Future Proof
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Housing and Business Development Capacity Assessment 2017

Summary Report

Waikato Regional Council
Te Kaunihera ā Rohe o Waikato

Hamilton City Council
Te kaunihera o Kirikiriroa

NZ Transport Agency
Waka Kotahi

Waipa District Council
Building Our Future Together

Waikato District Council

1 Contents

1. Executive Summary

The Future Proof Partnership has prepared this *Housing and Business Development Capacity Assessment Summary Report* to summarise the results of the detailed analysis undertaken of the demand, supply and sufficiency of development capacity for housing and business growth across the Future Proof sub-region, as at June 2017. This analysis was conducted to meet the requirements of the National Policy Statement on Urban Development Capacity (NPS-UDC).

In addition to providing a summary of the key results of housing and business growth and capacity assessment (HBA), this report also provides additional commentary and importantly includes an overview of the broader pipeline of supply in progress across the Future Proof sub-region.

The main objective of the HBA is to have a robustly-developed, comprehensive and frequently updated evidence base to inform planning decisions in urban environments in the Future Proof sub-region. This HBA will provide the evidence base to inform the next phase of the NPS-UDC requirements, the development of the Future Development Strategy, which will form part of the Phase 2 update of the Future Proof Strategy.

The overall conclusion from the assessment is that the Future Proof sub-region in not likely to have any projected shortfalls in capacity for either housing or business capacity over the short (1-3 years), medium (3-10 years) or long term (10-30 years). The sub-region has sufficient feasible development capacity, under current market conditions, to meet demand in the short and medium term. Assuming that more housing development opportunities will become feasible through time, and further capacity will become enabled in the Waikato and Waipa Districts, there is also likely to be sufficient feasible capacity to meet demand plus margin over the short, medium and long-term period in the Future Proof sub-region.

Context

The Future Proof partnership has worked collaboratively since 2007 to develop, and update, an integrated spatial plan and approach to guide growth management. The Future Proof partnership considers growth management across the entire sub-region and therefore has adopted the full geographic extent of the sub-region for the HBA, encompassing the territorial authority (TA) areas of Waikato District Council (Waikato), Hamilton City Council (Hamilton) and Waipa District Council (Waipa). Hamilton is the largest population centre in the sub-region, along with the townships of Pokeno, Tuakau, Te Kauwhata, Huntly, Ngaruawahia, Raglan, Te Awamutu and Cambridge. There are also several smaller villages throughout the sub-region.

Assessment Approach and Monitoring

The detailed analysis of demand and current capacity conducted by Market Economics, in collaboration with the Future Proof partners, can be found in the associated Housing and Business Assessment results reports[1]. This summary report has also been informed by the updated Future Proof Strategy (November 2017) and Future Proof NPS-UDC quarterly indicator monitoring undertaken to date. This HBA should be read in conjunction with these documents[2]. Ongoing monitoring of market conditions and the uptake of the identified capacity is essential.

[1] Housing Development Capacity Assessment 2017 & Business Development Capacity Assessment 2017. Future Proof Area - Waikato District, Hamilton and Waipa District. Market Economics Consulting, 12 Feb 2018.
[2] Documents available at http://www.futureproof.org.nz/page/13-background-reports

1.1 Housing Assessment Summary

The sub-region comprises a network of urban areas interlinked by housing, employment and education opportunities. These urban areas provide different offerings and operate as different housing markets, or sub-markets. Overall, house prices across the sub-region appear to broadly follow similar trends, suggesting an underlying interdependency and the influence of similar growth pressures, most notably the influence of Auckland to the north. Despite recent strong growth in the number of residential building consents issued the sub-region has experienced increasing housing unaffordability with rising house and rent prices.

Demand: Over the next 30 years, from June 2017, the Future Proof sub-region will need to accommodate approximately 61,000 additional dwellings. Just over half (31,928) of the projected demand for dwellings occurs in Hamilton and a third of this demand (13,000) is expected to be for detached dwellings. The NPS-UDC requires that an additional margin of capacity is provided (over and above the projected demand) of at least 20% in the short term and medium term, and 15% in the long term. This is to factor in "a proportion of feasible development capacity that may not be developed".

Capacity: Currently available capacity in the Waikato District is distributed widely across the district. Capacity is primarily concentrated in Pokeno, Tuakau (closest to Auckland in the north), in Te Kauwhata and in the south within Ngaruawahia. Capacity is also available around the edges of Hamilton and to a lesser extent in some of the other smaller settlements. The Waikato District is currently progressing a district plan review and plan changes that will enable a significant amount of additional capacity in a number of the urban centres across the district.

Hamilton has set out a strategic target of achieving an equal split (50:50) between housing development in the existing urban area and greenfield growth. Supported by an enabling planning framework and changing market dynamics, the distribution of growth has largely achieved strategic growth target over the last decade. Aligned with this strategic direction, housing capacity is available via the sequence of greenfield growth cells around the edges of the city and a large amount of infill and redevelopment capacity within the existing urban area. In the Waipa District, roughly two thirds of the currently available capacity is located in and around the main urban centres of Cambridge and Te Awamutu. A large amount of additional capacity, in the form of greenfield growth zones around both the main towns, will soon be enabled via the plan changes to the Waipa District Plan.

Sufficiency: Considering both the development capacity that is currently provided in resource management plans (supported with development infrastructure and feasible to develop) and the anticipated additional supply that is currently being enabled, it is likely that there will be sufficient capacity to meet the projected demand for housing and business space across the sub-region. The Future Proof sub-region has sufficient feasible development capacity, under current market conditions, to meet demand in the short and medium term. Assuming that more housing development opportunities will become feasible through time, and further capacity will become enabled in the Waikato and Waipa Districts, there is also likely to be sufficient feasible capacity to meet demand, plus the margin, over the long term in the sub-region. The availability of this capacity will be dependent on the continued ability of Future Proof Partners to fund their share of key infrastructure costs.

1.2 Business Assessment Summary

The sub-region is well positioned for continued economic and population growth. While there are significant differences between the economies of the three Future Proof TAs, there are links and interdependencies between the three districts: Hamilton functions as the primary service and industrial centre for the sub-region, whereas both Waikato and Waipa are more reliant on the primary production sectors for employment.

Demand: The projections of demand for business space, for both land (hectares) and floorspace (square meters) have been produced for three broad business sectors: retail, commercial and industrial. The majority of business land demand is concentrated within Hamilton. Overall the total industrial land demand is significantly greater than commercial and retail land demand. The NPS-UDC requires that an additional margin of capacity is provided (over and above the projected demand) of at least 20% in the short term and medium term, and 15% in the long term.

Capacity: The assessment of the business development capacity currently enabled by the district plans of the three Future Proof partners indicates that significant gross floor area capacity for the commercial and retail sectors exists. Industrial land capacity is less well supplied.

Sufficiency: The results of the Future Proof business land supply and demand (plus the required margin) for the three broad business sectors in the short, medium or long term are set out in Table 1. A 'tick' in the sufficiency measure column indicates sufficient supply (provision of enough development capacity to meet demand) for the period.

Table 1: Future Proof Business Sufficiency

Sector		Demand plus margin			Total Capacity	Sufficiency		
		Short term	Medium term	Long term		Short term	Medium term	Long term
Commercial	ha	29	96	154	1,066	✓	✓	✓
	sqm	87,922	297,990	808,559	22,389,853	✓	✓	✓
Retail	ha	9.5	29	59	310	✓	✓	✓
	sqm	38,785	107,204	249,804	2,087,549	✓	✓	✓
Industrial	ha	160	469	881	1,190	✓	✓	✓
	sqm	266,258	906,611	2,347,683	7,949,273	✓	✓	✓

Overall, there is a more than ample supply of commercial and retail capacity across Waikato and Hamilton. In Waipa there are indications that retail and commercial capacity (namely in the urban centres of Te Awamutu and Cambridge) may become constrained over the long term. It is anticipated that this pressure will be alleviated by the current plan changes underway. Commercial supply adequacy will be considered in the upcoming concept plan review and update for both Cambridge and Te Awamutu. Demand for industrial land in the Future Proof sub-region, however, it is far closer to supply over the long term, equalling 90% of available supply over the long term.

There is a clear need to undertake regular monitoring of business capacity uptake and identify any economic change that may influence demand and any other constraints on the availability of supply. As noted above, the availability of this capacity beyond the medium term will be dependent on the continued ability of Future Proof Partners to fund their share of key infrastructure costs.

2 Key Assumptions, Notes and Influences

This HBA should be considered alongside a wider suite of Future Proof and other partner documents, namely the Future Proof Strategy, the quarterly indicator monitoring reports and existing TA growth strategies. The Future Proof Strategy includes a desire to strengthen economic, cultural, social and environmental wellbeing outcomes. Communities and their wellbeing are at the heart of effective growth management.

Assessment Approach

- The future is uncertain. This report draws on projections of demand and a modelled assessment of capacity. Projections are an artefact of both method and data. Models are not reality but a representation of it based on input data, available knowledge and expert assumptions.
- Key inputs include University of Waikato November 2016 population projections (2013 Base), WISE model economic projections, the 2015-2025 LTPs, operative district plans and structure plans, as at June 2017.
- The HBA reflects the evidence base that the Future Proof partners currently have available.
- The demand results should not be used as the basis for providing precise amounts of capacity at specific locations as demand may be able to be met within other locations. Best used in aggregate as an indicator.
- This HBA will be subject to ongoing careful monitoring, review and update at least every three years.
- It is likely that feasible development capacity will increase over time due to growth in the urban economy.

Funding Assumptions and Challenges

- Planned and committed investment from Central Government and other national infrastructure providers will occur, e.g. State Highways, the rail network, education, healthcare, energy and telecommunications.
- Future Proof partner councils will be able to provide and fund infrastructure in a timely manner.
- The costs of development related infrastructure do not impact negatively on partner council financial balance sheets.
- All funding opportunities will be investigated and explored.
- The requirement to provide an additional margin of feasible development capacity over and above projected demand of at least 20% in the short and medium term, and 15% in the long term, is very problematic for the sub-region. This carries significant financial implications and balance sheet risk.
- There are infrastructure provision and funding issues that need to be addressed in order to uplift all the development capacity identified in this HBA.
- The HBA is subject to new tools being explored by Central Government, including KiwiBuild, potential Housing Commission/UDA, financing support and capital investment, and Regional Development (Provincial Growth) Fund. The ability to fund priority growth areas is limited by the current tools available to councils. This issue is not unique to the Future Proof sub-region as all growth areas are facing high debt-to-revenue levels.

Growth Management

- The Future Proof banded approach was used for population projections, see Appendix 1.
- The additional anticipated capacity identified will become available as expected in this report.
- Finer grained detail around capacity locations, staging and timing can be found in the updated Future Proof Strategy (November 2017) and the growth strategies and LTPs of the partner councils.
- It is important that development occurs in a logical and staged manner while being flexible enough to respond to changes in circumstances and new opportunities.
- Increased residential densities are an essential part of managing quality compact urban development.
- A comprehensive approach is taken to development and whole areas are considered so that sufficient scale is achieved to ensure that infrastructure and services are efficient and cost effective.
- The environmental impact of development will need to be carefully and appropriately managed.

Growth Drivers and Influences

- A number of factors influencing development capacity, housing supply and uptake are largely beyond the control of local government, including:
  - Demographic changes including migration rates
  - Numerous other drivers of change e.g. the availability and affordability of credit, change in prices and costs, investor confidence and activity, tax incentives, and low construction productivity
  - The influence of Auckland and any displacement of growth into the Future Proof sub-region
  - The impact of significant infrastructure (e.g. the completion of the Waikato Expressway in 2020 and future regional rail initiatives).

3 Introduction

The NPS-UDC came into effect on 1 December 2016 with an overarching purpose to ensure that planning enables development through providing sufficient development capacity for housing and business over the next 10 to 30 years. The NPS-UDC identifies the Future Proof sub-region as a high-growth urban area. As such, the Future Proof councils are required to meet all the requirements in the NPS-UDC, including the production of a housing and business development capacity assessment (HBA). This report provides a summary of the first HBA produced by the Future Proof partners.

3.1 Purpose

The purpose of this report is to meet the requirements of Policy PB1 of the NPS-UDC, which directs local authorities to quantify in broad terms how much feasible development capacity should be provided in resource management plans and be supported with development infrastructure, to enable the supply of housing and business space to meet demand. This policy directs local authorities to, on at least a three-yearly basis, carry out a HBA that[3]:

a) *Estimates the demand for dwellings, including the demand for different types of dwellings, locations and price points, and the supply of development capacity to meet that demand, in the short, medium and long-terms; and*
b) *Estimates the demand for the different types and locations of business land and floor area for businesses, and the supply of development capacity to meet that demand, in the short, medium and long-terms; and*
c) *Assesses interactions between housing and business activities, and their impacts on each other.*

Policy PB1 encourages local authorities to publish the results of their monitoring. This summary report, which quantifies the aggregate levels of demand and supply of land for housing and business development across the Future Proof sub-region, will be a key input for the next phase of the NPS-UDC requirements. It will provide the evidence base for the development of the Future Development Strategy (FDS) which will be considered under the Phase 2 update to the Future Proof Strategy.

3.2 Outline of report

This HBA report sets out the key results of the demand, capacity and sufficiency analysis along with contextual commentary. The aim of the report is to provide decision makers with an informative summary of the key results. The detailed results of the analysis of demand and supply for each TA can be found in the associated Market Economics Assessment Reports[4]. This summary report is broadly divided into four sections:

- Introduction: provides a contextual outline of the existing Future Proof Strategy and partnership, the Future Proof geographical area, and the wider historic growth context. An outline of the overall approach to assessment, the role of monitoring and key assumptions are also included.
- Housing Assessment: the key results (demand, supply and sufficiency) of the Housing Assessment are provided for the three Future Proof TAs.
- Business Assessment: the key results of the Business Assessment are provided for the three Future Proof TAs.
- Appendices: additional information regarding population projections, other sources of demand, methodology, stakeholder input, key definitions and the NPS-UDC HBA requirements.

[3] See Appendix 6: NPS-UDC HBA requirements
[4] Document available at http://www.futureproof.org.nz/page/13-background-reports

3.2.1 Future Proof Strategy

Future Proof is the 30-year growth strategy and planning framework for the sub-region[5]. The Future Proof Strategy (the Strategy) represents a partnership between Hamilton City Council, Waipa District Council and Waikato District Council, the Waikato Regional Council, tāngata whenua and the NZ Transport Agency. The partnership has been working together since 2007. Future Proof is the primary voice for long-term growth planning in the sub-region. There is alignment between the NPS-UDC requirements and the Future Proof Strategy, in particular the intent to spatially set out a settlement pattern in response to demand. Given the established Future Proof partnership approach to growth management across the entire sub-region, the partnership has adopted the full geographic extent of the sub-region for the HBA.

The Strategy was first adopted in 2009 and is now embedded in a number of statutory documents. The Future Proof settlement pattern has been tested through statutory processes such as the Waikato Regional Policy Statement (RPS) and district plan reviews. Its growth management approach has also been validated by both the Environment Court and the Ruakura Board of Inquiry.

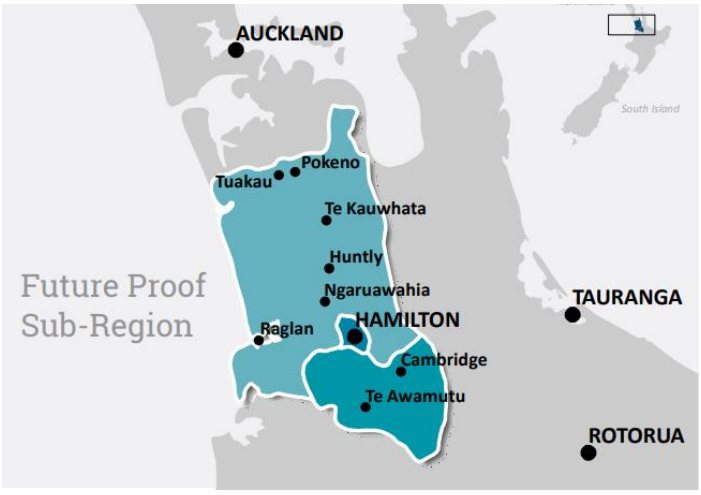
The Strategy is currently being updated in two phases: Phase 1 was completed in November 2017; Phase 2 of the update will incorporate the requirements of the NPS-UDC, including the Future Development Strategy. The Strategy aims to be flexible enough to deal with and respond to change. For this reason, appropriate triggers for development staging and alternative land release have been considered. The trigger-based approach has been scoped and is included in the updated Strategy (November 2017). This will be further refined as part of Phase 2 of the Strategy update. These triggers will feed into RPS and district plan changes to give effect to the settlement pattern and the new requirement to set minimum housing targets under the NPS-UDC.

The aim of the Strategy is to manage growth in the most efficient and effective manner by enabling the majority of development capacity within existing urban areas and towns. It also aims to achieve integration between the settlement pattern, infrastructure and funding. In terms of accommodating growth, the Future Proof capacity analysis to date has indicated that there is generally adequate residential supply to meet demand over the 30-year period. This HBA should be considered in conjunction with the existing Future Proof Strategy and will be used to inform the Phase 2 update.

3.2.2 Sub-regional Overview

The Future Proof sub-region (see Map 1), comprises Hamilton City Council with the Waikato District Council to the north and the Waipa District Council to the south. The sub-region is the growth hub of the Waikato region. It is projected that the Future Proof sub-region will contain 89% of the entire Waikato region's population growth out to 2031. Over the next 30 years Hamilton will contain nearly half of the projected future population for the sub-region, with Waikato accommodating around 30% and Waipa around 23%.

Map 1. Future Proof sub-region



Hamilton

Hamilton is the country's largest inland city, and fourth largest urban area, with a population of around 165,000 people. It is one of the fastest-growing cities in

[5] The sub-region refers to the territorial area of Hamilton, Waikato and Waipa Districts.

the country and has a comparatively youthful population, with around 60% of residents under 40 years of age. Hamilton is home to a world-class centre of agricultural biotech excellence and to many of New Zealand's science research facilities. It is also a leading area for high-tech innovative manufacturing and engineering industries. Hamilton is facing a number of growth pressures including:

- The Waikato Expressway making the connections between Hamilton, surrounding districts, and Auckland closer and more connected than ever
- Development surrounding the city, and a push for some of these areas to be serviced
- Ad hoc peri-urban development, which makes it difficult to plan infrastructure requirements
- Demand for residential development on industrial land as well as continued strong demand for industrial development.

One of the biggest challenges for Hamilton is infrastructure funding and financing. Hamilton has undertaken structure planning for most of its urban growth areas, but is currently unlikely able to fund infrastructure provision for all of these areas to unlock their full growth potential in the long term.

Waikato

The Waikato District has a population of around 74,000 people living in a number of small towns and villages and the rural environment. It encompasses a large and geographicaly diverse area, from Raglan on the west coast to inland farming areas across the Waikato plains in the east and from the Bombay Hills in the north to the lifestyle area of Tamahere in the south. Around 52% of residents are under 40 years of age. Pastoral farming is the largest single land use in the Waikato District. The dairy industry is the most economically significant industry, with forestry and dry stock also featuring strongly.

The growth pressures facing the Waikato District include the significant influence of Auckland as the country's largest city, the growth of Hamilton, demographic and land use changes as well as the effect of a completed Waikato Expressway. There are infrastructure servicing challenges for the district, given the development pressures across a number of geographically dispersed settlements with small populations.

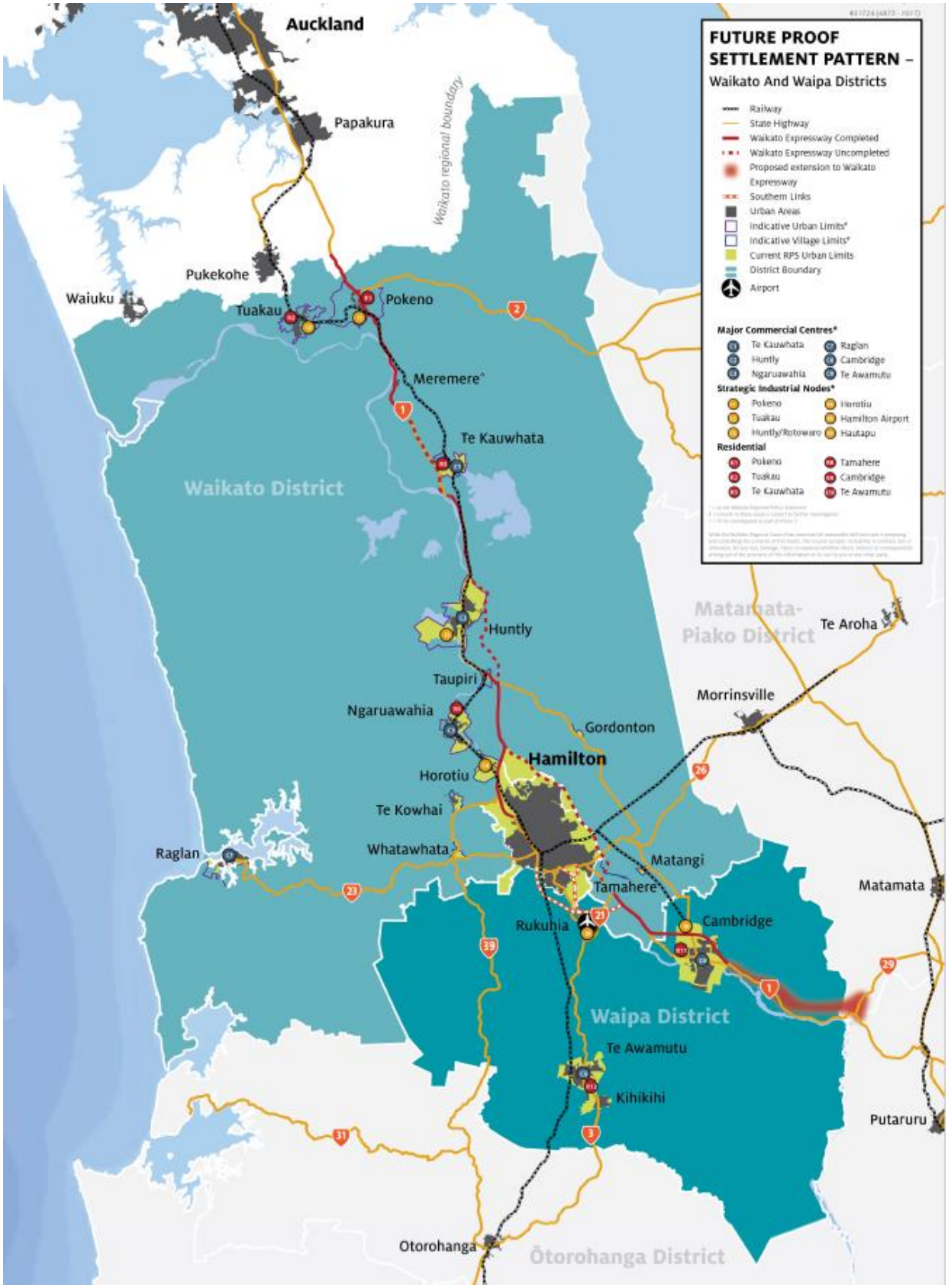
Waipa

Waipa has a population of around 53,000 fairly evenly split between urban and rural, with the main urban populations centred in the towns of Cambridge and Te Awamutu-Kihikihi. Around 49% of residents are under 40 years of age. Because of the high proportion of elite soils, the district has a rich agricultural base that is dominated by dairy farming, but also features sheep, beef, horse studs, deer farming and fruit production. Waipa is a base for international high-performance sport with equestrian facilities at Kihikihi, a track cycling velodrome in Cambridge, and an international rowing and kayaking course at Lake Karapiro.

Cambridge will attract the largest proportion of growth in the Waipa District with over half of new residents living there. Waipa has set a direction for growth in the update to Waipa 2050 (the district's growth strategy) and associated proposed plan changes. The challenges being faced by Waipa include:

- High demand for housing in Cambridge given its proximity to the Waikato Expressway, to Hamilton and to community services and employment
- An increasing and ageing population, and how to best cater for these changes
- Growth is putting stress and strain on existing infrastructure, particularly water.
- Infrastructure affordability.

Map. 2. Future Proof Settlement Pattern



3.2.3 Growth context

The Future Proof sub-region continues to experience high growth rates, which have placed pressure on all three TA areas. Hamilton, Waikato and Waipa are facing a number of similar challenges but they all have different growth stories due to their size, geographies and their communities. The sub-region is well positioned for continued economic and population growth. Located at the centre of the North Island's 'golden' economic triangle, the sub-region is served by key national infrastructure routes (State Highway 1 and the main trunk railway line) and is in close proximity to the ports of Auckland and Tauranga.

The Future Proof sub-region has experienced strong dwelling sales price growth in the three years since 2013, with rents also increasing at a steeper rate over this period than in the three years prior. This in part is due to significant population growth and housing price growth driven by a spike in Auckland-based investor activity as evidenced in Hamilton within the last three years. While affordability indicators suggest that housing and rental affordability has improved across the Future Proof sub-region between 2013 and 2015, housing affordability generally decreased in between 2015 and 2017.

The available business indicators currently suggest that there are no major concerns regarding the sufficiency of office and retail capacity in Hamilton. While there has been further decline in both office and retail vacancies in the Hamilton central business district (CBD), further supply (via new development and refurbishment) is expected. Strong uptake of industrial land has continued leaving overall vacancy rates for industrial leases in Hamilton at very low levels. Price differential analysis suggests that a level of insufficient capacity for industrial land exists. How the existing areas of zoned industrial land remain constrained requires further investigation.

3.3 Quarterly Indicator Monitoring

The NPS-UDC directs local authorities to conduct quarterly monitoring of a range of housing and business market indicators and price efficiency indicators. The purpose of this requirement is to ensure that local authorities are well informed with timely information about demand, urban development activity, how well the market is functioning and how market changes may affect the sufficiency of development capacity for housing and business land in the Future Proof sub-region.

To date the Future Proof partnership has produced three quarterly indicator reports: June 2017, September 2017 and December 2017/March 2018. These indicator reports provide data and commentary on a range of indicators of demand and supply and should be read in conjunction with this HBA summary report. The indicator reports are available on the Future Proof website[6]. This summary report draws on the monitoring work undertaken to date and includes key commentary and analysis from the two indicator reports. Further indicator reports will provide quarterly monitoring of the impact of economic cycles on the levels of demand and supply of housing and business land assessed in this HBA until the next HBA is undertaken (required by December 2020).

A short summary of the indicator monitoring work is provided at the start of the Housing Assessment section (see Section 4.1) and at the start of the Business Assessment Section (see Section 5.1).

[6] http://www.futureproof.org.nz/page/13-background-reports

3.4 Capacity Assessment Approach – Anticipated and Feasible Capacity

A short summary of the demand and capacity assessment methodology is provided in Appendix 4. Outlined below is the approach taken (in this summary report) to the consideration of additional anticipated capacity and the modelled assessment of feasible development capacity.

NPS-UDC direction: The NPS-UDC prescribes consideration of 'plan enabled' capacity, in other words the development capacity of land intended for either housing or business growth based on a collective consideration of the zoning, objectives, policies and rules in the relevant proposed and operative district and regional resource management plans and policy statements (See Appendix 6).

Available Capacity: When the Future Proof partnership first initiated the capacity assessment, several efforts by partners were already underway to increase the available land supply for housing and business activity: Waikato District Council had begun a review of its district plan and had started to process a number of proposed residential plan changes; Waipa District Council initiated a series of proposed plan changes to enable further residential and business capacity; and Hamilton City Council was anticipating changes to infrastructure funding allocation, (resulting from a Housing Infrastructure Fund bid) which would enable further residential capacity. Given that many of these initiatives were still emerging and represented at the time a shifting picture of potential supply, the decision was made to focus the capacity assessment conducted by Market Economics on the capacity that is currently enabled (as at June 2017) under the operative district plans and provisioned with development infrastructure under the relevant 2015-2025 long term plans (LTPs).

Anticipated Capacity: The various initiatives underway to increase development, representing a larger pipeline of additional supply beyond the capacity that is currently plan-enabled, is referred to in this report as 'anticipated capacity'. This 'anticipated capacity' has been assessed by Future Proof partners and is presented alongside the assessment of the levels of development capacity currently enabled by the operative plans. This provides a complete picture of both the operative and proposed capacity for housing and business demand across the Future Proof sub-region over the medium to long term. This anticipated capacity is based on local modelled and plausible yield calculations and has been allocated to the medium term and long term. Additional capacity has not been included in the short term, due to the time required to enable this capacity. A banded approach to the quantification of this supply has also been taken to reflect possible infrastructure and feasibility constraints on this anticipated capacity.

Feasible Capacity: The assessment of commercially feasible development capacity has involved first determining the level of feasible development capacity under current market conditions, as per the structures of building costs and sales at June 2017. The projections of future feasible development capacity have then been produced by applying conservative rates of increase to these inputs. As values and prices also increase over time due to changes in the economy it is entirely plausible that more housing development opportunities will become feasible. The Future Proof partnership views the projections of feasible development capacity, based on conservative rates of increase in costs and values, as a more likely picture of development capacity in the future. Any increase in capacity under the current market conditions assessment is simply a result of the provision of infrastructure.

Baseline: This HBA assessment provides a comprehensive stocktake of available capacity. The next HBA (required by December 2020) will fully reassess the operative district plans (including the incorporated anticipated capacity) and consider the infrastructure timing of the 2018-2028 LTPs. The extent of available feasible development capacity will consequently be further confirmed and refined via each successive HBA. Assessing a shifting picture of supply is likely to remain a challenge.

4 Housing Assessment

This Housing Assessment section provides an overview of the housing market(s) for the Future Proof sub-region. This is followed by a summary of the projected demand for housing, development capacity and the assessment of the sufficiency of the supply against the levels of projected demand.

4.1 Housing Market Overview

The Future Proof sub-region's network of urban areas is interlinked by employment and education opportunities. However, the urban areas across the sub-region provide different offerings and operate as different housing markets, or sub-markets. Overall, house prices across the sub-region appear to broadly follow similar trends, suggesting an underlying interdependency and the influence of similar growth pressures, most notably the influence of Auckland to the north.

The rapid growth that characterised housing markets in Hamilton, Waikato and Waipa districts, starting in late 2014 through to 2015 and 2016, appears to have eased off in 2017. Dwelling sale price growth slowed from 20-30% annual increases through 2016 back to an annual rate of 10% in Waipa, and 4-5% in the Waikato and Hamilton over the first half of 2017. Housing rental prices have also increased at a steeper rate over this period than in the three years prior. This likely reflects a combination of factors on both the supply and demand side. To some extent, the demand for housing in the Future Proof sub-region represented a spill over from Auckland, with buyers and investors seeking more affordable and/or profitable options. The population of the Waikato and Waipa districts has grown significantly over the past 5 years, averaging around 1,500 and 1,000 people per year respectively in these districts. Around 70% of the population growth in the Waikato in the past year has been from new migration, with the remaining 30% from natural increase. Incomes have also grown, although real mean household incomes in the Waikato region have grown more slowly than the national average, and declined slightly in 2017.

Hamilton has experienced high levels of infill activity over the last decade with notable increases in attached dwellings in recent years. The Government's housing and urban development initiatives are likely to have some influence on the rate and pattern of housing development in the sub-region.

Indicator monitoring

Affordability indicators suggest that housing and rental affordability improved across the sub-region between 2013 and 2015; however, housing affordability has generally decreased in the Future Proof sub-region between 2015 and 2017.

While the number of consents (as a proxy for supply) issued have largely kept pace with the demand for new dwellings (household growth) across the Future Proof sub-region, a gap between the two has emerged in Hamilton. This suggests that the rate of supply does not appear to be matching demand, possibly indicating constraints to the supply of new housing (see further discussion of latent demand in Appendix 2). The influence of economic cycles on the responsiveness of the housing construction industry and related labour and material costs and constraints may all be contributing factors. The recently released MBIE land concentration control measure for Hamilton suggesting that ownership of undeveloped residential land is highly concentrated implying that there may be a higher risk of land banking activity constraining capacity in Hamilton.

4.2 Demand

Population projections over the 30 years from June 2016 indicate that the Future Proof sub-region needs to provide development capacity for approximately 61,000 additional dwellings. The projected split between the three Future Proof TAs for the short, medium and long term is shown in Table 3 below.

Table 3. Demand for Dwellings

Area	Short term 2021	Medium term 2026	Long term 2046
Waikato	2,606	5,923	16,891
Hamilton	4,828	10,983	31,982
Waipa	2,033	4,722	12,069
Future Proof Total	9,467	21,628	60,942

Hamilton

Hamilton had an estimated 57,000 dwellings in 2017. Hamilton has a projected increase in demand for nearly 5,000 additional dwellings over the short term. Over the medium term, Hamilton is projected to have demand for an additional 11,000 dwellings, which implies an average annual growth rate of 2.0% over the medium term, for Hamilton as a whole. This is similar to the annual growth rate over the short term. Over the long term, the demand for additional dwellings in Hamilton is expected to total around 32,000. This translates into an average annual growth rate of 1.6%, lower than the growth rate over the medium term (2.0%) as the rate of growth is projected to slow through time.

As seen in Table 4, demand for attached dwellings (duplexes, town houses, terrace houses and apartments) in the short term (1,600) represents 28% of demand of total demand for housing. This increases over time to 30% in the medium term, and to 35% of total demand in the long term.

Table 4. Demand for Housing by Type in Hamilton

Demand by Housing Type	Short term 2021	Medium term 2026	Long term 2046
Demand for Standalone Dwellings	4,190	9,300	23,770
Demand for Attached Dwellings	1,600	3,880	13,010
Total Demand	5,790	13,180	36,780

Waikato

Waikato had an estimated 25,400 dwellings in 2017. In the Waikato, it is estimated a total of 2,600 additional dwellings are needed over the short term. This translates into annual growth of 2.5% for the district as a whole, over the short term. Over the medium-term, 6,000 additional dwellings are expected to be needed in the Waikato. This implies a very similar growth in demand to the short term, i.e. 2.4%. Over the long term, the demand for additional dwellings is expected to total around 16,900 dwellings. This implies a lower annual growth rate for the longer term when compared with the short and medium term, i.e. 1.8% compared to 2.4-2.5% over the short and medium term. Housing demand in this predominantly rural district has historically been for standalone dwellings.

Waipa

There are currently around 20,000 dwellings in Waipa, almost all of which are standalone dwellings. Over the short term, there is a projected demand for an additional 2,000 dwellings. This translates into an annual growth of 2.5% for the district over the short term. Over the medium term, demand for an additional 4,700 dwellings is projected in the Waipa, a growth rate of 2.4%. Over the long term, the total number of additional dwellings needed in the Waipa is expected to be around 12,100 suggesting a slower growth rate of 1.6% in the long term. Standalone dwellings have also historically been a feature of Waipa, however, there has been recent uptake of attached dwellings in Cambridge, particularly around the town centre.

4.3 Capacity

Set out below are the assessed levels of current capacity and the levels of 'anticipated' development capacity. Housing development capacity have been determined by assessing land that is:

- either zoned (or is planned to be zoned) for residential activity
- enabled by rules allowing residential activity in the relative district plan, and
- supplied or likely to be supplied by infrastructure and feasible for housing development.

The capacity tables below set out the levels of capacity that are feasible under current market conditions and the projections of feasible development capacity that are likely to become available over the short medium and long term. Any increase in capacity under the current market conditions assessment is simply a result of the provision of infrastructure. As values and prices also increase over time it is entirely plausible that more housing development opportunities will become feasible. The Future Proof partnership views the projection of feasible development capacity as a more likely picture of development capacity in the future.

Hamilton

The Hamilton District Plan supports the Hamilton Urban Growth Strategy (HUGS) and Future Proof Strategy target which seeks to achieve around 50% of Hamilton's growth through the regeneration of existing parts of the city (intensification and infill), and 50% in greenfield areas of the city. Residential Intensification Zones (RIZ) and other rules within the District Plan allow a range of redevelopment and infill activity to occur. Supported by this enabling planning framework and supported by changing market dynamics, the distribution of growth has largely achieved this strategic target over the last decade.

Aligned with this strategic direction the existing housing capacity in Hamilton is available via the sequence of greenfield growth cells around the edges of the city (see Map 3) and a large amount of infill and redevelopment capacity within the existing urban area. Redevelopment (usually involving the removal or demolition of one or more dwellings to build a greater number of new dwellings then those removed) plays a larger potential role in commercially feasible capacity in Hamilton than Waipa and Waikato as it is usually more feasible to undertake redevelopment in the city.

The availability of capacity in the long term will require alignment between land use, infrastructure and funding and will be dependent on the continued ability of Hamilton City to fund key infrastructure costs.

Table 5. Hamilton Housing Capacity

Capacity	Capacity – Current market (including redevelopment potential)			Capacity – Future projections (excluding redevelopment potential)		
	Short term 2021	Medium term 2026	Long term 2046	Short term 2021	Medium term 2026	Long term 2046
Current Capacity	10,540	13,180	17,990	11,447	20,908	49,037
Anticipated Capacity	-	2,500-3,000	3,000-4,500	-	2,500-3,000	3,000-4,300
Total	10,540	15,680- 16,180	20,990 - 22, 490	11,447	23,408-23,908	52,037-53,337

Table 6. Hamilton: feasible capacity by dwelling type

Max. Capacity (excluding redevelopment)	Short term 2021	Medium term 2026	Long term 2046
Maximum Capacity for Standalone dwellings	3,440	7,300	24,470
Maximum Capacity for Attached Dwellings if all Standalone dwelling opportunities taken up	6,350	11,610	21,780
Total Capacity (excluding redevelopment)	9,790	18,910	46,250

Current and future capacity

Within Hamilton's greenfield and infill areas, under current market conditions, there is commercially feasible development capacity in the short term (2021) for around 10,500 dwellings. This rises to close to 13,200 dwellings in the medium term (to 2026) and to close to 18,000 in the long term (to 2046). The assessment of capacity under current market conditions includes a small margin of redevelopment which is feasible. The future projection of feasible capacity (which has conservatively excluded redevelopment) indicates development capacity in the short term (2021) of around 11,500 dwellings. This rises to close to 20,900 dwellings in the medium term (to 2026); and to close to 49, 000 dwellings in the long term (to 2046).

Uptake

Monitoring of residential uptake in Hamilton confirms that available redevelopment and infill development opportunities are being taken up. Over the past 10 years 47% of consented dwellings were within the existing urban areas of the city, with the balance consented in the greenfield areas. The residential activity within the existing urban areas has included significant redevelopment of standalone houses into terrace or low-rise apartments (2-3 storeys) within the RIZs. Close to 400 duplexes have been constructed since 2014, when this activity was enabled under review of the Hamilton District Plan. These levels of uptake of infill and redevelopment opportunities in Hamilton suggest that actual demand for attached dwellings may be higher than modelled. The levels of residential redevelopment undertaken in Hamilton over the past few years is greater than the short-term levels of infill and redevelopment suggested by the modelled feasibility results for these types of development. This suggest that developers may be undertaking residential developments that have a different cost and profit structure to the modelled assumption (20% profit margin) and that the actual number of current feasible development opportunities in Hamilton is likely to be greater than the modelled results in the short term.

The results in Table 6 suggest that Hamilton's total capacity will be influenced by how capacity is taken up and how much redevelopment activity occurs. For example, if a standalone house is redeveloped into a duplex (two adjoined houses) rather than four town houses the net reduction in infill capacity will be two dwellings. In Hamilton's growing urban economy demand for standalone dwellings is expected to be greater than supply. It is expected that some of the demand for standalone dwellings will be met by other forms of attached dwellings as people make choices and trade-offs in cost and location about the type of dwellings they purchase or rent.

Anticipated capacity

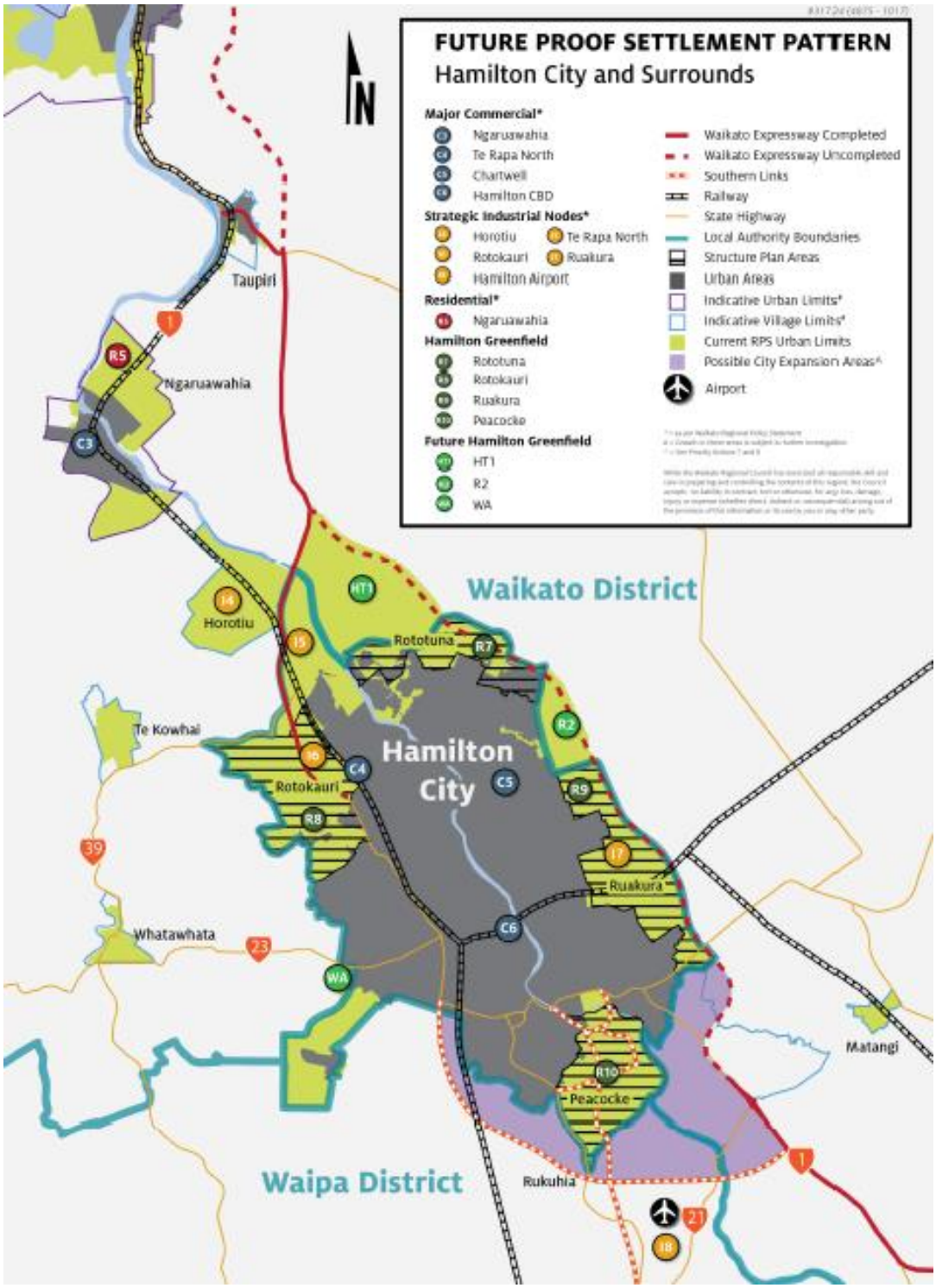
Hamilton's 2018-28 LTP proposes to shift (and advance) some of the focus of infrastructure investment from the Rotokauri growth cell to the Peackocke growth cell (see Map 3) to align with Hamilton's successful Housing Infrastructure Fund (HIF) bid. In the medium term, this change from the current level of assessed supply will likely advance housing supply in the region of 500 dwellings in the medium term with the potential to advance 1,500 more dwellings in the longer term. This anticipated net difference between the capacity enabled under the infrastructure funding timing in the 2015-2025 LTP and the 2018-2028 LTP is incorporated in the Hamilton capacity table (Table. 5).

Hamilton currently has six proposals for SHAs, which may enable capacity for approximately 2,880 dwellings in various locations across the city over the medium term and into the long term (see Appendix 2). As there is some certainty that these SHAs will proceed, this additional capacity has also been incorporated into the anticipated capacity estimates (see Table 5) and removed from the industrial land capacity (Table 18). This additional anticipated capacity is likely to add a new supply dynamic to the city, particularly as many of these developments will occur on land currently zoned for industrial use. The impact of this additional supply will need to be carefully monitored to ensure that the efficiency of land use, the supply of capacity and that both public and private infrastructure spending are not compromised.

Additional Strategic Capacity

Hamilton City Council and Waikato District Council are parties to a strategic agreement on Future Urban Boundaries. The agreement provides a framework for areas of strategic land within the Waikato District to be transferred to Hamilton City should they be required for urban development, namely residential. This agreement is likely to move towards 'triggers' rather than a 'fixed dates' approach which will allow for an earlier transfer of land if it is needed. At present, there is sufficient land supply within the existing Hamilton boundary so land transfer is currently not required. Future Proof also provides a mechanism for a strategic agreement to be negotiated between Waipa District Council and Hamilton City Council with regards to land in the Southern Links precinct (see Map 3).

Map 3. Future Proof settlement pattern: Hamilton and surrounds



Waikato

Waikato District currently has a large amount of capacity with significant additional anticipated capacity coming on stream in the medium term (additional 4,000 to 5,000 dwellings) and the long term (additional 12,000 to 15,000 dwellings). Waikato District Council is committed to supporting its future settlement pattern which allows for further anticipated capacity in towns such as Tuakau, Te Kauwhata and Pokeno in the north, and Ngaruawahia, Taupiri, Horotiu and Te Kowhai in the south, to ensure that growth around the Hamilton City boundary is prudently managed.

Table 7. Waikato Housing Capacity

Capacity	Capacity – Current market (including redevelopment potential)			Capacity – Future projections (excluding redevelopment potential)		
	Short term 2021	Medium term 2026	Long term 2046	Short term 2021	Medium term 2026	Long term 2046
Current Capacity	5,660	7,630	8,690	6,987	9,440	13,062
Anticipated Capacity	-	4,000-5,000	12,000-15,000	-	4,000-5,000	12,000-15,000
Total	5,660	11,630 - 12,630	20,690 - 23,190	6,963	13,440-14,440	25,062-28,062

Current and future capacity

In the Waikato District, under 'current market' conditions, there is commercially feasible development capacity in the short-term for around 5,700 dwellings. This rises to close to 7,600 dwellings in the medium term; and to close to 8,700 in the long-term. The future projection of feasible capacity (excluding redevelopment) indicates development capacity in the short term of around 7,000 dwellings. This rises to close to 9,400 dwellings in the medium term; and to 13, 000 dwellings in the long term. Around two thirds of this capacity is available within the greenfield areas and 35% within existing residential areas (infill).

Anticipated capacity

A large amount of plan-enabled and serviced capacity is anticipated to be provided in the medium to long term by two notified private plan changes and the Waikato District Plan review which is currently underway. The two private plan changes in Te Kauwhata (2,600 additional dwellings) and Pokeno (150 additional dwellings) will add to the existing zoned structure plan capacity in these two towns (refer Map 2).

The Waikato District Plan review proposes to zone significant additional capacity in Tuakau, Pokeno, Huntly, Ngaruawahia, Taupiri and Te Kowhai for residential development and will adjust the existing development rules to allow for greater capacity in the existing centres (smaller lot sizes, multi-unit development, etc). Huntly has significant geological and topographical constraints for growth and while the potential for additional greenfield development appears to be limited, there is potential for redevelopment within the existing urban footprint.

The availability of this capacity will require alignment between land use infrastructure and funding and will be dependent on the continued ability of Waikato District to fund key infrastructure costs.

Waipa

With the existing Waipa 2050 Growth Strategy guiding urban expansion, Waipa is well placed to address current urban growth. In the Waipa District, roughly two thirds of the currently available capacity is located in and around the main urban centres of Cambridge and Te Awamutu. A large amount of additional capacity, in the form of greenfield growth zones around both the main towns, will soon be enabled via a district plan change.

Table 8. Waipa Housing Capacity

Capacity	Capacity – Current market (including redevelopment potential)			Capacity – Future projections (excluding redevelopment potential)		
	Short term 2021	Medium term 2026	Long term 2046	Short term 2021	Medium term 2026	Long term 2046
Current Capacity	2,920	2,920	3,510	3,305	4,073	5,186
Anticipated Capacity	-	4,000-5,000	11,000-13,000	-	4,000-5,000	11,000-13,000
Total	2,920	6,920 - 7,920	14,510 - 16,510	3,305	8,073-9,073	16,186-18,186

Current and future capacity

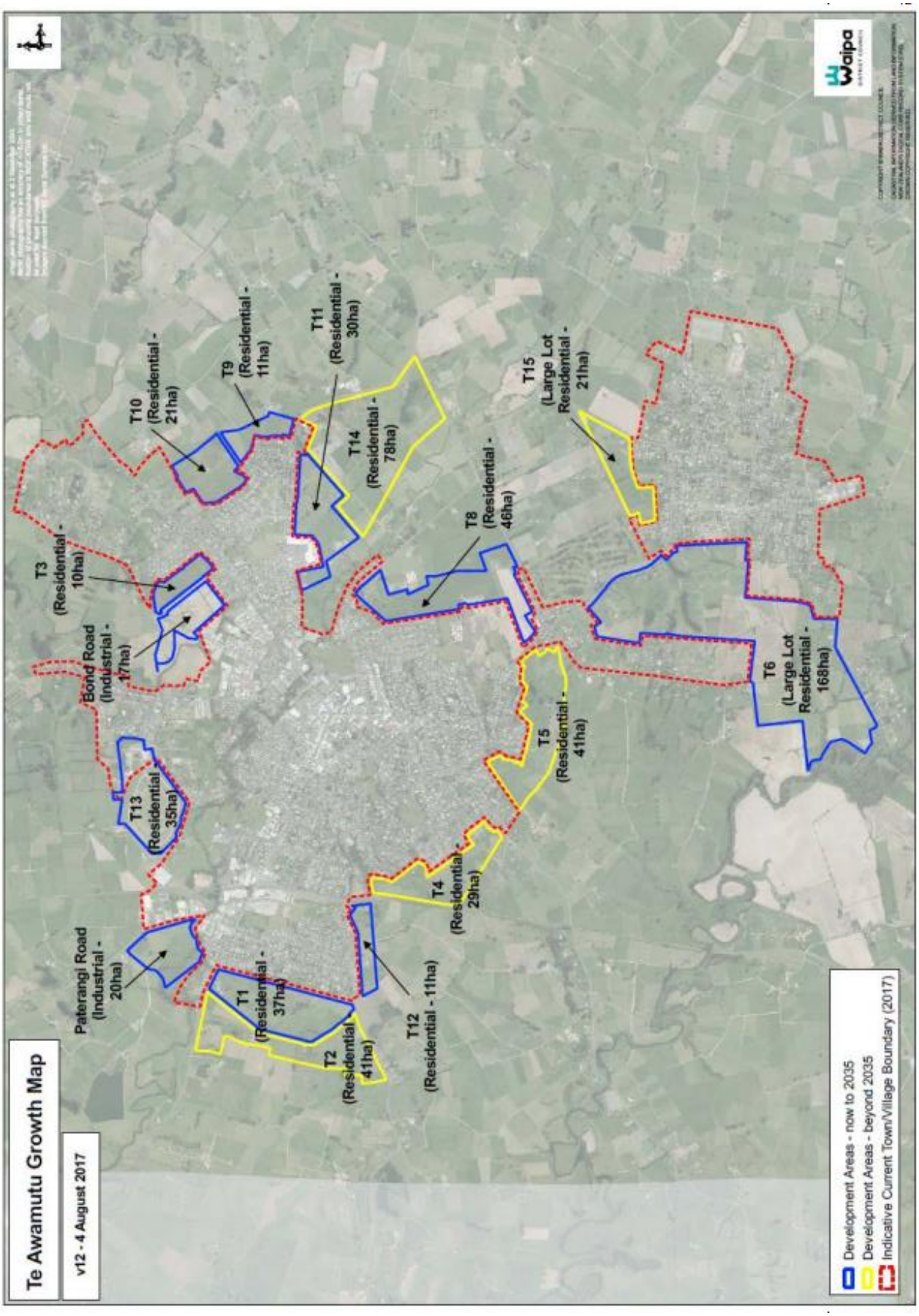
In the Waipa District, under current market conditions, there is commercially feasible development capacity in the short-term for around 2,900 dwellings. This remains at 2,900 dwellings in the medium term; and increases to 3,500 in the long-term. The future projection of feasible capacity (excluding redevelopment) indicates development capacity in the short-term of around 3,300 dwellings. This rises to close to 4,000 dwellings in the medium term; and to close to 5,200 dwellings in the long term. Around 80% of this capacity occurs within the greenfield areas.

Anticipated capacity

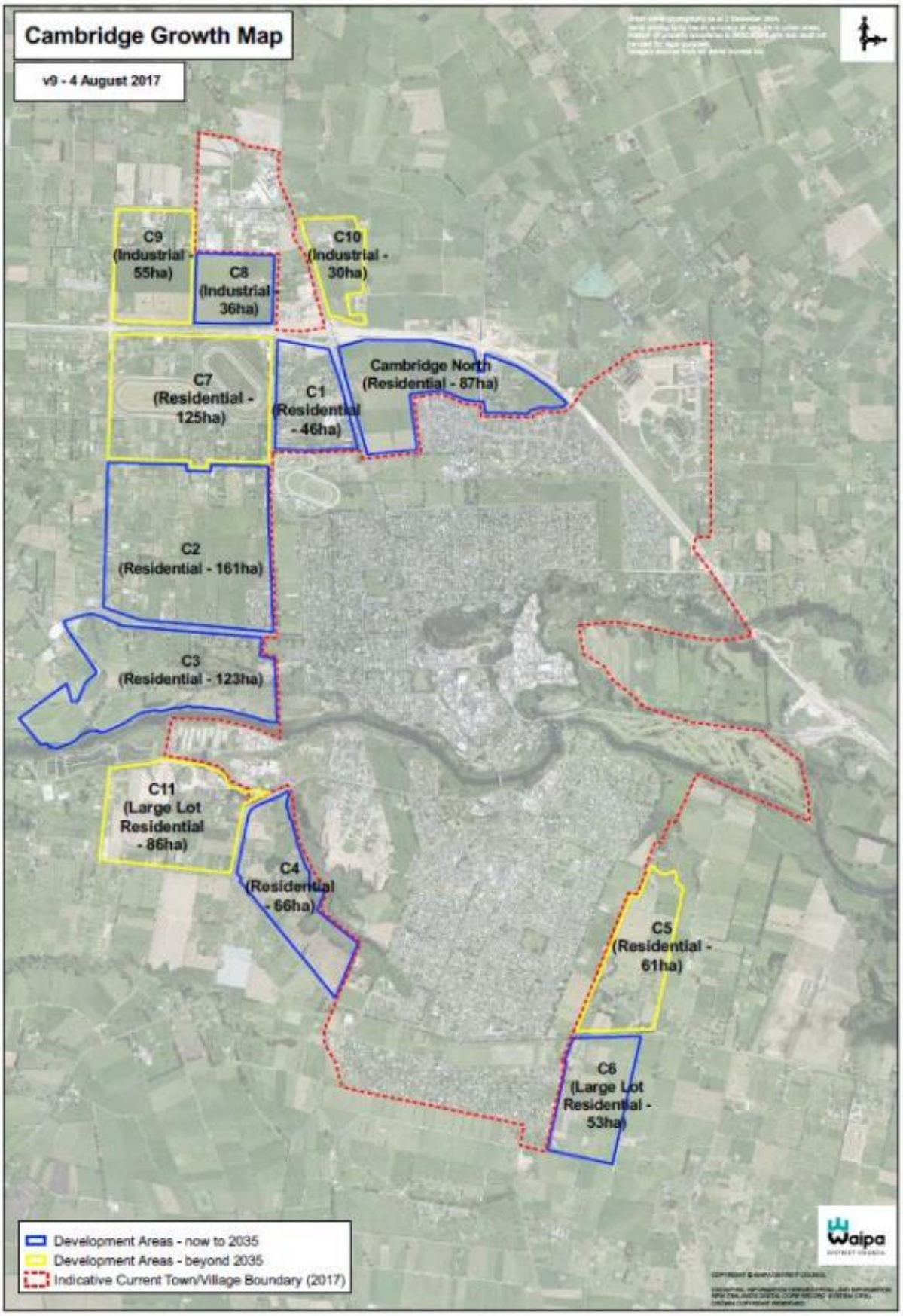
A significant amount of additional anticipated supply has been signalled in the Waipa 2050 Growth Strategy and has been recently notified in Plan Changes 5 and 7. These Plan Changes will introduce greater flexibility and allow planning and development of a couple of the identified growth cells around Cambridge and Te Awamutu as and when required by the market (see Maps 4 and 5). These growth cells are estimated to provide an additional dwelling capacity of over 12,000 over the medium, long term and beyond.

Waipa District infrastructure strategies propose a flexible approach to servicing these additional growth cells. The availability of this capacity will require continued alignment between land use infrastructure and funding and will be dependent on the continued ability of Waipa District to fund key infrastructure costs.

Map 4. Te Awamutu Growth Map



Map 5. Cambridge Growth Map



4.4 Sufficiency

Sufficiency of supply is determined by comparing the demand, plus the margin required of 20% in the medium term and 15% in the long term, to the level of total capacity. Overall the Future Proof sub-region is not likely to have any shortfalls of capacity for housing over the short (1-3 years), medium (3-10 years) or long term (10-30 years), assuming that the anticipated capacity becomes available and that feasibility development capacity will increase though time.

Both the development capacity that is currently provided in resource management plans (supported with development infrastructure and feasible to develop) and the anticipated additional supply that is currently being enabled is likely to be sufficient to meet the projected demand for housing and business space across the sub-region over time. Assuming that more housing development opportunities will become feasible over the medium to long term, and that additional anticipated capacity will become enabled in the Waikato and Waipa Districts, there is likely to be sufficient feasible capacity to meet the demand plus the additional margin in the medium to long-term period.

The approach taken in the analysis regarding the sufficiency by price point is to assess the shortfall or surplus of projected changes in dwelling value bands against projected changes in demand by household income. This is a broad assessment against the potential purchasing power of the community, not an assessment of affordability.

Table 9. Future Proof Housing Sufficiency

Term	Demand		Capacity			Sufficiency
	Base Demand	Demand + Margin	Capacity (current market)	Capacity (future projection)	Anticipated Capacity	
Short Term (2021)	9,467	11,360	19,070	21,739	-	✓
Medium Term (2026)	21,628	25,954	23,730	34,421	10,500 - 13,000	✓
Long Term (2046)	60,942	70,083	30,190	67,285	26,000 - 34,500	✓
Total	**92,037**	**107,397**	**72,990**	**123,445**	**36,500 - 47,000**	✓

Hamilton

Table 10. Hamilton Housing Sufficiency

Term	Demand		Capacity				Sufficiency
	Base Demand	Demand + Margin	Capacity (current market)	Capacity (future projection)	Anticipated Capacity	Total Capacity	
Short Term (2021)	4,828	5,794	10,540	11,447	-	11,447	✓
Medium Term (2026)	10,983	13,279	13,180	20,908	2,500-3,000	22,408-24,908	✓
Long Term (2046)	31,982	36,837	17,990	49,037	3,000-4,500	52,037-53,537	✓

Overall, Hamilton has sufficient capacity to meet the demand for houses over the short and medium term. Assuming that additional housing development capacity will become feasible through time Hamilton is likely to have sufficient capacity over the long term. Hamilton has sufficient capacity to meet to the demand for attached dwellings over the long term; however, the results of the modelling analysis suggest that there may be a shortfall of capacity for feasible standalone dwellings

compared to demand in the short and medium term. It is expected that some of the demand for standalone dwellings will be met by other forms of attached dwellings as people make choices and trade-offs in cost and location about the type of dwellings they purchase or rent.

However, when considering the value distribution of dwellings, some shortfalls are projected to occur within the lower dwelling value bands within Hamilton, combined with surpluses within the upper value bands. By typology, in the short term, nearly three quarters of Hamilton's demand if for standalone dwellings. The share decreases through time as trade-offs are made based on price and location. A small shortfall of demand for standalone houses exists in the medium term.

Waikato

Table 11. Waikato Housing Sufficiency

Term	Demand		Capacity				Sufficiency
	Base Demand	Demand + Margin	Capacity (current market)	Capacity (future projection)	Anticipated Capacity	Total Capacity	
Short Term (2021)	2,606	3,127	5,610	6,987	-	6,987	✓
Medium Term (2026)	5,923	7,108	7,630	9,440	4,000-5,000	13,440-14,440	✓
Long Term (2046)	16,891	19,425	8,690	13,062	12,000-15,000	25,062-28,062	✓

Waikato has sufficient capacity to meet the demand for houses over the short term and medium term. Over the long term, capacity will be met by the additional anticipated capacity and the overall increases in feasible development capacity through time. The results of the analysis of the likely value distribution of dwellings show projected shortfalls occurring in the lower to middle price brackets. In the short to medium term, some of this demand could be met through market adjustment within the middle value brackets.

Waipa

Table 12. Waipa Housing Sufficiency

Term	Demand		Capacity				Sufficiency
	Base Demand	Demand + Margin	Capacity (current market)	Capacity (future projection)	Anticipated Capacity	Total Capacity	
Short Term (2021)	2,033	2,440	2,920	3,305	-	3,305	✓
Medium Term (2026)	4,722	5,666	2,920	4,073	4,000-5,000	8,073-9,073	✓
Long Term (2046)	12,069	13,879	3,510	5,186	11,000-13,000	16,186-18,186	✓

Waipa currently has sufficient capacity to meet the demand for houses over the short term. Within the short term, overall capacity will be significantly bolstered by the additional capacity enabled by the proposed plan changes. These plan changes will enable enough capacity to meet the demand for housing over the medium and long term. Overall increases in feasible development capacity over time will also increase the availability of feasible development capacity. The assessment of the value distribution of dwellings, show projected shortfalls in the lower to mid value bands, increasing in the medium term. There may, however, be some scope for the market to adjust where shortfalls occur in value bands adjacent to those that contain surpluses.

4.5 Housing Capacity Assessment Overview

Development capacity for housing is well supplied across the Future Proof sub-region. Overall, there is likely to be ample supply of current housing development capacity in the short and into the medium term with multiple initiatives currently underway to increase supply in the medium and long term in Waikato and Waipa. Assuming that more housing development opportunities will become feasible over the medium to long term, and that additional capacity will become enabled in the Waikato and Waipa Districts, there is likely to be sufficient feasible capacity to meet the demand plus the additional margin in the medium to long-term period.

In the Waikato District, a large amount of plan-enabled and serviced capacity is anticipated to be provided in the medium to long term by two notified private plan changes and the district plan review which is currently underway. The Waipa District Council 2016 review of the Waipa 2050 Growth Strategy, together with the infrastructure spend outlined in the proposed 2018 LTP and the plan changes to the district plan will provide sufficient flexibility in the development of the new urban growth cells to enable the Waipa District to remain responsive to the growth in the medium and long term. Hamilton has experienced high of levels residential growth in its existing residential areas. It is expected that a large portion of housing demand will continue to be accommodated by infill and redevelopment activity providing a range of attached dwelling options.

The value band sufficiency analysis suggests that there is likely to be some shortfall in the lower dwelling value bands across the Future Proof sub-region. Beyond ensuring that sufficient supply is enabled there are many drivers of property values beyond the control of Future Proof partners. The assessment of the demand for different dwelling types in Hamilton, compared with the likely supply, suggests that there may be a mismatch. The enabled capacity by dwelling type is, however, more aligned with the local and sub-regional strategic growth outcomes to achieve further intensification and a infill rate of 50% of new development.

Uncertainty and Sensitivity testing. As noted in Section 2, there are a number of factors influencing land and housing markets which will impact development capacity, housing supply and the construction of dwellings. The HBA provides a snapshot of capacity as at June 2017. The accompanying HBA analysis provides sensitivity testing of two variables: change in development yield (change in the average section size); and change in the level of feasible development opportunities if a profit of less than 20% is assumed. Other key sensitivities which should also be contemplated alongside these include population change (increase in demand) and increased lags in the responsiveness of the construction industry to supply dwellings in response to demand.

Monitoring of residential development trends and uptake of capacity in the urban centres across the Future Proof sub-region should be conducted. This will assist with understanding how demand may be changing and how development capacity is being utilised and taken up. This is particularly relevant for Hamilton, which has a large amount of infill and redevelopment capacity and the demand for attached dwellings is significant. Given the key assumptions noted in this document, it is imperative that Future Proof partners ensure that the anticipated levels of capacity are fully enabled in response to the projected levels of demand. Careful monitoring of uptake to confirm remaining capacity and confirm feasibility assumptions is also required.

5 Business Assessment

This Business Assessment section provides an overview of the business economy in the Future Proof sub-region. This is followed by a summary of the projected levels of demand for business development capacity, the assessment of business development capacity and the assessment of the sufficiency of the supply against the levels of projected demand. This is followed by summary commentary.

5.1 Business Economy Overview

Economies reflect established investment patterns and the structures of their populations and institutions[7]. These features, or drivers of growth, will shift only gradually over time meaning that the existing structures will play an important role in the shape of the local economy in the short to medium term. Consequently, an understanding of the local economy is important. The Future Proof partners have examined the structure of the Hamilton, Waikato and Waipa economies and analysed the trends in recent economic changes. This section provides an overview of the local economies drawing on analysis undertaken by Future Proof partners[8] and the ME Business Capacity Assessment report[9].

Hamilton has high relative concentrations of employment in the public sector; hospitals, health services and education and cafes and restaurants. In addition, high concentrations of retailing, manufacturing and utilities reflect Hamilton's role as the region's only city. Export-oriented manufacturing activities are also prevalent. Hamilton also has high levels of relative employment in the higher order service sectors (finance and insurance, communications, administration, health care and social services). This is as expected given its role as the main centre for the Waikato region.

Hamilton accommodates 48% of businesses within the Future Proof sub-region; however, these businesses are generally larger than businesses in the Waikato and Waipa districts, as they employ 68% of the total employees in the Future Proof sub-region. The average business in Hamilton employs 6.3 workers whereas the average in Waikato is 2.5 and Waipa 2.9. The economies of both Waikato and Waipa are heavily reliant on the primary production sectors for employment (30% and 19% respectively). Hamilton relies in part on the primary sector to feed its industrial and service sector base meaning it has an indirect employment relationship with the farming sectors.

Waikato District has a stronger primary sector, extractive industries and utilities focus (electricity and gas generation and water and waste services). Waikato is relatively exposed to the primary sector, comprising 33% of gross domestic product in the district, compared with around 7% for New Zealand as a whole. The size of the primary sector means that its relative volatility can have a significant effect on the district's economy. While still small relative to the size of the primary sector, property-related business (rental, hiring and real estate services) and construction have been the strongest contributors to GDP growth in recent times. In contrast, the mining industry has shrunk significantly; however, is still the biggest contributor to local GDP.

Waipa also has a primary sector focus along with the categories of transport and warehousing concentration, rental hiring and real estate services and the arts and recreational services. The

[7] NPS-UDC: Guide on Evidence and Monitoring. MBIE. June 2017
[8] Future Proof Economic Analysis- Structure and Shift share. Future Proof Partners. November 2017
[9] Business Development Capacity Assessment 2017. ME Consulting. February 2018

presence of a number of national level sports specialty training centres contributes strongly to this. Waipa has high reliance of the agricultural sectors for employment. The construction sector is also strongly represented.

Particular focal points of growth in the Waikato and Waipa have been around the fringes of Hamilton, Cambridge, and the northern parts of the Waikato. As part of the latter, the Gateway Business Park has been developed in the Pokeno area, with a large infant formula manufacturing plant constructed. Nearby Tuakau also has significant industrial land zoned (116ha). Horotiu, located in Waikato immediately north of Hamilton, has established manufacturing businesses, within the Northgate industrial estate, with Ports of Auckland locating a new freight hub at this site.

The employment trends in the Waikato and Waipa reflect the urban environments within the two districts. Urban-centric sectors within Waipa have a higher overall concentration of employment than the same sectors within Waikato. Along with the fact that Waipa is only one-third the size of Waikato, the employment trends imply that Waipa is overall more urban in terms of the economy than Waikato. This is consistent with the spatial development of the two districts. Waikato has a dispersed pattern of many small towns interspersed by rural areas, while Waipa is centred largely around the two larger townships of Cambridge and Te Awamutu-Kihikihi.

Indicator monitoring

Business vacancy rates can provide a useful indication of whether plans are providing enough development capacity to meet the demand for different types of land use activities. There are currently no publicly available business vacancy statistics available for the Waikato or Waipa Districts; however, bi-annual office, retail and industrial vacancy rate monitoring is available for Hamilton.

The latest available business vacancy rates for Hamilton (September 2017) suggest that there are no major concerns regarding the sufficiency of office and retail capacity in the CBD[10]. While there has been further decline in both office and retail vacancy rates in the Hamilton CBD, further supply (via new development and refurbishment) is expected. The available industrial capacity monitoring for Hamilton highlights that strong uptake of industrial land has continued, currently leaving overall vacancy rates for industrial leases in Hamilton at very low levels within the established industrial precincts.

MBIE has developed price efficiency indicators to assist local authorities to understand how well their land and development markets are functioning, and the potential impact of land use regulations on these markets. The available industrial zone price differential for Hamilton suggests that a level of insufficient capacity for industrial activity existed in 2015. After this date, further industrial land has been incorporated into the city via the 2016/17 District Plan (including the Ruakura Plan Change). While additional industrial land has been zoned in Hamilton, is not clear to what extent the existing areas of zoned industrial land remain constrained. As noted above, the nature of any potential constraints requires further investigation. Indicators will be monitored for change and discussed in subsequent quarterly indicator reports.

[10] Future Proof Housing and Business Market Indicators Quarterly Monitoring Report – September 2017 Quarter. Future Proof Partnership. February 2018

5.2 Demand

The demand for business capacity is derived from a macroeconomic model that produces outputs of demand by three broad categories: retail, commercial and industrial, for non-residential land and floorspace. The model outputs employment and value-added projections. These are then converted to demand for land and floorspace based on current and intensified future ratios between employment and land/floorspace.

In total, employment growth across the Future Proof sub-region is expected to increase from a base of 130,600 employees in 2016 to 214,100 by 2051, an average increase of 1.8% annually over that period. The annual employment growth rate declines over time with stronger growth in the short term of 2.2% annually, dropping to 2.0% in the medium term to 1.8% annually in the long term. The most employment growth occurs in the business/finance and governance sectors which adds 18,900 in the long term. The fastest growing broad sector is the transportation and storage sector which increases employment by 78% over the long term. Translating employment growth into total land demand results in approximately 1,090ha of business zoned land over the long term.

Table 13: Total Business Land Demand by Broad Sector, 2017 – 2047 (ha)

Area	Commercial	Retail	Industrial	Total land demand
Hamilton	87	36	524	647
Waikato	33	11	209	254
Waipa	30	11	147	188
Future Proof Total	150	59	881	1,090

For the retail and commercial sectors, floorspace is generally a more meaningful measure than land. In total, to cater for anticipated economic growth over the next 30 years, the Future Proof sub-region requires over 3.4 million sqm of gross floor area of build space (GFA) - 2.3million sqm of that for the industrial sectors, 809,000 sqm for commercial activities and 250,000sqm for retail.

Table 14: Total Business Floorspace Demand (GFA) by Broad Sector, 2017 – 2047 ('000 sqm)

Area	Commercial	Retail	Industrial	Total floorspace demand
Hamilton	403	118	767	1,288
Waikato	217	70	933	1,220
Waipa	189	62	648	899
Future Proof Total	809	250	2,348	3,407

Hamilton

Table 15: Hamilton Future Business Land Demand (ha and sqm)

Sector		Short term	Medium term	Long term
Commercial	Ha	15.0	69.1	86.7
	GFA	53,689	164,829	402,548
Retail	Ha	6.2	20.1	36.3
	GFA	30,179	68,274	118,070
Industrial	Ha	110.1	318	524.4
	GFA	101,460	303,780	767,080

It is estimated that Hamilton requires 87ha of additional commercial land to cater for anticipated growth over the long term (total over 30 years). Approximately 15ha is required in the short term (next 3 years) and 69ha in total over the next 10 years. Over the next 30 years, Hamilton is expected to require an additional 36ha of retail land. In the short term 6.2ha of this demand is expected and

20ha of this demand within the next 10 years. In total over the next 30 years, Hamilton requires an additional 524ha of industrial land. In the short term (next 3 years) 110ha are required and 318ha over the next 10 years (medium term) for industrial growth.

Waikato

Table 16: Waikato Future Business Land Demand (Ha and Sqm)

Sector		Short term	Medium term	Long term
Commercial	Ha	3.2	10.6	33.5
	GFA	18,535	76,653	216,885
Retail	Ha	0.8	3.2	11.4
	GFA	4,562	21,742	69,983
Industrial	Ha	22.8	77.1	209.4
	GFA	95,008	386,435	932,958

Waikato is estimated to require 33.5ha of additional commercial land over the long term (30 years). The majority of this demand arises in the north, in the ward containing Pokeno and Tuakau (the Awaroaki-Tuakau ward) with almost 12ha of demand. In the short term 3.2ha is required over the next 3 years and a total of 10.6ha over the medium term (10 years). Overall the rate of demand is approximately 1ha per year over the next 30 years.

In terms of retail land demand, Waikato is estimated to require an additional 11.4ha over the long term. The most demand arises in the north as Waikato grows on the back of Auckland's expansion. The Awaroaki-Tuakau ward sees demand growth of 4.6ha in the long term. In the short term (3 years) retail land demand is less than 1ha, with 3.2ha required over the next 10 years. Industrial land demand in Waikato is high. Over the long term over 209ha of additional industrial land is estimated to be required. Of this, 22.8ha are required in the short term and 77.1ha in the medium term. While the most demand is from the north (65ha in Awaroaki-Tuakau) there is strong demand across the rest of the district.

Waipa

Table 17: Waipa Future Business Land Demand (Ha and Sqm)

Sector		Short term	Medium term	Long term
Commercial	Ha	5.7	13.9	29.9
	GFA	15,698	56,508	189,126
Retail	Ha	2.5	5.7	11.3
	GFA	4,044	17,188	61,751
Industrial	Ha	22.3	58.6	147.2
	GFA	69,790	216,386	647,645

Over the next 30 years, there is demand for almost 30ha of additional commercial land, 11ha of retail land and 147ha of industrial land in Waipa. The majority of land demand is concentrated into and around Cambridge (15ha of commercial, 4.8ha of retail and 72ha of industrial). In the short term, the district requires almost 6ha of commercial land, 2.5ha of retail and 22.3ha of industrial. In the medium term, this increases to 14ha of commercial, 6ha of retail and 59ha of industrial.

5.3 Capacity

Non-residential capacity can be summarised as the amount of vacant land and/or gross floor area available to meet future demand over the short, medium and long term. Business development capacity has been determined by assessing land that is:

- appropriately zoned (or is planned to be zoned) and enabled by rules allowing business activity in the relative district plans for business activity
- supplied, or likely to be enabled, by key infrastructure
- the development area is sufficiently commercially attractive.

This section provides a summary of assessment of plan-enabled and serviced land across the Future Proof sub-region. Section 5.4 addresses the feasibility of this capacity and followed by the summary of current sufficiency in Section 5.5.

Availability of Infrastructure

Infrastructure provision for business land is broadly aligned with plan-enabled capacity across the Future Proof sub-region. This infrastructure provision is either outlined in the LTPs, the available 30-year infrastructure strategies or the bulk of the infrastructure will be provided at the developer's expense. This assumes that the progressive provision of infrastructure, to enable business capacity, will match the rate of demand in the locations where demand arises. This will require careful monitoring and review to ensure that the timing and the extent of infrastructure provision does not constrain capacity for development.

Available Capacity

Table 18. Future Proof Vacant Business Land by broad sector, 2017 (ha)

Area	Commercial	Retail	Industrial	Total vacant business land
Hamilton	643	186	630	1459
Waikato	346	56	299	701
Waipa	78	70	193	341
Future Proof Total	1,066	312	1,122	2,500

The vacant commercial land capacity within Hamilton and Waikato represents the bulk of the total vacant business land. Within Hamilton, the 643ha of vacant commercial land represents 42% of the total 1,526ha of vacant business capacity. Waikato's commercial land capacity represents the largest proportion of vacant land capacity within the TA, with 346ha (49%) of the 700ha of total vacant land capacity. Waipa's commercial capacity is a much smaller proportion of the total vacant business land capacity, with 78ha (23%) of the total 341ha.

For all partners, vacant retail land capacity represents the smallest proportion of total vacant land capacity available in the Future Proof sub-region. Hamilton contains most of the vacant retail land capacity in the sub region, with 186ha (60% of 312 ha total). Waikato contains the smallest total amount of vacant retail land capacity, with 56ha of the 700ha total. Retail land in Waipa is a larger proportion of the total land capacity than for the other partners, with 70ha of the total 341ha available for retail development. Vacant industrial land capacity represents the largest proportion of total vacant capacity in both Hamilton and Waipa, with 630ha (43% of 1,526 ha total) and 193ha (56% of 341ha total) of local industrial capacity respectively. Vacant industrial land capacity within Waikato is a slightly smaller – but significant – portion of total capacity, with 299ha (43%) of the total 700ha dedicated to industrial land.

Table 19. Future Proof Vacant Business Capacity (GFA) by broad sector, 2017 ('000 sqm)

Area	Commercial	Retail	Industrial	Total vacant business GFA
Hamilton	16,874	944	<5,010	22,828
Waikato	4,415	592	2,094	7,101
Waipa	1,101	552	845	2,498
Future Proof Total	22,390	2,088	7,949	32,427

Across the Future Proof sub-region, the commercial sector has the greatest GFA capacity. Within Hamilton, plan-enabled commercial GFA represents 16.87 million sqm (74%) of the total 22.83 million sqm enabled. Similarly, plan-enabled commercial floorspace in Waikato and Waipa represent 4.42 million sqm (62% of the total 7.10 million sqm) and 1.10 million sqm (44% of the total 2.49 million sqm) respectively. Retail floorspace capacity across the TAs represents the smallest proportion of total floorspace capacity in all cases. Retail floorspace capacity within Hamilton represents 0.94 million sqm (4% of the total 22.83 million sqm), 0.59 million sqm (8% of the total 7.10 million sqm) in Waikato, and 0.552 million sqm (22% of the total 2.49 million sqm) in Waipa. Where retail floorspace activities are permitted, they have been given primacy for ground floor occupation over all other land use types. This assumption has been made to reflect the likely development patterns, where retail development is likely to out-compete other land uses on the ground floor.

Vacant plan-enabled industrial floorspace within Hamilton represents 5.01 million (22%) of the total 22.83 million sqm enabled within the TA. Industrial floorspace capacity in the Waikato totals 2.09 million sqm (29%) of the 7.10 million sqm enabled. Vacant Industrial capacity in the Waipa equates to 0.85 million sqm, or 34% of the total 2.50 million sqm of business capacity in the area. Hamilton has a comparatively large volume of industrial floorspace capacity due to future strategic industrial areas such as Te Rapa North and Ruakura identified in the Waikato Regional Policy Statement (RPS) and the Future Proof Strategy.

Anticipated Capacity

Hamilton No additional business capacity is anticipated in Hamilton; however, as outlined in the housing assessment section of this report, the proposed SHA developments will reduce the existing industrial land capacity. See Appendix 2 for further detail on the current SHA proposals.

Waikato No significant additional anticipated capacity is envisaged for business land either through existing private plan changes (Te Kauwhata and Pokeno) or through the Waikato District Plan Review. However, Waikato District Council will be doing an assessment of business land needs as part of a master planning initiative for its main towns to ascertain if future growth warrants additional business land. Some redevelopment potential also exists within the district's main towns.

Waipa Two plan changes underway in Waipa (Plan Changes 6 and 7) will enable further commercial, retail and industrial capacity over the next 30 years (refer Map 4 and 5). Plan Change 7 will enable new commercial zones in the Future Neighbourhood centres in Cambridge North (as part of the C1 Structure Plan area) and on Cambridge Road (as part of the C2 Structure Plan area). These new neighbourhood centres will cater for local commercial and retail demand as new residential development occurs in Cambridge North and the C1, C2 and C3 Structure Plan Area over the 10 to 30 years. Plan Change 6 updates the Hautapu Industrial Structure Plan, on Cambridge's northern edge, rezoning approximately 55ha of rural land for industrial use.

Uptake The Future Proof partners currently do not have complete data sets on the historical update of business land. However, steps are underway to implement and improve monitoring to remedy this. Available commentary on industrial use indicates that uptake of available land and industrial tenancies has been very high in Hamilton, and in the industrial areas immediately adjacent to Hamilton (Titanium Park and Horotiu), since 2015. A monitoring framework will need to be established by Future Proof and uptake reported in quarterly indicator reports.

5.4 Development Feasibility

Method: As the type and nature of business development is far more varied than residential development, the same approach to determining the feasible development capacity of residential development cannot be used for assessing business capacity. Given this complexity, a multi-criteria analysis (MCA) approach has been used as it allows councils and other stakeholders to identify the key criteria that are important in the selection and development process for the land.

Each broad business area is scored against the criteria and the ratings added up to provide an overall score. Comparisons can then be made between where the plan-enabled capacity resides and the MCA score for those areas. If capacity is provided in the areas that score highly in the MCA, the TAs can be reasonably confident that development will proceed. However, if capacity is clustered in areas that score poorly on the MCA process, they may find businesses do not develop that land, and pressure will be brought to bear on other land.

Results: The results of the MCA analysis show that there is a close alignment between where the Future Proof partners have provided capacity and high scores under the MCA framework. This indicates that the TAs can be relatively confident that zoning is appropriate in terms of location and the nature of the land zoned. However, there are a couple of areas where the MCA analysis suggests that development will be constrained in terms of market acceptance of product.

Commentary: Hamilton's plan-enabled capacity clearly aligns with areas that score well through the MCA process. This means that Hamilton's capacity is likely to be developed in line with demand and that there are unlikely to be significant issues at this time that may halt development or cause bottlenecks in supply of land to meet growth needs.

Development areas in Waikato generally score lower with only the industrial land competing effectively with Hamilton from a development perspective. This is to be expected as the size and growth potential in the urban parts of the Future Proof sub-region are much more attractive to commercial and retail land developers, whereas industrial developers are likely to be seeking lower cost land with fewer sensitive neighbours making Waikato and Waipa more attractive.

Development potential in Waipa is limited to the two large urban centres (Te Awamutu and Cambridge) and the Hamilton Airport business park development (Titanium Park). The MCA has suggested that there is a lack of differentiation within each of these areas, partially as much of the existing plan-enabled commercial capacity is currently located in Titanium Park which is located away from the urban centres. The Waipa plan changes (7 and 8) will enable further commercial capacity over the medium to long term and provide further commercial capacity within the towns. Close monitoring of the uptake of business land in certain areas has been advised.

5.5 Business Sufficiency

The results of the business capacity analysis reveal that the Future Proof sub-region does not have any projected shortfalls in capacity over the short, medium or long term. In tables 20, 21 and 22 the projected levels of demand for land (by hectare) and floor space (by square metre) plus the required margin of 20% in the medium term and 15% in the long term are compared to the level of total capacity to determine the sufficiency of supply. The capacity figures below do not include any anticipated supply detailed in the supply section above. A 'tick' in the sufficiency measure column indicates a sufficiency of supply for the period.

Table 20. Commercial Capacity Sufficiency (ha and sqm)

Commercial Sector by TA		Demand plus margin			Total Capacity	Sufficiency Measure		
		Short term	Medium term	Long term		Short term	Medium term	Long term
Hamilton	ha	18	83	99.7	642.7	✓	✓	✓
	sqm	64,427	197,795	462,930	16,873,753	✓	✓	✓
Waikato	ha	3.9	12.8	38.5	345.6	✓	✓	✓
	sqm	22,241	76,659	234,731	4,415,300	✓	✓	✓
Waipa	ha	6.8	16.8	34.4	77.9	✓	✓	✓
	sqm	18,837	67,810	217,495	1,100,800	✓	✓	✓
Total Future Proof Sub-region	ha	28.7	96.4	154.6	1,058.1	✓	✓	✓
	sqm	105,505	342,264	915,156	22,389,853	✓	✓	✓

The total plan-enabled business capacity within the Future Proof sub-region, across all three broad economic areas, is sufficient to meet the projected growth needs. Tables 20 and 21 show that commercial and retail land demand over the long term is significantly less than the amount of land provided for in the district plans. Demand for industrial land (Table 22) is far closer to supply over the long term. While demand does not exceed supply in the long term, it forms approximately 80% - 88% of supply.

Table 21. Retail Capacity Sufficiency (ha and sqm)

Retail Sector by TA		Demand plus margin			Total Capacity	Sufficiency Measure		
		Short term	Medium term	Long term		Short term	Medium term	Long term
Hamilton	ha	7.4	24.1	41.8	185.8	✓	✓	✓
	sqm	36,215	81,929	135,781	943,513	✓	✓	✓
Waikato	ha	1	3.8	13.1	55.7	✓	✓	✓
	sqm	5,474	22,312	76,859	592,400	✓	✓	✓
Waipa	ha	3	6.8	12.9	68.8	✓	✓	✓
	sqm	4,853	20,625	71,013	551,630	✓	✓	✓
Total Future Proof Sub-region	ha	11.4	34.7	67.8	310.3	✓	✓	✓
	sqm	46,542	124,866	283,653	2,087,549	✓	✓	✓

Table 22. Industrial Capacity Sufficiency (ha and sqm)

Industrial Sector by TA		Demand plus margin			Total Capacity	Sufficiency Measure		
		Short term	Medium term	Long term		Short term	Medium term	Long term
Hamilton	ha	132.1	381.6	603	630.6	✓	✓	✓
	sqm	121,752	364,548	882,142	5,009,853	✓	✓	✓
Waikato	ha	27.3	92.5	240.8	299.2	✓	✓	✓
	sqm	114,010	382,965	995,509	2,094000	✓	✓	✓
Waipa	ha	26.7	70.3	169.3	193.2	✓	✓	✓
	sqm	83,748	259,664	744,792	845,420	✓	✓	✓
Total Future Proof	ha	159.7	469.1	881	1189.8	✓	✓	✓
	sqm	266,258	906,611	2,347,683	7,949,273	✓	✓	✓

5.6 Business Capacity Assessment Overview

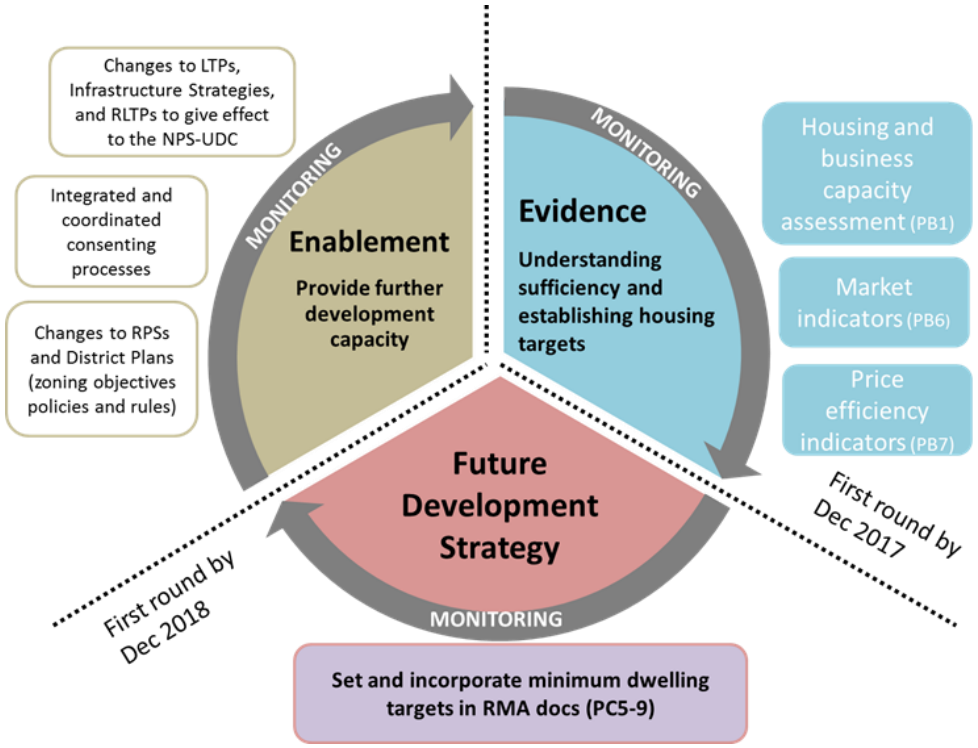
Development capacity for business activity is well catered for across the Future Proof sub-region. Overall there is a more than ample supply of commercial and retail capacity across Waikato and Hamilton.

However, in the Waipa district the capacity by hectare results indicate that retail and commercial capacity (namely in the urban centres of Te Awamutu and Cambridge) may become limited over the long term. It is expected that this pressure will be alleviated by the plan changes underway which make provision for new commercial zones within the Future Neighbourhood centres of the new residential growth areas of Cambridge. In addition, the town concept plans for both Cambridge and Te Awamutu are to be reviewed and updated between 2018 and 2019. The planning will include an assessment of the adequacy of commercial zone space to accommodate the anticipated future growth of both towns.

Demand for industrial land in the Future Proof sub-region, however, is far closer to supply over the long term, equalling approximately 85% of supply over the long term. This capacity may be reduced in Hamilton if SHA proposals on land currently zoned for industrial activity are approved. There is a clear need to undertake regular monitoring of business capacity uptake and to identify any economic change that may influence demand.

6 Next steps

This report summarises the housing and business development capacity assessment (HBA) produced to meet the PB1 requirements of the NPS-UDC.



Future Development Strategy

The overall objective of the HBA is to have a robustly-developed, comprehensive and frequently updated evidence base to inform planning decisions in urban environments in the Future Proof sub-region. This analysis provides an evidence base to inform the next phase of the NPS-UDC requirements, the development of the Future Development Strategy and the incorporation of minimum dwelling targets in the Waikato Regional Policy Statement and the district plans.

This analysis will also be used to update Phase 2 of the Future Proof settlement pattern and will also inform the Hamilton to Auckland Spatial Plan. This spatial plan exercise is the first major initiative under the Government's recently completed Urban Growth Agenda.

Ongoing Monitoring

In addition to the established quarterly market and price efficiency indicator monitoring reporting, the need to undertake additional monitoring has been clearly highlighted. The Future Proof Partnership will develop an updated monitoring regime to assess the:

- rate and volume of the uptake of capacity, particularly if this is at a faster pace than projected
- intensity of the uptake, particularly if the development does not maximise the available capacity
- changes in build cost and prices influencing development feasibility.

This uptake monitoring will assist with identifying any emerging capacity constraints or potential shortfalls providing an indication of when new interventions may be required to release further development capacity. Given the long lead-in times required to provide new capacity it is important that the monitoring framework accounts for the time required to enable the required capacity.

Appendix 1: Population and Household projections

The Future Proof partners have adopted the November 2016 population projections produced by the University of Waikato (UoW) as the shared and common population evidence base to ensure consistency in planning and decision making. The projections, developed in collaboration with all the territorial authorities in the Waikato region and partners such as NZTA, are used to inform the regional Waikato Integrated Scenario Explorer Model (WISE), the Regional Land Transport Model (WRTM) and the development of LTPs, the Future Proof Strategy, and the Waikato Plan.

The UoW projections effectively augment data from Statistics New Zealand, incorporating localised drivers of growth, namely higher levels of net migration and larger numbers of households. These projections for the Waikato region are based on the Census 2013 data and represent the latest projections and best dataset available at the time at which they were adopted by the Future Proof partners as the shared set of projections off which to base the development of the 2018-2028 LTPs. It is anticipated that the next UoW projection series will be available mid-2020 after the Census 2018 population statistics are released later in 2019.

The Future Proof partnership has adopted both the low and medium projections into the Future Proof Strategy. This allowed the three TAs in the Future Proof partnership to have some discretion as to which series to apply to LTP planning. This approach has been endorsed by peer review in 2017. As the two population projections series reflect different local rates of growth and different assumptions about the future, this banded approach provides an envelope, or range of what future activity could look like. Hamilton adopted the UoW low series as this series was a closer fit with the local experience of dwelling growth and expected economic conditions over the next few years. Under the UoW low series average household growth in Hamilton is sustained at historic levels unprecedented in the city (1,200 to 1,300 dwellings per annum). Waikato and Waipa adopted the medium series.

The Future Proof partners also make use of the WISE model which is maintained by the Waikato Regional Council on behalf of the TAs in the region. The WISE model was developed as a scenario and spatial analysis explorer to support land use decisions in the Waikato region, including the spatial allocation of population growth over time. The allocation and staging of growth in the Future Proof Strategy has been informed by output from the WISE model.

Market Economics had been employed by Hamilton City Council early in 2017 to provide growth projections and undertake a capacity assessment to inform localised growth modelling. Given that Hamilton represents a majority share of the demand and capacity it was considered appropriate that Market Economics be appointed for the NPS-UDC analysis to maintain a consistent approach to projections of growth and the capacity assessment across the sub-region.

As the UoW household projections were not available at the desegregated level required to conduct the NPS-UDC analysis required, further post processing was conducted to produce the households at the Census Area Unit (CAU) level. Market Economics then converted the household projections in each location to demand for additional dwellings. The household projections supplied are a function of the natural increase (and associated household formation rates) within each local area combined with an extrapolation of rates of migration for each area. They represent underlying demand and do not take account of resulting patterns of growth where demand may be met in a different location within the Future Proof sub-region to where it arises.

Appendix 2: Other Sources of Demand and Supply

This section outlines other sources of demand and supply for housing. Available projections and commentary on student, tourist, short-term accommodation, social housing demand and seasonal workers for the Future Proof sub-region indicate that these sources of demand are not of a scale which requires specific consideration in the demand or supply modelling undertaken. However, other central government policy initiatives may impact either the supply, demand or capacity. These initiatives include Hamilton's City Councils Special Housing Areas (SHAs) and the KiwiBuild programme. These initiatives will need to be assessed as detail emerges, or is confirmed, to determine how the policies may affect housing and business capacity. Similarly, the estimations of latent demand may require further consideration.

Students: Student numbers are primarily a consideration in Hamilton, which hosts the two largest tertiary education providers in the region, the University of Waikato and Waikato Institute of Technology (WINTEC), and a few other smaller training providers.

Provider	Year	EFTS		
		International	Domestic	Total
UoW	2014	1,595	8,255	9,850
	2015	1,725	8,245	9,970
	2016	1,700	8,055	9,750
	2017	1,795	8,100	9,890
WINTEC	2014	790	5,060	5,850
	2015	900	4,925	5,825
	2016	970	4,955	5,925
	2017	1,055	4,550	5,610

Overall, student numbers at the two largest education providers have been relatively stable over the last four years[11]. While both providers have growth aspirations[12], the Ministry of Education's latest forecast of demand for tertiary education in New Zealand[13] does not indicate that there will be any growth in student numbers in the short term. The Government's first year 'fees free' tertiary education policy has not resulted in a significant increase in the number of enrolments. The impact of any changes to the Government's immigration policy[14] may impact the number of international students.

Tourists: Whilst the demand modelling conducted reflects projected growth in the accommodation sector other indicators of demand for visitor accommodation or use of residential capacity are examined here. The Future Proof sub-region does not experience the same levels of visitor demand as the other NPS-UDC high growth areas and the top five tourist regions in New Zealand (Auckland, Rotorua, Wellington, Christchurch and Queenstown).

Accommodation Survey YE Nov-17	Occupancy rate %
Hamilton	66.70
Waikato	29.13
Waipa	25.64
Tauranga City	55.02
Auckland	74.41
Wellington	72.78
Total NZ	**44.76**

While the Future Proof sub-region is well placed to capitalise on tourism growth due to its proximity to Auckland[15] and a need for higher quality accommodation has been recognised[16], the proportion of unoccupied dwellings and visitor accommodation occupancy rates of do not indicate that there is a shortage of visitor accommodation in the main Future Proof urban areas[17].

[11] Source: Education Counts. Provider summary tables. September 2017 and Provider-based Enrolments. May 2018.
[12] University of Waikato Strategy 2017-2021, Wintec Strategic Plan 2016-2018
[13] Ministry of Education. New Zealand tertiary education demand forecast 2017.
[14] Infometrics. Migration slowdown a sign of the times, 2February 2018
[15] Colliers International. Regional Hotel Market Analysis & Forecasting. May 2016
[16] Hamilton and Waikato Tourism Year End Report to 30 June 2016
[17] Statistics New Zealand. NZ.Stat. Datasets: Households & Occupied dwellings, unoccupied dwellings, 2013 Census.

However, is not the case for the coastal town of Raglan which had a very high proportion of unoccupied dwellings at the 2013 census (24%). This may be indicative of Raglan having a large seasonal or transient population. While visitor numbers have been high in recent years commentary from Infometrics notes that the tourism sector has been facing problems caused by capacity constraints and consequently it is difficult for visitor arrivals to increase during the peak summer months without improved and expanded infrastructure to meet the rising numbers[18].

Unoccupied dwellings	% of total dwellings	Ratio of households
Hamilton	5%	1.07
Waikato	10%	1.12
Raglan Area	24%	-
Waipa	6%	1.07
Auckland	7%	1.08
Tauranga	9%	1.11
Wellington	7%	1.08
NZ	11%	1.13

Holiday rentals: A stocktake[19] of the number of AirBnB rentals in the Future Proof sub-region, as at February 2018, indicates that short term rentals do not represent a significant proportion of the overall dwelling stock. It is expected that houses advertised on other short-term term/holiday rental platforms will only represent a marginal increase in the total number of houses used for this purpose. While numbers in all three TAs fall below the national average, at the local level there are a large number of short-term rentals in Raglan.

Area	Whole house/unit AirBnB listing as proportion of area housing stock Feb 2018
NZ	1.5%
Hamilton	0.3%
Waikato	1.2%
Waipa	0.8%

Social housing: The most recent Ministry of Social Development Income-Related Rental Subsidy demand figures indicate low levels of funding[20] for social housing growth and development by Housing New Zealand and local community housing providers in the Future Proof area. It is also understood that the development intentions of local community housing providers are generally incremental or small in scale. The impact of the Government's renewed focus on the role of the state in housing provision, or any social housing component of the announced Kiwi Build programme (see below), is currently unknown. Housing New Zealand has conducted a capacity study of its Hamilton residential land holdings in 2017 which considers the additional capacity which may be available via site amalgamation. The extent of this potential additional feasible development capacity, in addition to this capacity assessed by this HBA, will require further consideration.

Area	MSD Number of additional IRRS dwellings, funded June 2020
Hamilton	170
Waikato	10
Waipa	0

Special Housing Areas: Hamilton City Council and the Government signed a Housing Accord on 22 December 2016 as a means to increase housing supply and improve housing affordability in Hamilton. Special Housing Areas (SHAs) are defined areas of land in the city that are not currently zoned for housing, that can be put forward for housing development by landowners or developers for consideration by Council, and can then rezone to enable more houses to be built. As at June 2018, Hamilton Council has six proposals for Special Housing Area, five sites, totalling 66.8 hectares, are on land currently zoned for industrial activity.

SHA proposals	6
Total land area hectares	122 ha
Estimated number of houses	2,875

[18] Infometrics. Cooler tourist arrivals in December. 2 February 2018.

[19] Infometrics. Measuring the scale and scope of Airbnb in Hamilton City, Waikato District and Waipa District. April 2018

[20] Ministry of Social Development. Social housing purchasing strategy for Income-Related Rent Subsidy (IRRS) places, December 2016 update.

Area	Number of Houses delivered 2018-2028
Hamilton	8,000 - 10,000?
NZ	100,000

KiwiBuild: The Government's house building programme 'KiwiBuild' aims to deliver 100,000 affordable houses over 10 years in partnership with the private sector[21]. A recent policy announcement outlined that house prices for Hamilton will be under $500,000. The detail of the programme is currently unknown. However, it is anticipated that Hamilton, or the Future Proof sub-region, could be allocated a proportionate share of the housing programme: between 8,000-10,000 houses over 10 years. How this programme will be implemented or what the nature, timing or scale of any residential developments that would contribute to the programme is currently unclear. Meeting this target may be challenging, more from a skills and materials than a land supply perspective. Nevertheless, within current capacity there is room to meet the Waikato proportion of any national allocation of KiwiBuild.

Seasonal workers: Overall **t**he Future Proof sub-region does not experience significant seasonal fluctuations in tourism service workers. Some seasonal variation in the number of rural agricultural workers, particularly horticultural workers, exists in the Waikato District and Waipa District, however statistics on the number of seasonal workers (and the related housing demand) are not readily available. As the focus of the housing capacity analysis has been on the major urban areas, the impact of seasonal worker demand for housing has not been considered. Nevertheless, further work should be undertaken to clarify demand in this area.

Latent demand (under supply): Estimates of the size of the housing undersupply will vary depending on starting point, assumptions about population growth, household composition and lag times between building consents and building completions. To date the MBIE has produced two different estimates of the accumulated housing shortfall in Hamilton and an estimate for Waikato and Waipa. Future Proof estimates that any potential undersupply for Hamilton will be around a few thousand and largely non-existent or immaterial for Waikato and Waipa.

Any estimate of a mismatch between the level of demand and capacity provides a very simple cumulative estimation of the potential level of the projected level of local demand, which may not yet have been satisfied locally (latent demand). If houses are not being constructed at the rate to meet the demand projections, this may result in an increase in the average number of people living in each house or may result in people seeking accommodation outside of Hamilton (in Waikato and Waipa for example). An undersupply of housing in an area of demand will also influence house price increases with obvious effects on housing affordability.

As it is likely that there is more than sufficient feasible development capacity in Hamilton, there is consequently enough feasible capacity to accommodate a level of potential 'shortfall' in addition to the levels of projected demand. Key to satisfying housing demand, and alleviating any potential undersupply, will be sustaining high levels of housing construction over the medium term.

[21] http://www.labour.org.nz/kiwibuild

Appendix 3: Housing and Business Interactions

The capacity results presented in this report provide an indication of what the business capacity that exists within the Future Proof sub-region if all vacant business-zoned land were occupied by business activities. In specific mixed-use type zones, where both residential and business land activities could occur, there is potential for an overlap in capacity.

For example, in zones such as the City Centre Zone in Hamilton, residential and (primarily) commercial land uses may occupy the same vacant sites. The issue does not impact upon retail capacity in these zones, as both the Business Capacity and Residential Capacity models recognise the primacy of retail uses on ground floors in mixed-use zones such as these. What this does mean is that competition for upper-floor space could alter the actual developments types into the future. Although the issue does not reflect the plan-enabled capacity in a strictly quantitative sense (in terms of applying the zone rules), it is worth noting that potential double-counting of capacity might occur. Where retail floorspace activities are permitted, they have been given primacy in the models for ground floor occupation over all other land use types. This assumption has been made to reflect the likely development patterns, where retail development is likely to outcompete other land uses on the ground floor.

More broadly than this, Hamilton City Council employs a business centres hierarchy in the Hamilton District Plan with the aim of consolidating business activity in the business centres. By largely restricting business activity to the business zones these rules should limit the take up of residential capacity by business activity, or vice versa. The Hamilton District Plan provides for the development of anticipated community facilities via zoning for this purpose. Areas zoned for this purpose have not been included in the either the housing or business capacity analysis.

Waipa and Waikato district councils also use a business centre hierarchy to ensure that the main commercial and retail activity occurs in town centres with only convenience retail and business occurring in residential areas. 'Big box' retail tends to be a special case and is often co-located on the edge-of-town business centres or industrial areas.

The Waikato District Plan identifies anticipated uses in the business zones for shops, offices, professional rooms, hotels, bars, places of assembly, and community centres facilities. Some residential use is expected, for example shop-top flats, but industrial uses are not provided for. Land zoned for business activities are provided for the main towns in the district (Tuakau, Pokeno, Te Kauwhata, Huntly, Ngaruawahia and Raglan). In addition, land zoned for business activities is also available in smaller communities such as Horotiu and Tamahere. Business-related activities as described above are confined to the business zone in these settlements.

The business capacity multi criteria analysis (MCA) conducted incorporates a number of locational criteria for business activity. As noted in the Business Development Feasibility section above the results of the MCA show that there is a close alignment between where capacity is enabled and high scores under the MCA framework. This indicates that the current zoning is appropriate in terms of location and the nature of the land zoned.

As noted above, the price differential analysis results are inconclusive as significant areas of plan-enabled industrial land in Hamilton are not incorporated. Consequently, the price differential currently does not provide any insight into any potential barriers to change.

Appendix 4: Methodological Overview

This section provides a high-level overview of the assessment approach undertaken by Market Economics within each of the core components. More detailed technical information on each of the sections is available within the associated technical specifications documents.

Residential demand: Market Economics has constructed a model that converts the Future Proof area household projections into demand for dwellings. The model estimates the demand for different types of dwellings within each location (CAU) across the Future Proof sub-region. The residential demand model calculates and analyses the existing relationship between different household and dwelling types. It then adjusts the structure of demand into the future based on a combination of demographic changes in the household composition structure and exogenously determined market structures. Price structures are then applied to identify the distribution of these dwellings across different price bands within each location. The final outputs are the number of dwellings of each type and price point demanded within each location (CAU) across the Future Proof sub-region.

Residential plan-enabled capacity: Market Economics has undertaken detailed GIS analysis to identify the capacity for infill development, redevelopment and greenfield expansion across the Future Proof sub-region. The analysis identifies the number of additional residential dwellings that can theoretically be constructed under each development scenario under the relevant district plans. A range of spatial parcel level data were brought together within the GIS system to calculate capacity.

Residential feasible development capacity: The residential commercial feasibility capacity model calculates the number of plan-enabled dwellings that are commercially feasible to construct at each point in time. It calculates the total cost of each development option, then compares it to an estimated sales price. If the sales price exceeds the costs by a sufficient margin, the development option is identified as commercially feasible. The model operates at a parcel level and tests the commercial feasibility of the range of different development configurations that are enabled on each site under the relevant district plans. This includes infill development through subdivision of a component of the site, redevelopment of a site, and the addition of a duplex together with existing dwellings on each site. Importantly, the model tests a range of different dwelling sizes within each possible dwelling configuration (rather than averages) to reflect differences in the development types that are suitable within each location. The residential commercial feasibility model provides the number of development options that are commercially feasible on each property parcel under 'current market' conditions and at each point in time (future projection).

Business demand: Market Economics has constructed a macroeconomic model that produces outputs of demand for non-residential land and floorspace by location (CAUs) across the Future Proof sub-region. The model is based on an input-output (I-O) framework that structures each of the TAs within the wider Waikato regional and national economies. It is driven by population, international exports, inter-regional trade, investment (gross fixed capital formation), and productivity increases. The macroeconomic model outputs employment, economic and value-added projections. These are then converted to demand for land and floorspace based on current and intensified future ratios between employment and land/floorspace. The model is calibrated against

the Waikato Integrated Spatial Explorer (WISE) model, which has both demand and supply-side drivers and includes spatial land constraints.

Business development capacity: Market Economics has undertaken detailed GIS analysis to identify the capacity for retail commercial and industrial activity and expansion across the Future Proof sub-region. The analysis identifies the number of vacant parcels available for development and the amount of GFA that can theoretically be constructed under the current district plan zoning regulations. A range of spatial parcel level data were brought together within the GIS system to calculate capacity. Plan-enabled capacity on vacant land is estimated by applying planning rules relating to site coverage, height and floor area ratios (FARs) to identiy vacant non-residential land. It is important to note that the resulting gross floor area or GFA is a theoretical maximum – it is not a measure of what will be built on the site.

Business feasible development capacity: The type and nature of business development is far more varied than residential – retail and commercial clients have a wide range of development types that might be suitable for a piece of land, each with different build costs, ownership types and developer margins. Consequently, the residual land value type model used to assess residential feasibility is not appropriate for business land assessments. The MCA provides a way for councils to frame the development opportunities within their district by scoring them against a set of agreed criteria. Each criterion plays a large or small role in the development and locational decision, so is given a large or small share of the total area score.

Each broad area is then scored against the criteria and the ratings added up to provide an overall score out of 100. Comparisons can then be made between where the plan-enabled capacity resides and the MCA score for those areas. If capacity is provided in the areas that score highly in the MCA, council can be confident that development will proceed. However, if capacity is clustered in areas that score poorly on the MCA process, they may find businesses do not develop that land, and pressure will be brought to bear on other land. This may lead to unintended consequences. Once all areas have been coded and scored, the results can be placed alongside capacity to highlight any mismatches between plan-enabled capacity and the areas that are most desirable to be developed.

Appendix 5: Stakeholder Input

This HBA report has been prepared by the Future Proof Technical Implementation Group (TIG), comprising representatives from the following:

- Waikato District Council
- Hamilton City Council
- Waipa District Council
- Waikato Regional Council
- NZ Transport Agency
- Ngā Karu Atua o te Waka.

The report draws on information from the following wide range of engagement activity, undertaken by the Future Proof partners, which incorporated input from the stakeholders outlined below.

The Housing Assessment, and the housing capacity identified, reflects the following engagement:

- Hamilton Council Housing Accord and Special Housing Areas Policy engagement with Community Housing providers, including Housing New Zealand
- Waikato District Council North Waikato Integrated Growth Management Programme Business Case
- Waipa Council Waipa 2050 Strategy engagement, Waipa District Plan Change Plan Change 5 - Waipa 2050 Growth Strategy and Plan Change 7 - C1, C2 and C3 Structure Plans
- Future Proof Strategy Update (Phase 1) engagement
- Operative Waikato Plan, Waikato District Plan Review, Te Kauwhata Private Plan Change 20 and Pokeno Private Plan Change 21 engagement.

The Business Assessment was informed by the following engagement:

- University of Waikato/WISE economic projections informed by local input
- Future Proof Strategy Update (Phase 1) engagement
- Waipa Council Waipa 2050 Strategy engagement and Waipa District Plan Change 6 - Hautapu Industrial Structure Plan
- Operative Waikato Plan, Waikato District Plan Review, Te Kauwhata Private Plan Change 20 and Pokeno Private Plan Change 21 engagement
- Business Land Feasibility (MCA) Workshop, Hamilton.

Other primary sources of information used in this report include:

- Infometrics
- Statistics New Zealand
- MBIE Indicator Dashboard.

Appendix 6: NPS-UDC HBA Requirements and Key definitions

NPS-UDC HBA requirements PB1-PB5:

Evidence and monitoring to support planning decisions

Policies PB1 to PB7 apply to all local authorities that have part, or all, of either a medium-growth urban area or high-growth urban area within their district or region. The application of these policies is not restricted to the boundaries of the urban area.

PB1: *Local authorities shall, on at least a three-yearly basis, carry out a housing and business development capacity assessment that:*

a) Estimates the demand for dwellings, including the demand for different types of dwellings, locations and price points, and the supply of development capacity to meet that demand, in the short, medium and long-terms; and

b) Estimates the demand for the different types and locations of business land and floor area for businesses, and the supply of development capacity to meet that demand, in the short, medium and long-terms; and

c) Assesses interactions between housing and business activities, and their impacts on each other.

Local authorities are encouraged to publish the assessment under policy PB1.

PB2: *The assessment under policy PB1 shall use information about demand including:*

a) Demographic change using, as a starting point, the most recent Statistics New Zealand population projections;

b) Future changes in the business activities of the local economy and the impacts that this might have on demand for housing and business land; and

c) Market indicators monitored under PB6 and PB7.

PB3: *The assessment under policy PB1 shall estimate the sufficiency of development capacity provided by the relevant local authority plans and proposed and operative regional policy statements, and Long Term Plans and Infrastructure Strategies prepared under the Local Government Act 2002, including:*

a) The cumulative effect of all zoning, objectives, policies, rules and overlays and existing designations in plans, and the effect this will have on opportunities for development being taken up;

b) The actual and likely availability of development infrastructure and other infrastructure in the short, medium and long term as set out under PA1;

c) The current feasibility of development capacity;

d) The rate of take up of development capacity, observed over the past 10 years and estimated for the future; and

e) The market's response to planning decisions, obtained through monitoring under policies PB6 and PB7.

PB4: *The assessment under policy PB1 shall estimate the additional development capacity needed if any of the factors in PB3 indicate that the supply of development capacity is not likely to meet demand in the short, medium or long term.*

PB5: *In carrying out the assessment under policy PB1, local authorities shall seek and use the input of iwi authorities, the property development sector, significant land owners, social housing providers, requiring authorities.*

PC1: *To factor in the proportion of feasible development capacity that may not be developed, in addition to the requirement to ensure sufficient, feasible development capacity as outlined in policy PA1, local authorities shall also provide an additional margin of feasible development capacity over and above projected demand of at least:*

- *20% in the short and medium term, and*
- *15% in the long term.*

Key NPS-UDC Definitions:

Short term *means within the next three years.*

Medium term *means between three and ten years*

Long term *means between ten and thirty years.*

Demand *means:*

In relation to housing, the demand for dwellings in an urban environment in the short, medium and long-term, including:

a) the total number of dwellings required to meet projected household growth and projected visitor accommodation growth;

b) demand for different types of dwellings;

c) the demand for different locations within the urban environment; and

d) the demand for different price points

recognising that people will trade off (b), (c) and (d) to meet their own needs and preferences.

In relation to business land, the demand for floor area and lot size in an urban environment in the short, medium and long-term, including:

a) the quantum of floor area to meet forecast growth of different business activities;

b) the demands of both land extensive and intensive activities; and

c) the demands of different types of business activities for different locations within the urban environment.

Development capacity *means in relation to housing and business land, the capacity of land intended for urban development based on:*

a) the zoning, objectives, policies, rules and overlays that apply to the land, in the relevant proposed and operative regional policy statements, regional plans and district plans; and

b) the provision of adequate development infrastructure to support the development of the land.

Development infrastructure *means network infrastructure for water supply, wastewater, stormwater, and land transport as defined in the Land Transport Management Act 2003, to the extent that it is controlled by local authorities.*

Feasible *means that development is commercially viable, taking into account the current likely costs, revenue and yield of developing; and* ***feasibility*** *has a corresponding meaning.*

Sufficient *means the provision of enough development capacity to meet housing and business demand, and which reflects the demands for different types and locations of development capacity; and* ***sufficiency*** *has a corresponding meaning.*