
Pokeno/Tuakau and Raglan	$1,700	$2,300
Mid Waikato Districts	$1,600	$2,200
Hamilton - Standalone	$1,600	$2,200
Hamilton - Duplex	$1,800	$2,400
Hamilton - Apartment	$1,800	$3,300
Hamilton City Centre		
Downtown Precinct 1-3 storeys	$3,000	$3,850
City Living Precinct 1-3 storeys	$2,250	$3,850
Ferrybank Precinct 1-3 storeys	$2,220	$3,815
Downtown Precinct 4+ storeys	$4,000	$5,000
City Living Precinct 4+ storeys	$3,800	$5,000
Ferrybank Precinct 4+ storeys	$3,800	$5,000
Cambridge	$1,700	$2,300
Te Awamutu	$1,600	$2,200
Kihikihi	$1,700	$2,300

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

Table 8-3: Sales Price by Dwelling Size and Typology

	Suburban Dwelling Sales Price					
	Standalone		Duplex		Suburban Apartment	
Area	100m2	200m2	100m2	200m2	100m2	200m2
Pokeno/Tuakau	$530,000	$865,000				
Te Kauwhata	$529,000	$780,000				
Ngaruawahia	$503,000	$741,000				
Huntly	$409,000	$603,000				
Taupiri	$529,000	$780,000				
Raglan	$583,000	$952,000				
Hamilton						
Level 1	$501,000	$866,000	$469,000	$810,000	$438,000	$758,000
Level 2	$541,000	$935,000	$508,000	$880,000	$478,000	$827,000
Level 3	$582,000	$1,006,000	$545,000	$942,000	$509,000	$881,000
Level 4	$618,000	$1,070,000	$579,000	$1,001,000	$541,000	$936,000
Level 5	$637,000	$1,102,000	$596,000	$1,031,000	$558,000	$965,000
Te Rapa North	$589,000	$1,019,000	$530,000	$917,000	$501,000	$866,000
Rotokauri	$589,000	$1,019,000	$530,000	$917,000	$501,000	$866,000
Rototuna	$595,000	$1,039,000	$535,000	$935,000	$506,000	$883,000
Ruakura North	$589,000	$1,019,000	$530,000	$917,000	$501,000	$866,000
Ruakura South	$589,000	$1,019,000	$530,000	$917,000	$501,000	$866,000
Temple View	$559,000	$968,000	$503,000	$871,000	$476,000	$823,000
Peacocke	$589,000	$1,019,000	$530,000	$917,000	$501,000	$866,000
Cambridge	$677,000	$932,000				
Te Awamutu	$543,000	$741,000				
Kihikihi	$531,000	$726,000				

Table 8-4: Hamilton City Centre Apartment Sales Prices

	Apartment Sales Price		
City Centre Precinct	50m2	75m2	100m2
Hamilton CBD - Downtown Precinct	$462,000	$558,000	$672,000
Hamilton CBD - City Living Precinct	$403,000	$512,000	$623,000
Hamilton CBD - Ferrybank Precinct	$403,000	$512,000	$623,000

8.2 Developer Survey

The following is a list of the questions contained within the survey sent to residential dwelling commercial developers within the Future Proof Area. The questions contained a mixture of potential specified options (as listed) or open ended responses. Known property developers were invited to respond to the survey online by each FPP area council.

1. What sort of development does your company do the most of?
    a. Greenfield.
    b. Brownfield – infill (adding additional dwellings to a vacant or underused site).

c. Brownfield – redevelopment (removing existing dwellings and replacing with new).
d. Mixture (specify).

2. On average how many dwellings do you build each year?
    a. Open ended response.
3. What types of dwellings does your company typically build? (select all that apply)
    a. Stand alone.
    b. Duplex.
    c. Terrace/townhouse.
    d. Vertically attached apartments.
4. Where do you do the majority of your work?
    a. Within (FPP area city/district) only.
    b. Other locations within the Waikato region.
    c. Other development within New Zealand (specify).
5. Respondents were asked to identify the location of their development activity within their selected FPP area from a provided list of suburbs/urban areas.
6. To what extent do the following factors affect the commercial feasibility of residential development in Hamilton? (respondents were asked to rate the following factors on a scale of 'Very large effect', 'Large effect', 'Some effect', 'Minor effect' or 'No effect').
    a. Access to labour.
    b. Availability of sub-contractors.
    c. Prices within the construction sector (materials and labour).
    d. Access to finance.
    e. Interest rates/holding costs.
    f. Council fees (e.g. development contributions, consent fees).
    g. Quantity of zoned land.
    h. Existing land ownership structures.
    i. Provision of infrastructure (three waters/transport).
    j. Access to amenities.
    k. Market demand for dwellings.
    l. Patterns of purchaser demand (e.g. type, size and location of dwellings).
    m. Planning provisions (e.g. dwelling typologies and minimum site sizes).
    n. Scale of the development.
    o. Competition with other developers.
    p. Wider economic conditions.
7. Are there any other factors affecting the commercial feasibility of residential development in (selected FPP area)?
    a. Open ended response.
8. For the factors you've ranked above as having a 'very large effect', please tell us why you think so?
    a. Open ended response.
9. How do you see the dwellings you deliver in (selected FPP area) changing over the short-term (to 2023) or medium-term (to 2030), in terms of lot size and typology?
    a. Open ended response.
10. What are the key drivers influencing these changes and how do you expect the changes to progress over time?
    a. Open ended response.

11. What do you consider to be acceptable profit margins when undertaking residential development? How are these affected by the scale, type and location of development?
    a. Open ended response.
12. Is there any else you'd like to tell us?
    a. Open ended response.