Business Development Capacity Assessment 2021

Future Proof Partners: Hamilton City, Waikato District, Waipā District

30 June 2021

m.e consulting

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Executive Summary

New Zealand is a highly urbanised economy. The vast majority of people, employees and businesses are located inside urban centres. City economies are highly productive and cities are a highly efficient way to house populations with small environmental footprint. Urban economies are the centres of knowledge and innovation. They serve as production and service centres for the country because the production of goods and services is more efficient in high density environments.

Local authorities have an important role to play in the operation of city economies, primarily through planning for growth. Ensuring the appropriate provision of development opportunities means businesses and households are accommodated in appropriate locations. Well-designed urban areas maximise efficiency and effectiveness through appropriate urban form, achieving economies of scale and the innovation and creativity needed to grow. Efficiently functioning urban areas help maximise national economic output and wellbeing.

To this end, central government has released a national policy statement to provide direction to decision makers under the RMA on planning for urban environments. The National Policy Statement on Urban Development 2020 (NPS-UD) aims to ensure that planning decisions enable the supply of business land within local authorities is sufficient to meet business demand. The NPS-UD adds updates and amendments to the previous National Policy Statement on Urban Development Capacity 2016 (NPS-UDC).

The NPS-UD contains a number of objectives and policies that aim to meet those objectives. This report aims to assist in meeting policies under Subpart 3 – Evidence-based decision making and Subpart 5 – Housing and Business Development Capacity Assessment (HBA). Under clause 3.10 Assessing demand and development capacity:

(1) *Every local authority must assess the demand for housing and business land in urban environments, and the development capacity that is sufficient to meet that demand in its region or district in the short term, medium term, and long term, and*
(2) *Tier 1 and tier 2 local authorities comply with subclause (1) in relation to tier 1 and tier 2 urban environments by preparing and publishing an HBA as required by subpart 5.*

As determined by subpart 5 – Housing and Business Development Capacity Assessment (HBA), this report aims to assist fulfil subclauses 3.28 Business land demand assessment, 3.29 Business land development capacity assessment, and 3.30 Assessment of sufficient development capacity for business land.

Clause 3.28 Business land demand assessment requires:

1) *Every HBA must estimate, for the short term, medium term, and long term, the demand from each business sector for additional business land in the region and each constituent district of the tier 1 or tier 2 urban environment.*

2) *The demand must be expressed in hectares or floor areas.*
3) *For the purpose of this clause, a local authority may identify business sectors in any way it chooses but must, as a minimum, distinguish between sectors that would use land zoned for commercial, retail, or industrial uses.*
4) *The HBA for a tier 1 urban environment must:*
   a) *set out a range of projections of demand for business land by business sector, for the short term, medium term, and long term; and*
   b) *identify which of the projections is the most likely in each of the short term, medium term, and long term; and*
   c) *set out the assumptions underpinning the different projections and the reason for selecting which is the most likely; and*
   d) *if those assumptions involve a high level of uncertainty, the nature and potential effects of that uncertainty.*

Clause 3.29 Business land development capacity assessment requires:

1) *Every HBA must estimate the following, for the short term, medium term, and long term, for the region and each constituent district of the tier 1 or tier 2 urban environment:*
   a) *the development capacity (in terms of hectares or floor areas) to meet expected demand for business land for each business sector, plus the appropriate competitiveness margin; and*
   b) *of that development capacity, the development capacity that is:*
      i) *plan-enabled; and*
      ii) *plan-enabled and infrastructure-ready; and*
      iii) *plan-enabled, infrastructure-ready, and suitable for each business sector.*
2) *A local authority may define what it means for development capacity to be "suitable" in any way it chooses, but suitability must, at a minimum, include suitability in terms of location and site size.*

Clause 3.30 Assessment of sufficient development capacity for business land requires:

1) *Every HBA must clearly identify, for the short term, medium term, and long term, whether there is sufficient development capacity to meet demand for business land in the region and each constituent district of the tier 1 or tier 2 urban environment.*
2) *The requirements of subclause (1) must be based on a comparison of:*
   a) *the demand for business land referred to in clause 3.28 plus the appropriate competitiveness margin; and*
   b) *the development capacity identified under clause 3.29.*
3) *If there is any insufficiency, the HBA must identify where and when this will occur and analyse the extent to which RMA planning documents, a lack of development infrastructure, or both, cause or contribute to the insufficiency.*

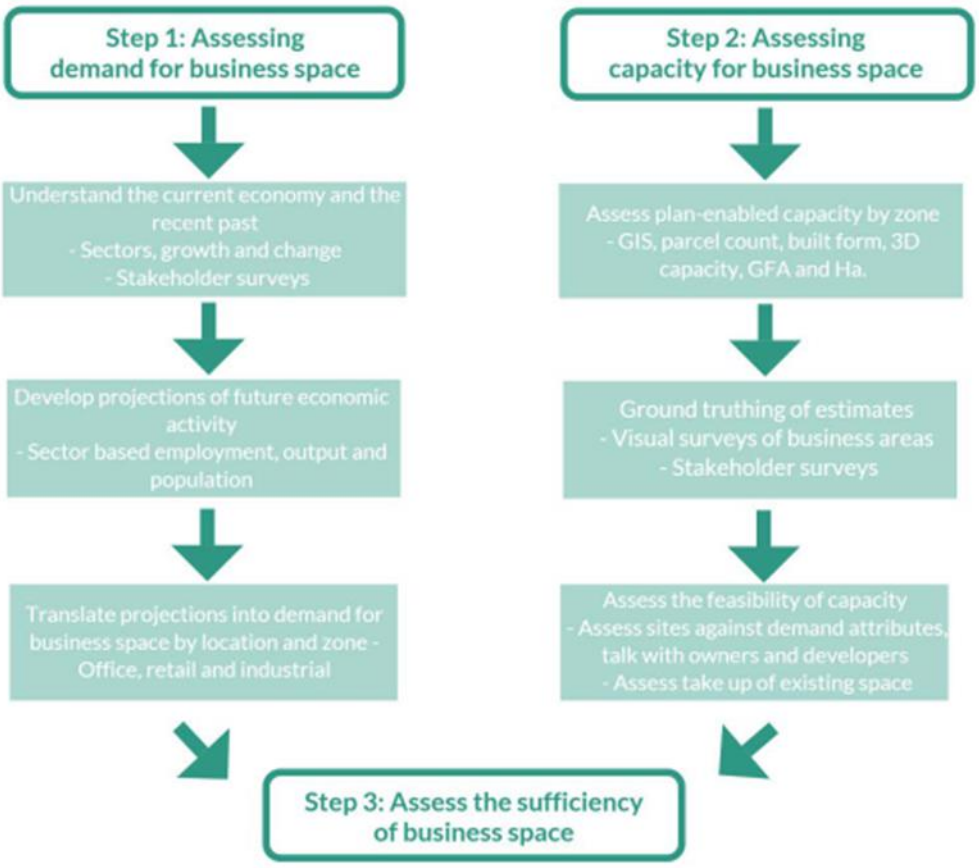
This assessment contains information on; the current economy, likely future economic growth by sector, the amount of capacity enabled under the current planning provisions plus any other strategic planning documents by type and location, as assessment of the feasibility or developability of that capacity and finally an assessment of the sufficiency of capacity to meet the foreseeable demands arising in the urban area in the short, medium and long terms.

Background

The Future Proof Partnership (FPP) is made up from the councils of Waikato District, Hamilton City and Waipā District. Together these Councils have been identified as a Tier 1 local authorities in the NPS-UD. In accordance with the National Policy Statement – Urban Development 2020 ('NPS-UD' or simply 'NPS'), FPP must complete a Housing and Business Development Capacity Assessment (HBA) within the urban environment every 3 years (Subpart 5, clause 3.19).

This document fulfils those requirements for the Future Proof Partnership area and consenting authorities. The approach adopted splits the tasks into 3 broad steps; assessing demand, assessing capacity and assessing sufficiency of capacity to meet demand (as outlined in Figure 0.1).

Figure 0.1: Business Development Capacity Approach Summary



District Economy

The NPS states that the NPS applies to *"all local authorities that have all or part of an urban environment within their district or region"*. What forms part of an urban environment is therefore important. 'Urban environment' is defined in the NPS as:

Any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that:

a) is, or is intended to be, predominantly urban in character; and
b) is, or is intended to be, part of a housing and labour market of at least 10,000 people.

Together, the Future Proof Partners (FPP) comprise the tier 1 local authorities that are defined as part of the Hamilton tier 1 urban environment within the NPS. This means that the policies are applied across the district. The following assessment focuses on the entirety of Waikato District, Waipā District and Hamilton City.

Within each TA, the zoning structure (zones and sub zones) at the parcel level has been used to identify where capacity exists and the nature of activity that is enabled on each parcel as determined by the relevant district plans. In addition to the currently zoned land, information from structure plans that relate to greenfields development has been used to identify the nature, timing, and amount of future capacity enabled on them.

There are significant differences between the three TA economies, that reflect the different roles each plays within the FPP. Hamilton has high relative concentrations of employment in the public sector – public administration and safety, health and education and the social assistance and other services sectors. In addition, high concentrations of retail, manufacturing and utilities reflect its role as the regions prime city. The economies of both Waikato District and Waipā District are reliant on the primary production sector for employment. Primary production is the largest employer in both, however Waikato District is much more reliant with 26% of all workers employed in the sector as compared to 14% in Waipā District. Hamilton City relies on the primary sector to feed its industrial and service sector base meaning it has an indirect employment relationship with the farming sectors. As the primary sector expands or contracts so too will Hamilton's industrial and service sector employment. Both Waikato and Waipā also have a relatively high number of employees within the construction industry (14% and 13% respectively), mirroring the trend seen across the country.

Other than this, Waikato and Waipā are noticeably different from each other. A portion of this difference is driven by the location of minerals such as coal and aggregate and the relative location of the districts to Auckland. Waikato District has a higher concentration of employees in the Mining sector as demand for aggregate material drives employment in this industry. Waikato has also had a greater increase in the number of manufacturing jobs, with employment in the sector approximately doubling over the past 10 years.

Waipā District has more diverse employment in relation to Waikato District. Waipā has higher concentrations of retail activity, health care and social assistance, and art and recreation services, and other services. These last sectors are important as they capture the high-performance sports facilities and education facilities that Waipā District is beginning to see concentrated around Cambridge (Rowing at Karapiro and Cycling at the Velodrome in Cambridge).

Business Land and Floorspace Demand

In total, employment growth across the FPP area is expected to increase from a base of 159,300 in 2020 to 225,800 MECs by 2050 – an average of 1.4% annually over that period. Employment growth rate declines over time with stronger growth in the next 10 years of 1.6% annually, dropping to 1.2% between 2030 and 2040, down to 0.9% annually between 2040 and 2050.

The most employment growth occurs in the business/finance and governance sectors which 19,500 MECs over the 30-year period to 2050. The fastest growing sector is the Utilities sector which increases employment by 65% over the long term from 1,700 MECs to 2,800 by 2050. The sector with the largest overall growth is the Business/Finance/Governance sector, growing by 19,500 MECs from 35,800 in 2020 to 55,300 in 2050. This is the employment that the FPP councils need to be able to accommodate through planning provisions and the land they apply to.

Employment is translated into likely floorspace and land use requirements using average floorspace per worker and land area per worker ratios. These averages are derived from a combination of recent rating data information by zone, employment by statistical area, and land use-space types. Given the similarity of activities carried out by employees across a range of sectors, there are a smaller number of space types than there are activity types or economic sectors. For the purposes of the NPS-UD, all space and land types have been condensed into 3 broad categories – Retail, Commercial and Industrial. Translating employment growth into total land demand results in the FPP partners needing to identify approximately 983ha of business zoned land over the long term to 2050 (Figure 0.2).

Figure 0.2: FPP Total Business Land Demand by Broad Sector, 2020 – 2050 (ha).

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	101	19	17	137
Retail	41	7	6	54
Industrial	540	145	108	793
Total Bus. Land Demand	**681**	**171**	**131**	**983**

For the retail and commercial sectors, floorspace is a more meaningful metric than land. This is because businesses in these sectors generally are able to occupy multiple levels of one building on one site, which means that land requirements are lower. In total to cater for anticipated economic growth over the next 30 years, the FPP area requires over 4.5 million sqm of gross floor area of build space (GFA) - 3.3million sqm of that for the industrial sectors, 884,000sqm for commercial activities and 322,000sqm for retail.

Figure 0.3: FPP Total Business Floorspace Demand (GFA) by Broad Sector, 2020 – 2050 ('000 sqm)

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	652	122	109	884
Retail	245	39	38	322
Industrial	2,234	609	456	3,299
Total Bus. GFA Demand	**3,132**	**770**	**603**	**4,505**

M.E have not incorporated growth in education floorspace demand in our assessment of commercial demand. This is because the Ministry of Education has the ability to designate land for development of education facilities outside of traditional business zoning.

Business Land and Floorspace Capacity

Business Land and Floorspace capacity in each district has been identified by applying the provisions in each District Plan to vacant parcels identified in the rating database and other parcel level land files. This produces a measure of total Plan Enabled capacity that needs to be refined to account for the portion not feasible for development for whatever reason. We have also used information relating to greenfields development (including structure plans) to identify capacity on land areas that are not currently developable under the existing zoning. A reduction in greenfield areas of 30% has been applied across the Waikato and Waipā districts so that roads, reserves and infrastructure requirements are taken account of. A similar process has been undertaken for Hamilton City.

Out of necessity, provisions in the district plans are broad, meaning that most parcels identified as vacant can meet a relatively wide range of needs. Therefore, capacity may not be exclusively allocated back to one usage type or another. Parcel level capacity has been aggregated to reporting areas (town agglomerations for Waikato and Waipā or broad suburbs for Hamilton) by broad activity type (Commercial, Retail, and Industrial). The current planning provisions enable a large amount of business land capacity for growth. In total, over 2,216 ha of land has been identified through the plans. Most of this resides within Waikato District (1,231ha) with 744ha in Hamilton and 242ha in Waipā. Much of the land in Waikato District and Hamilton City is comprised of greenfield land, that may not be available in the short or medium term. The vacant identified land is mostly available for Commercial or Industrial uses (1,053ha and 2,216ha respectively), with 241ha available for Retail use as well.

Note that totals do not sum down columns because one piece of land may be used for multiple purposes under the different plans. This means that one piece of land may potentially be used for any combination the three broad uses and so has been identified as capacity within that category, but once it is occupied by one use it necessarily excludes all other uses.

Figure 0.4: FPP Long term Vacant Business Land Capacity, 2020-2050 (ha)

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	565	316	173	1,053
Retail	161	69	11	241
Industrial	640	1,174	231	2,045
Total Vacant Bus. Land*	**744**	**1,231**	**242**	**2,216**

Plan enabled gross floor area (GFA) was then determined based on the relevant zoning rules – site coverage, building heights and floor area ratios were used to calculate GFA for each parcel. Activity status tables were used to determine the activity types allowed. Permitted, restricted discretionary and discretionary status activities have been incorporated under the assumption that these are essentially allowed under the various District Plans. A site coverage of 38% was applied in Industrial zones across the

sub-region to reflect the fact that industrial businesses tend to utilise much less of the site area for floorspace.[1]

Figure 0.5: FPP Long term Vacant Business Floorspace Capacity (GFA), 2020-2050 ('000sqm)

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	10,013	4,115	1,774	15,902
Retail	756	341	95	1,192
Industrial	3,501	4,436	872	8,809
Total Vacant Bus. Land*	**12,416**	**8,785**	**2,742**	**23,942**

In total the identified vacant business land supports approximately 23.9m sqm of built space. Once again, row values do not sum to column totals due to competing land uses. Over half of the vacant capacity is within Hamilton City alone, with 10 million square metres of vacant commercial and 3.5 million square metres of vacant industrial floorspace. Waikato District has the largest amount of Industrial floorspace of any of the partners, with 4.4 million square metres available long term to 2050. Much of this is contained in the greenfields land identified in the Waikato 2070 planning, with more available after 2050 as well. 4.1 million square metres of commercial floorspace capacity has also been identified in Waikato District. Waipā District has the lowest total capacity with 2.7 million square metres enabled in total, or 11.4% of the total identified in the sub-region. Because commercial space is able to occupy above ground floorspace (unlike retail or industrial) it makes up the majority of the total floorspace identified (66%).

It is important to be aware of issues and limitations associated with the capacity estimates. They include:

- Currency of data. This information is based on the rating database. Any development since the last update of rating information may reduce these numbers. This has been partially overcome by ground truthing exercise with Council staff but will need ongoing monitoring to ensure currency.
- Housing capacity crossover: In some of the zones housing demand competes with commercial demand for the same space – notably in mixed use zones and the central business district of Hamilton. Again, monitoring of uptake by activity type, including housing is important to remain currency of dataset.
- Other Capacity Sources: There is currently an amount of unoccupied but built space within the FPP area. This will provide capacity to a portion of short term demand yet is outside the measure of capacity described above. In addition, redevelopment of currently underutilised or older built sites will provide additional capacity not captured above. This potential can be assessed by looking at the average level of intensity in a given centre of business area. Sites not at the current average, or within the upper half are likely to have redevelopment potential. The same holds true for industrial sites. Care needs to be taken, as often sites appear to be underutilised, yet

[1] The 38.3% site coverage was derived from the average site coverage in the Te Rapa North industrial zones, and reflects our assumption for industrial space availability going forward. District Plan rules indicate site coverages of between 58% and 80% for industrial type zones.

the space may play a vital role in an industrial process (such as truck parking/turning, product storage etc). It is important for Council to monitor development, redevelopment and usage patterns to build up a knowledge base over time of business area operation.

- Rural Capacity: The focus of this report is urban development capacity. The rural zones play an important role in the FPP area and are likely to provide additional capacity not discussed in this report, such as local yards or storage buildings.

Development Feasibility

The approach described above focuses on establishing plan-enabled capacity. However, identified capacity may not translate to actual business properties available to the market unless it is "feasible" to develop. Feasible means commercially viable for a developer to develop given current costs, revenues and yield. However, for business land the situation is complex. 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 single piece of land. Ownership models differ widely as will appetite for debt and risk profiles. A developer willing to occupy a site for a lifetime may be able to amortise costs across a very long timeframe, so is motivated differently from a developer looking to build more generic tilt slab industrial units for rapid sale.

Because of these complexities a residual land value type model is not appropriate for business land assessments. Multi-Criteria Analysis 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, Councils can be confident that development will proceed.

The MCA analysis showed that there is a close alignment between where the FPP have provided capacity and high scores under the MCA framework. This indicates that the FPP can be confident that zoning is appropriate is terms of location and the nature of the land zoned. There are limited areas where development will be constrained in terms of market acceptance of product.

MCA Scores have been aligned against capacity in the final assessment in the body of the report.

Sufficiency of Plans

Demand is aligned against supply by broad type at the local level (town or broad suburb) to determine overall sufficiency of FPP business provisions. Detail at the local level is contained in the body of the report, but at the overall TA level for the FPP, it is clear that both the amount of land provided and the built space that enables exceeds the total amount of demand – even with an added margin (20% in the short to medium term and 15% in the long term). Note that the Green Bands in the Sufficiency Measure Columns indicate sufficient capacity to meet demand. Also note that values are cumulative across time periods, so that values within the long term supply and demand columns represent total expected capacity and demand as at 2050.

At the total FPP level, the total amount of expected demand for commercial land is approximately 13% of commercial capacity over the long term, with retail demand at 22% of available land capacity. In aggregate, industrial land demand is expected to take up almost 39% of the total provided over the long term (30 years).

At the individual territorial authority level however, there are significant differences. Demand in Hamilton City is expected to reach approximately 18% of vacant commercial land capacity, 25% of retail land capacity, and almost 85% of industrial land capacity. Long term, demand in Waikato District is expected to reach 6% of commercial land, 9% of retail land, and 12% of industrial land. This is largely due to the significant amount of greenfields land that Waikato District has earmarked for future development. Although development timeframes are unavailable for Waipā District, the district has enough capacity for all development types based on current vacancy information. Long term demand is expected to require 59% of retail land, 47% of industrial land, and 10% of commercial land. Based on these supply and demand estimates, there is enough vacant land capacity within the Future Proof Partnership over the long term.

Figure 0.6: Future Proof Partners Business Land Sufficiency summary (ha)

	Demand Growth (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
Sector	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Commercial									
Hamilton City	12.1	40.1	100.9	340.3	413.1	564.8			
Waikato District	1.9	7.7	19.2	279.8	311.0	315.6			
Waipa District	1.0	5.4	16.9	172.5	172.5	172.5			
TOTAL FUTURE PROOF	**15.1**	**53.3**	**137.0**	**792.6**	**896.7**	**1,052.9**			
Retail									
Hamilton City	4.9	16.7	40.8	126.9	133.1	160.7			
Waikato District	0.6	2.6	6.5	51.9	64.6	69.2			
Waipa District	0.2	1.9	6.3	10.6	10.6	10.6			
TOTAL FUTURE PROOF	**5.6**	**21.2**	**53.6**	**189.5**	**208.3**	**240.5**			
Industrial									
Hamilton City	52.2	221.5	539.6	270.3	337.0	639.7			
Waikato District	12.4	55.1	144.9	415.3	705.0	1,174.4			
Waipa District	8.6	31.5	108.2	230.9	230.9	230.9			
TOTAL FUTURE PROOF	**73.2**	**308.0**	**792.7**	**916.5**	**1,272.9**	**2,045.0**			

As with vacant land capacity, gross floorspace capacity at the aggregate Future Proof level is well in exceedance of projected demand. In total, commercial demand will occupy 6% of commercial GFA capacity, while retail and industrial demand is only expected to occupy 27% and 38% respectively.

Long term commercial floorspace demand growth is less than 7% of capacity for all of the individual councils. Demand for retail floorspace is expected to reach 32% and 40% of total enabled floorspace in Hamilton and Waipā, and only 12% of capacity in Waikato. Industrial floorspace demand will reach almost 64% of Hamilton's plan-enabled floorspace capacity, 14% of Waikato's capacity, and 52% of Waipā's industrial floorspace capacity.

Figure 0.7: Future Proof Partners Business Space Sufficiency Summary (GFA)

	Demand Growth (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
Sector	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Commercial									
Hamilton City	78,155	260,358	652,346	4,785,160	6,472,643	10,012,586			
Waikato District	11,949	49,060	122,183	3,546,319	4,042,029	4,115,441			
Waipa District	6,965	35,317	109,309	1,774,287	1,774,287	1,774,287			
TOTAL FUTURE PROOF	**97,069**	**344,734**	**883,839**	**10,105,766**	**12,288,959**	**15,902,313**			
Retail									
Hamilton City	29,618	100,303	244,848	586,797	617,599	755,665			
Waikato District	3,339	15,454	39,159	281,737	325,355	341,086			
Waipa District	907	11,593	37,798	95,431	95,431	95,431			
TOTAL FUTURE PROOF	**33,864**	**127,350**	**321,806**	**963,964**	**1,038,385**	**1,192,182**			
Industrial									
Hamilton City	215,205	915,240	2,234,402	1,340,626	1,596,205	3,500,905			
Waikato District	52,902	231,509	609,026	1,534,816	2,638,583	4,436,399			
Waipa District	37,198	134,494	455,601	871,814	871,814	871,814			
TOTAL FUTURE PROOF	**305,304**	**1,281,243**	**3,299,029**	**3,747,257**	**5,106,602**	**8,809,119**			

Conclusions and Future Updates

Overall the various Future Proof Partners have, through their planning documents, structure plans and other strategic documents, made sound provision for growth in demand for business land and floorspace over the 30 year period 2020-2050. Much of the capacity enabled is in greenfields land that is earmarked for future development. There are significant amounts of commercial floorspace enabled (well in exceedance of likely demand), as commercial businesses are more willing to occupy floors above street-level as compared to traditional industrial or retail businesses.

Our analysis indicates that there is potential for some pressure to be felt at the local level within each council, as demand for land and floorspace at the town or suburb level may not match exactly the enabled capacity. These pressures are exacerbated when the required demand margins (+15-20%) are added.

Most significantly, this pressure occurs within the Hamilton City boundary for industrial land. It is possible to reduce these pressures by ensuring that industrial land in "industrial development areas" is protected from encroachment by other uses (especially large format retail). There are some areas where commercial and retail land and GFA demand is likely to outstrip capacity within Hamilton, but these demand types are much more mobile than industrial types and are able to occupy a diverse range of locations and zones as compared to industrial uses. Where deficits occur in industrial capacity at local levels, it may be preferable for industrial-type businesses to migrate to other areas such as Te Rapa and Frankton for the co-locational and economic benefits that can be derived from such a move. We recommend that council protects industrial land for industrial uses, given that there are significant levels of commercial and retail land enabled elsewhere.

Waikato is generally well-supplied with land across the district. Much of the supply in the medium and long term is located at the northern end of the district, adjacent to the Auckland Region and State Highway 1 at Ohinewai. In the rest of the district, Raglan faces insufficient industrial land supply in the short, medium, and long term, while Huntly faces insufficient industrial supply in the medium-to-long term, and Te Kauwhata faces insufficient supply in the long term. These may not be as big an issue as initially assumed,

there is the possibility of businesses locating nearby – especially for Huntly in Horotiu. Council may have to explore options of re-zoning in Raglan, although options may be limited by topography in the area.

Waipā has sufficient capacity at almost all levels and timescales, with minor insufficiencies occurring in long term retail land & floorspace supply in the district's minor towns, and a small deficit in realistic industrial floorspace in Cambridge-Karapiro. The retail deficit is likely due to reactive zoning, and the long term growth (of +320sqm GFA) could be easily re-zoned in the future, or through redevelopment of existing land. The deficit in realistic industrial land of approximately 13,200 could similarly be realised through minor rezoning, slightly more intensive development (greater than 38% site coverage), or re-location.

Key conclusion points include;

- In general, the gap between Industrial land supply and industrial land demand is closer than for either retail or commercial. This means Councils should be particularly vigilant in terms of monitoring uptake and usage of industrial land. Industrial land is particularly sensitive to being used for other purposes. Due to its relatively low value, it is often targeted by large format retail operators who seek large footprint sites at relatively low cost. As they are destinations in and of themselves, they have the ability to drive trade their way. This changes the dynamics of cities and can lead to very significant adverse outcomes as trade is drawn away from traditional centres impacting on their ability to function and deliver amenity to the city.
- High level of cross over between retail and commercial in terms of land requirements means that they could potentially be viewed as a single entity. This may alleviate pressure felt at a local level if either one or the other is constrained.
- Reasonably strong alignment between results of the MCA framework and plan enabled capacity indicate Councils are zoning land that is appropriately located and is likely to meet developer requirements.
- Price is the key factor when establishing whether land will be developed or not. Land price encompasses a range of the variables identified within the MCA. Price is often the first hurdle to development, but not the only factor. While it is important to get the price right, price will not necessarily compensate for deficiencies in either location or other physical characteristics of a parcel of land.

The most important thing Councils can do to ensure they remain in touch with growth and change, is to constantly monitor business land development. By consistently updating datasets on development and occupancy, Councils will be well placed to address development and broader economic trends as they begin to emerge.

Monitoring should include – but not be limited to;

- Uptake of business land – quarterly or annually at the least
- Development typologies – what is being built on the land
- Occupation and use – who are the final occupiers of the land and what do they do/what sector do they belong to.

- Employment: How much employment is being achieved on the developed land.
- Market trends in locational choice and usage: What is coming down the pipeline, what are the developers and real estate agents saying about the near and far future.

1 Introduction

The Future Proof Partnership (FPP) is made up from the councils of Waikato District, Hamilton City and Waipā District. Together these Councils have been identified as a tier 1 urban environment. In accordance with the National Policy Statement – Urban Development[2] (NPS-UD or NPS), FPP must complete an assessment of both Business Development and Residential Development Capacities at least every three years. This report, prepared by Market Economics Limited (M.E) in collaboration with FPP, updates the original assessment to 2021.

The Future Proof Partners network has been identified as a "tier 1 urban environment" under the NPS-UD and is subject to a range of provisions due to this.

This assessment analysis of the FPP Business markets, including both the demand and supply sides, as well as the sufficiency of capacity provided by the Councils under their various District Plans.

This report, prepared by Market Economics Limited (M.E) delivers an update to the original Business Development Capacity Assessment (BDCA) prepared for the Future Proof Partners Business Development. A separate residential capacity assessment – the Housing Development Capacity Assessment (HDCA) – has also been undertaken and is detailed in a separate report. This BDCA focuses on the development capacity within the urban environments of each of the partnership councils, as required by the NPS-UD.

1.1 Purpose of the NPS-UD

In summary, the NPS-UD requires local authorities to ensure there is sufficient housing and business land to meet expected demands. To do so, it establishes a comprehensive staged assessment process to ensure local authorities gain a more fine-grained understanding of the economic influences on capacity and demand in order to better plan for growth.

The NPS identifies that urban environments are areas where population and economic activities are in close proximity and that they are often growing at significantly higher rates than in rural or provincial settings. This dynamism leads to unique and challenging conditions that require particular policy responses to manage the effects and to ensure that growth is managed in a manner that is both efficient and ensures that communities continue to be able to provide for their social, cultural, environmental, and economic wellbeing.

In order to effectively manage growth, it is important to understand growth within the urban environment, both population and economic. Local authorities are able to make well informed decisions if they have access to consistent and robust estimates of economic growth. Understanding the key drivers of growth

[2] http://www.mfe.govt.nz/sites/default/files/media/Towns%20and%20cities/National_Policy_Statement_on_Urban_Development_Capacity_2016-final.pdf

and the land use implications of change will assist authorities when assessing the effects of alternative policy options. In the context of business land, it will also support thriving town centres, efficient transport and infrastructure planning, and enable change that fosters the sustainable growth of the district. This information will also provide greater understanding of industries that may change over time and enable the management of possible negative effects of business activities, such as reverse sensitivity or high vacancy rates.

A key outcome of the NPS-UD is the integration of land use and infrastructure planning. This recognises that development is dependent on the availability of infrastructure, and decisions about infrastructure can shape the location and form of urban development. There are obvious benefits, particularly in terms of efficiencies, more predictable outcomes and cost savings to the wider community from ensuring consistency between all of these processes. Accordingly, the NPS-UC requires that development capacity considered in these assessments is either serviced or identified in a Future Development Strategies.

1.2 Objectives and Policies

As tier 1 local authorities, the FPP areas are subject to the full suite of objectives and policies under the NPS-UD. The objectives and policies are structured into four key themes, summarised below:

- *Outcomes for planning decisions* – these provisions establish the requirement to ensure sufficient housing and business capacity to meet demand, provide for choices, and urban environments that develop and change over time.
- *Evidence and monitoring to support planning decisions* - these provisions specify the reporting requirements, the need to monitor market indicators, and consider influences on capacity such as rate of take-up and feasibility.
- *Responsive planning* – requires a response to be initiated if the evidence base suggests there is insufficient development capacity, establishes the requirement for Councils to prepare a 'Future Development Strategy' and the setting of 'minimum targets' in regional and district plans.
- *Coordinated planning evidence and decision-making* – encourages collaboration between authorities that share jurisdiction over an urban area, and between regional and local councils.

1.3 The Business Development Capacity Assessment (BDCA)

The NPS specifies the overall requirement for the BDCA (Subpart 3 clause 3.10, Subpart 5 clause 3.19), together with a range of requirements in the Policies[3]. Each Policy assessment needs a sound analytical/technical base and good supporting information, and most need quantification to demonstrate compliance. There are many inter-linkages and inter-dependencies among the policies, which make it important to understand the NPS both holistically, and as to the specific requirements for each Policy. The individual policies cannot be satisfied if treated in isolation.

[3] Available for download from https://environment.govt.nz/assets/Publications/Files/AA-Gazetted-NPSUD-17.07.2020-pdf.pdf

Within this wide suite of policies, the major part of the technical analysis and monitoring is set out in policies clauses 3.28 to 3.30, which contribute most directly to the BDCA (and HDCA). These are addressed throughout this report.

The two assessments should help local authorities to quantify in broad terms how much development capacity should be provided in resource management plans and supported with development infrastructure, to enable the supply of business (and housing) space that meets demand. Policy PB3 requires that this assessment include how much capacity is "feasible" to develop in the current market and expected to be taken up over time. In addition, the calculation of total feasible capacity required needs to include margins over and above projected demand, to inform policies PC1 and PC2.4

The assessments should also include information about the interactions between housing and business activities, such as whether the location of activities provides for accessibility and the efficient use of land and infrastructure and how urban environments are developing and changing over time.

1.4 Approach Overview

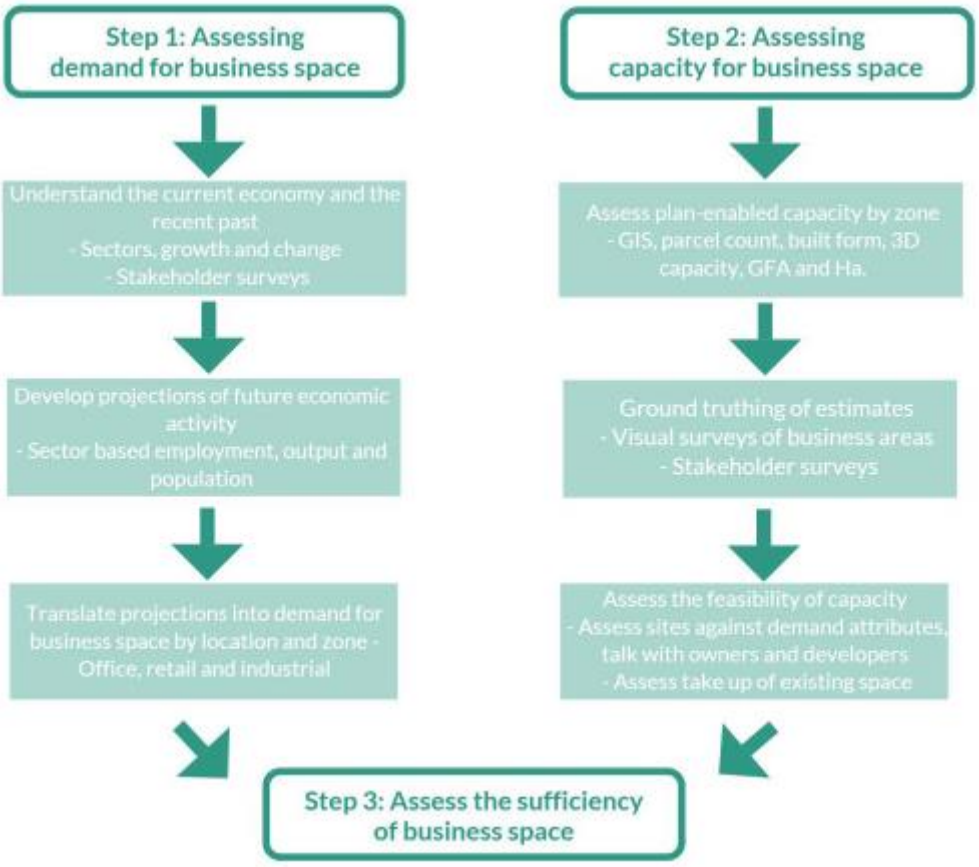
This report focuses on economic growth and how it translates into land and space requirements within the FPP urban environment. Economic growth is a key driver of development markets and is important to understand in terms of absolute scale, composition and timing. With this information, FP partners can make more informed decisions that:

- provide sufficient capacity and choices for all business uses, in appropriate locations, and an efficient allocation of capacity between them;
- support thriving town centres, efficient transport, and management of the negative effects of business activities and reverse sensitivity;
- enable constant spatial change to support economic growth and change, particularly, a greater understanding of how the role and function of the district's centres may change over time;
- understand the influences of business growth on associated demands and locations for visitor accommodation, housing and social and development infrastructure.

These outcomes would contribute to effective and efficient urban environments that enable people and communities and future generations to provide for their social, economic, cultural and environmental well-being. This information also supports informed investment and funding decisions.

The BDCA has three main stages or components of analysis for both demand and supply. The broad approach is presented in Figure 1.2. The following sections contain a narrative that addresses each stage in detail.

Figure 1.1: Business Development Capacity Approach Overview



1.5 Data Sources

The BDCA modelling draws on existing datasets as supplied to M.E by the FPP councils. Key database sets include:

- Rating databases – containing information relating to existing land uses, development patterns (e.g. floorspace), and value (CV, IV, LV)
- Published District Plans – contain information relating to activity status of development types and development rules (site coverages, heights, floor-area ratios, etc).

Several spatial datasets were also incorporated into the modelling, including:

- LINZ Primary Parcels[4] – capacities were modelled at the LINZ Primary Parcel level
- District Plan Zoning – provided by each council, including overlays, subzones, and hazards

[4] https://data.linz.govt.nz/layer/50772-nz-primary-parcels/

- Building Footprints – derived from aerial photography, used to help cross-check Rating Database information
- Greenfield Structure Plans – spatial layers detailing the land earmarked for future development, including any information on development type and capacity.

The BDCA modelling also incorporates several other datasets, including:

- WISE Model Outputs – detailing population and employment projects at the local level
- Economic Futures Model (EFM) – predicts economic growth feedbacks based on regional inputs and outputs
- Business Directory – determines the number of employees and businesses within a geographic area based on census information.

Some further data was provided to M.E from within each individual FPP council. This related to the ground-truthing of available capacity.

1.6 Stakeholder Engagement

The NPS-UD requires local authorities to seek and use the input of particular local groups with relevant expertise. This helps ensure that local development perspectives inform assessment of feasibility and that local market conditions are fully represented in the analysis. In particular, local engagement has been used to assist in identifying characteristics of land and location that make development feasible across the range of development sectors. Local engagement has also been used to quantify the relative importance of land and locational characteristics in the development of a Multi Criteria Analysis (MCA) framework used to assist in ranking development opportunities.

The stakeholder engagement process was undertaken in the form of a workshop where those attending participated in a discussion of the relevant issues and requirements relating to business developments. The discussion was led by M.E, with support from council staff within the FPP. The Workshop was held on January 19th 2018, with results collated and incorporated into the MCA.

Representatives of the development community, commercial land real estate agents, and large commercial development operators were included in the workshop, along with key Council staff engaged in the development process.

1.7 Terminology and Definitions

There are some key terms used in this report that are defined here:

- **Base year**: the base year of this assessment is 2020. Capacity estimates have been based on 2020 valuation information and structure plans. Demand projections have been calculated for every year from a 2018 base, to coincide with Statistics New Zealand information.

- **Business Land**: land that is zoned for business uses in urban environments, including but not limited to land in the following examples of zones:
    - Industrial.
    - Commercial.
    - Retail.
    - Business and business parks.
    - Centres (to the extent that this zone allows business uses).
    - Mixed use (to the extent that this zone allows business uses).

  It is important to note that the above zone codes are not exclusive. A piece of land is likely to be zoned for a wide range of activities. The Resource Management Act is essentially an enabling Act, this means that TAs ensure that they cater for a wide range of activities being enabled in business zones. Compatibility of activities is key as is ensuring that any adverse impacts or emissions are able to be dealt with in a manner that does not harm surrounding land uses.

- **Business Demand**: The demand businesses place on the land or commercial property market for space. This is initially defined in terms of additional employment or turnover, translated into GFA and ultimately appropriately zoned land.
- **Economic growth**: Employment or GDP growth over time.
- **Short term**: up to three years measured from the base year, 2020-2023.
- **Medium term**: 4-10 years measured from the base year, 2023-2030.
- **Long term**: 11-30 years measured from the base year, 2030-2050.
- **Feasible**: Development that is commercially viable to a developer, taking into account the current likely costs, revenues and yield of developing. Feasibility has a corresponding meaning. Note that feasibility assumes that the land is enabled for development by the plan and supported by public infrastructure.
- **Industrial Land**: Land that has been zoned for industrial activities under the relevant District Plan (in this case the proposed District Plan). The zones in this group are likely to be Heavy Industry and Light Industry. This land generally enables industrial type activities (manufacturing, wholesale, logistics and distribution, trade suppliers etc.), usually at the expense of significant office or retail activity.
- **Heavy Industry**: Defined according to its emissions. Whether it is noise, or discharges to air or water, the industry is likely to require buffering from residential activities.
- **Light Industry**: Generally the balance of manufacturing activity that does not generate noxious discharges or noise pollution. Needs for buffering is less or non-existent. Light Industrial activities can be used to buffer heavy industry.

- **Industrial space**: This is limited to the ground floor in nearly all cases. Height limits in industrial zones do not necessarily add floorspace capacity the way they do in commercial zones.
- **Realistic industrial space (RIS):** M.E have applied a reduced site coverage of 38.3% to industrial zoned land, to better reflect industrial development patterns.[5]
- **Commercial land**: Land that is zoned for commercial activities – usually office or retail activity. Manufacturing activities are generally not enabled on commercial land.
- **Commercial Space**: The build floorspace on land zoned commercial. This space is calculated by multiplying site size by the Floor Area Ratio (FAR) or building coverage by the number of floors allowed under the height limits. Not all zones have FAR's or height limits, so a flexible approach is adopted. Ground floor commercial space in centres generally represents retail capacity, while above ground floor space generally represents office employment capacity or visitor accommodation.
- **Retail Space**: Usually ground floor commercial space dedicated to selling goods and services to consumers. May also occur above the ground floor.
- **Office Space**: Usually above ground Commercial floorspace used for office activities.

Other terms used throughout this report draw on commonly used zoning terminology. Appendix 2 contains a list of acronyms used.

1.8 Report Outline

This report is structured as follows:

Section 2 describes the study area and urban environment of the Future Proof Partners. This section details the approach and spatial framework used.

Section 3 describes the district economy, including current economic indicators and key sectors. It also describes recent changes within the local economy, and drivers of economic growth.

Section 4 describes future business land and floorspace demand by sector. It describes how employment types are aggregated to different floorspace types, thereby defining the demand projections.

Section 5 describes the plan enabled business land and floorspace capacity by sector within each of the councils.

Section 6 contains the development feasibility for each of the sector types, based on a Multi Criteria Analysis.

[5] The 38.3% site coverage was derived from the average site coverage in the Te Rapa North industrial zones, and reflects our assumption for industrial space availability going forward. District Plan rules indicate site coverages of between 58% and 80% for industrial type zones.

Section 7 brings the results from sections 4 and 5 to discuss the sufficiency of capacity for the different sectors within the Future Proof Partners network. This section also covers the MCA work and makes recommendations for Council monitoring key areas.

Section 8 contains an overview of the work carried out, identifies some key issues throughout the process and some key learnings.

2 Study Area - Urban Environment

The NPS-UD describes the urban environment as being characterised by the closeness of people and places, and the connections between them. They are places of high economic and population growth and while they share common elements, each has unique characteristics generating identity and advantage. Urban environments are places of rapid change, managing change and growth is therefore important for council seeking to ensure the urban environments continue to provide for people and communities wellbeing.

2.1 Geographic Context

The FPP network contains a land area totalling 6,034 km^2, of which Waikato District makes up 4,453 km^2 (73.8%), Waipā District makes up 1,470 km^2 (24.4%), and Hamilton City makes up 111 km^2 (1.8%). The combined area is located within a geographically significant sector of the North Island, sitting astride a large portion of the 'Golden Triangle' (Hamilton-Tauranga-Auckland).

Within the Future Proof Partnership there is one distinct city (Hamilton) along with 4 significant urbanised townships (Te Awamutu and Cambridge in Waipā and Tuakau and Ngāruawāhia in Waikato District), and a number of smaller towns (Huntly, Raglan, Pokenō, and Te Kauwhata), captured in Figure 2.1. Towns and townships are primarily located along State Highways, interspersed by tracts of rural land. These rural areas represent some of the most exceptional agricultural land in the country.

The FPP's proximity to Auckland means that areas such as northern Waikato are experiencing significant pressure to develop and expand urban amenities as housing supply and affordability issues in Auckland drive growth out to the neighbouring districts. This exacerbates internal population growth and puts further pressure on the current infrastructure.

Figure 2.1: Future Proof Partners Study Area

2.2 Spatial Framework - Land Use Zones

Modelling of business demand and capacity within the FPP area occurs at the Statistical Area level (SA2's), with demand growth based on outputs from the WISE[6] model. This allows a relatively granular view across the FPP area, which can be aggregated to a range of geographic scales, enabling the results to be output at to the level of key urban geographies, such as towns or other reporting areas as required. It is important not to assess levels of sufficiency at the SA2 level, as demand is mobile and the relatively short distances within Hamilton City[7] for example, mean that economic activity can be aggregated in an efficient manner while still meeting the wider needs of the community. It is still important to ensure that local needs are met locally – especially with respect to a portion of retail and services which should be met within local centres within or adjacent to residential areas. Overall, given the relatively cohesive nature of business activities within the Future Proof Partnership area, it is possible to allocate SA2s to reporting areas.

Within the Hamilton City portion of the FPP BDCA, a specialised set of catchments has been created based upon existing development types and any known future developments. The Hamilton City spatial framework is displayed in Figure 2.2. These are broadly based on existing zoning and greenfields earmarked for future development. Frankton, CBD, and Chartwell are largely developed already. Te Rapa is a mixture of developed industrial land uses and greenfield developments, while Ruakura is primarily greenfield at the moment.

For both Waikato and Waipā Districts, all modelled outputs have been aggregated to the a combination of towns based on geographic location, to effectively capture the range of urban towns and townships in both districts. These can be seen in Figure 2.3 and Figure 2.4 for Waikato District and Waipā District respectively.

Urban areas within Waikato District have been aggregated to: Pokenō, Tuakau, Te Kauwhata, Huntly, Ngāruawāhia, Raglan, and Rest of Waikato. Waikato District requires a larger range of reporting areas because of the relatively spread spatial distribution between the towns.

Urban areas within Waipā District have been broadly aggregated to: Cambridge-Karapiro, Te Awamutu-Kihikihi, Rukuhia-Ngahinapouri-Ohaupo-Pirongia, and Rest of Waipā. Cambridge-Karapiro and Te Awamutu-Kihikihi have been combined based on the proximity of the satellite towns to the major centres, while Rukuhia, Ngahinapouri, Ohaupo, and Pirongia effectively create network of well-connected towns for assessment.

[6] Waikato Integrated Scenario Explorer.

[7] 5km in a straight line from the CBD is rural land to the west and east, while the north south distances are only 7km

Figure 2.2: Hamilton City Spatial Framework

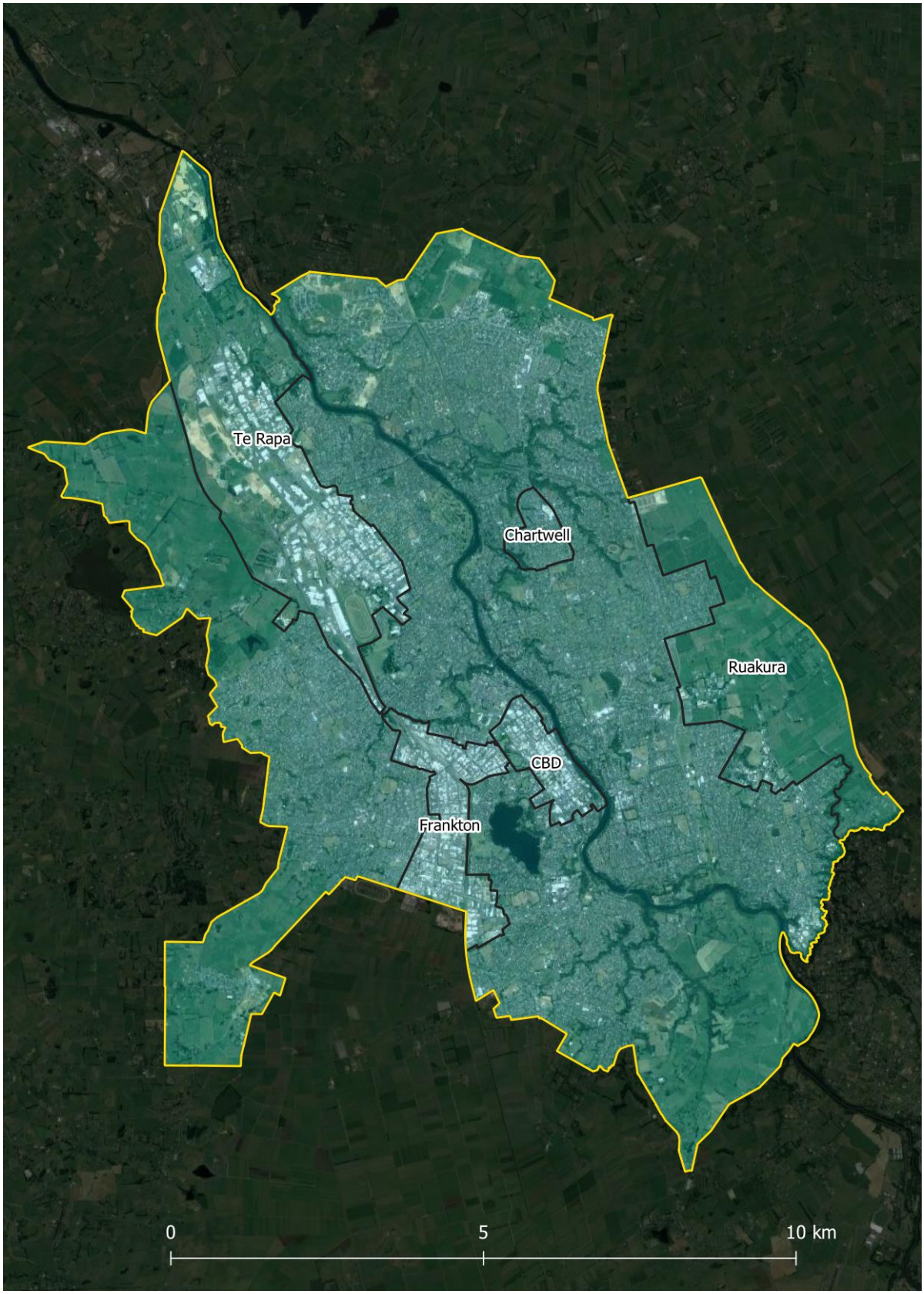


Figure 2.3: Waikato District Spatial Framework

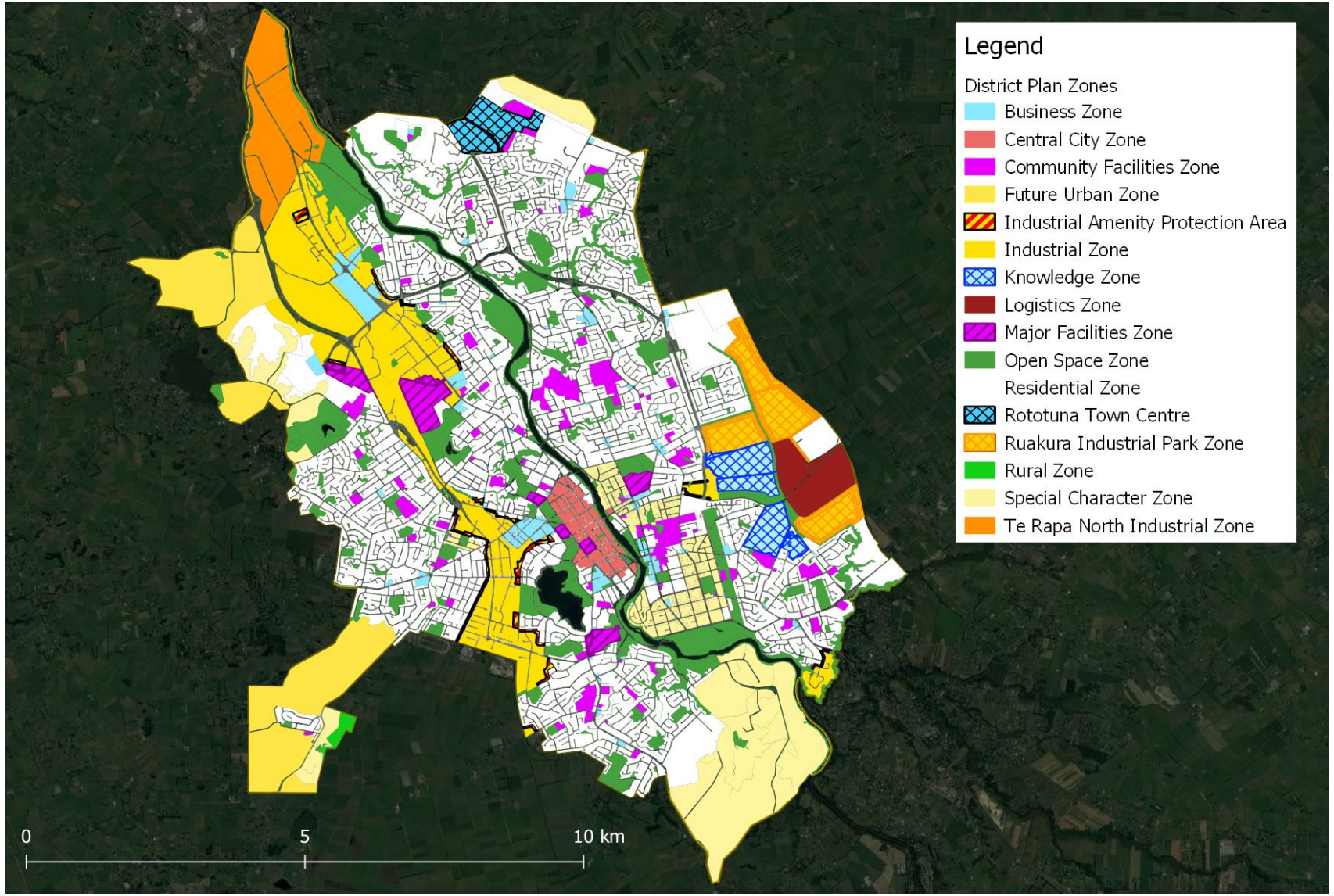
Figure 2.4: Waipā District Spatial Framework

The District Plan zones were key in determining the urban areas assessed by the BDCA, largely due to the fact that they effectively distinguish urban developments and land uses compared to rural land uses. The zones included in the BDCA were selected based on the activities allowed, and the objectives for the zones. Anywhere that urban development was recognised as a priority was included in the analysis. Although it is recognised that there may be some capacity within the rural environment within each of the FPP councils, these were not modelled except where a structure plan existed.

2.2.1 Hamilton City

Hamilton City contains a wide range of zones, due to the complex range of residential, business, environmental and rural land types that exist within the city boundary. Figure 2.5 displays the main District Plan zones as they occur across the city. The zones within the city are further defined by the inclusion of sub-zoning information, which reflect differing rules and requirements reflecting the desired objectives and development patterns put forth by Hamilton City Council.

Figure 2.5: Land Use Zones in Hamilton



The key zones assessed within the Hamilton City FPP BDCA are the;

- Business Zone,
- Central City Zone,
- Industrial Amenity Protection Area,
- Industrial Zone,
- Knowledge Zone,
- Logistics Zone,
- Ruakura Industrial Park Zone, and the
- Te Rapa North Industrial Zone.

Each of these zones has been further informed by subzones within the District Plan. The BDCA also incorporates related greenfield structure plans and associated information relating to these.

The Business Zone is a key zone within the BDCA assessment for Hamilton City. This zone is located in key clusters throughout the city, reflecting the location of key commercial and retail centres. The Business Zone is split by seven subzones, reflecting the varied nature of business activities across the city. The subzones include Commercial Fringe, Events Facilities Fringe, Sub-Regional Centre, Large Format Retail, Suburban Centre Core, Neighbourhood Centre, and Suburban Centre Core. As the names of these imply, each of these subzones have distinct development characteristics and permitted activities which have been distinguished within the BDCA. The intensity and type of development is variable throughout the subzones, with all space types – including industrial uses – represented within the Business Zone.

The City Centre Zone complements the Business Zone within the BDCA for Hamilton City. This zone is confined to the main city centre, and is split by the Downtown, City Living and the Ferrybank Precincts which act as subzones. The City Centre Zone largely supports commercial and retail activities, though there is some competition for residential accommodation in the form of apartment complexes. Development patterns within the City Centre Zone are intensive compared to other zones within the city, as might be expected of the key commercial hub within the urban area.

The Industrial Amenity Protection Area (IAPA) is a relatively small zone, existing on the edges of the Industrial Zone within the city. This zone is primarily used as a buffer to stop encroachment and reverse sensitivity of the residential zones surround the Industrial Zone at key points. Although some development is allowed in the IAPA, it is restricted. Overall this zone is not key within the BDCA, though it is assessed for completeness.

As the name implies, the Industrial Zone is the key zone within Hamilton City for enabling industrial type development and activities. The Industrial Zone is primarily represented in large clusters around Te Rapa and Frankton, with smaller pockets in Riverton and eastern Claudelands/western Ruakura. Developments within the Industrial Zone are generally warehouse, factory, or yard based with large lot sizes (and large buildings in the case of warehouses and factories). The Te Rapa cluster is comprised mainly of large lot activities, and relatively low intensity development. The Frankton cluster is more intensive, with smaller

buildings grouped together on smaller sites, though there are some large yard-based developments to the south. The Industrial Zone defines key clusters of existing industrial business activity within the city, with little room for extra development.

The Knowledge Zone is a confined zone within Hamilton City, home to the main tertiary education and research facilities within the city. The zone is comprised of three subzones: The University of Waikato Campus, Ag Research, and Waikato Innovation Park subzones. All enable the same activities and are more reflective of the organisations occupying the area rather than different development patterns. This zone primarily enables commercial uses relevant to research and academia, especially offices and educational facilities, as well as some storage facilities where required. Vacant areas in these subzones are primarily reserved for similar activities, though capacity is still available.

The Logistics Zone is one large cluster confined to Ruakura. Currently, the zone is undeveloped rural land, earmarked for future industrial development. The zone rules allow for warehouse- and yard-based activities, meaning that the Logistics Zone provides potentially significant amounts of industrial capacity. Although not currently developed, it is key to assessing future urban capacity within Hamilton City and so is included in the BDCA.

The Ruakura Industrial Park Zone (RIPZ) is key to providing capacity for the inland port that has been consented in Ruakura. Much of the area is currently rural farmland and undeveloped, which means that there is likely to be significant capacity identified here within the BDCA. The zone is likely to host mainly industrial land uses such as yard- and warehouse-based activities. The RIPZ will likely work in conjunction with the Logistics Zone described above. Although not currently developed, it is key to assessing future urban capacity within Hamilton City and so is included in the BDCA.

The Te Rapa North Industrial Zone (TRNIZ) is the final of the primary zones assessed within the BDCA in Hamilton. The TRNIZ is located to north of the existing industrial developments in Te Rapa and is largely undeveloped. The zone is split into Deferred Industrial, Heavy Industrial, and no subzones. Likely development patterns into the future are similar to those existing in the Industrial Zones, with extra emphasis on large-scale, heavy industry (factories, processing plants, etc) land uses. As with the Logistics Zone and the RIPZ, the TRNIZ is likely to provide significant capacity to industrial space types. Although not currently developed, it is key to assessing future urban capacity within Hamilton City and so is included in the BDCA.

Adding to the complexity of these zones, greenfield structure plan information was provided to M.E to enable detailed analysis of the greenfield areas within Hamilton. In the BDCA, this is especially relevant to the Logistics Zone and the Ruakura Industrial Park Zone, as well as portions of the Industrial Zone to the west of the existing developments at Te Rapa. Where this data was provided, M.E used it in place of the zoning information because of the more accurate information that was available (especially relating to spatial extents).

Together, the above zoning and the greenfield structure plan data was used to delineate the urban study area used in the Hamilton City section of the BDCA.

2.2.2 Waikato District

The Waikato District contains a wide range of zones, due to the complex range of residential, business, environmental and rural land types that exist across the district. Adding to this complexity, the operative district plan contains two separate planning sections that interact with the planning zones to alter the rules and activities in some cases. There are further changes in rules and zoning under the proposed district plan. The zoning within the proposed district plan is more simple than in the operative district plan, reducing the number of sections down to one and combining zoning. There are also greenfield areas earmarked for development under the Waikato 2070 strategy. The BDCA takes account of all of these rules to assess capacity across each of the locations.[8] Figure 2.6 shows the existing zones as determined by the Waikato Operative District Plan.

The key zones assessed within the Waikato District section of the BDCA are:

- Business,
- Heavy Industrial,
- Industrial,
- Industrial 2,
- Industrial Park,
- Light Industrial, and the
- Village Business zone.

As with Hamilton City, some greenfield structure plan information was supplied to M.E to augment the zoning information and thereby define the urban study area used in the BDCA. This was in the form of the Waikato 2070 designations.

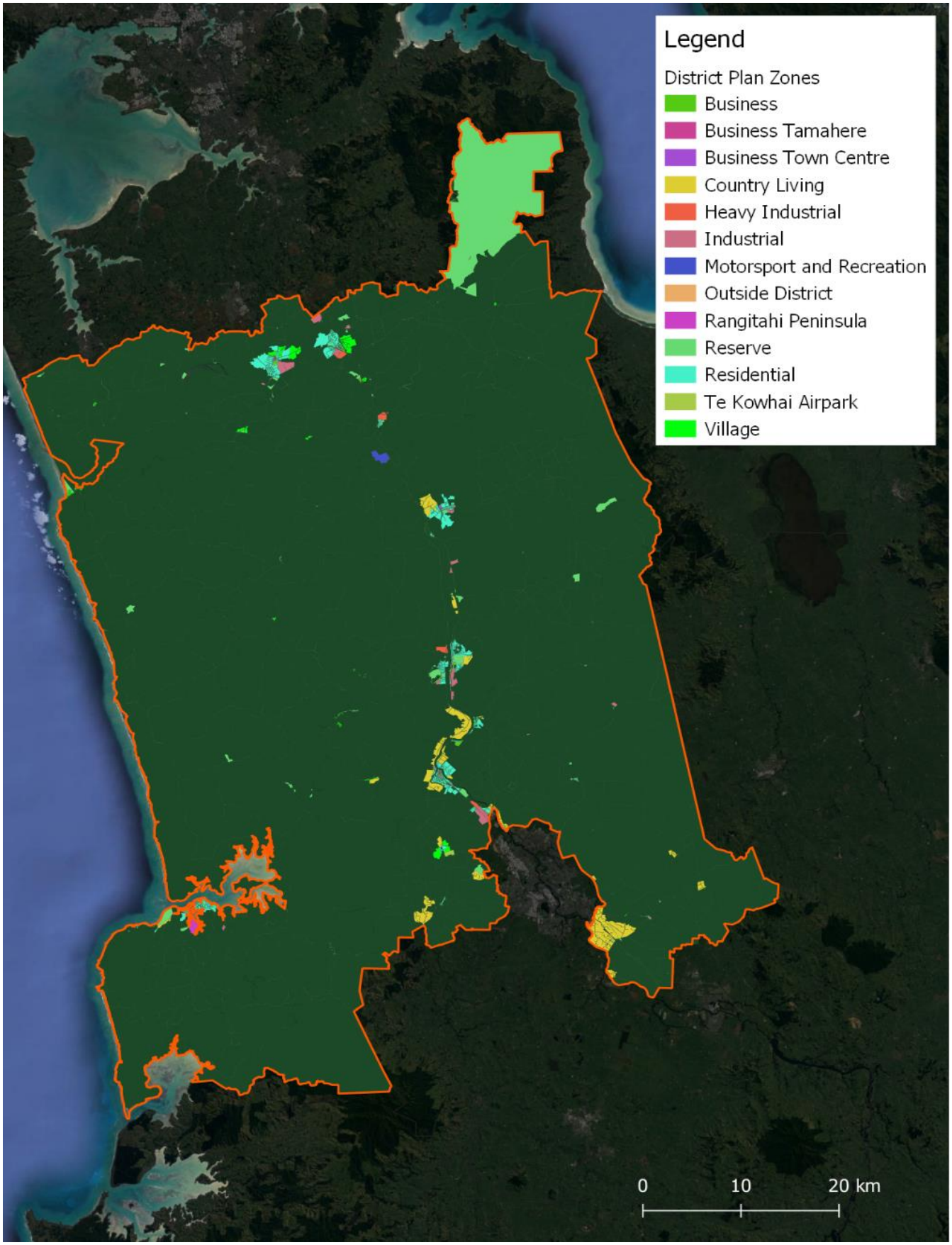
The Business Zone in the Waikato District defines the key commercial and retail activity centres within the District Plan. This zone is found in all major towns through the district, including larger centres such as Pokenō, Tuakau, Te Kauwhata, Ngāruawāhia, Huntly, Horotiu and Raglan. There are some small clusters of Business Zones within minor townships as well, reflecting spot zoning where commercial or retail activities have been developed. Generally, the Business Zones are located in the centre of each urban cluster with residential and other business zoning surrounding these, consistent with historic urban development patterns. In some cases there are business zones located outside the main centre where businesses have established. All these scenarios are taken into account within the BDCA.

The Heavy Industrial Zone is located solely within the Waikato Section of the Waikato District Plan zoning areas. This zone is located primarily on the outskirts of the Meremere, Huntly and Horotiu, where they are occupied (or have previously been occupied) by heavy industrial activities such as processing plants and

[8] Further information regarding this will be supplied in the following HDCA Technical Report.

power stations. The clusters within this zone are included in the BDCA due to their potential for capacity for industrial uses, especially at the decommissioned Meremere Power Station.

Figure 2.6: Land Use Zones in Waikato



The Industrial and Industrial 2 Zones are located adjacent to Pokenō and Tuakau. Both zones primarily allow for industrial land uses such as warehouse, yard, and factory-based activities. The zones are mostly undeveloped, though the Industrial 2 zone in Pokenō is currently under development. These zones are likely to provide locally significant industrial capacity to the Franklin portion of the Waikato District, and have been incorporated into the BDCA due to this.

The Industrial Park Zone (IPZ) is located solely within Horotiu and is currently under development. The Industrial Park Zone has been established to work in combination with the Ports of Auckland inland hub that is also in the process of being developed. The activities located within the IPZ are centred around manufacturing and warehousing, meaning it enables some industrial activity and capacity. It is included in the BDCA due to the role it plays in providing industrial capacity for the southern Waikato.

The final zone included in the Waikato District potion of the BDCA is the Village Business Zone. This zone is reflective of small local businesses located in small townships such as Otaua, Mercer, Mangatangi and Naike. The capacity in this zone is likely to be limited due to the small-scale nature of the zoning but is included in the BDCA for completeness.

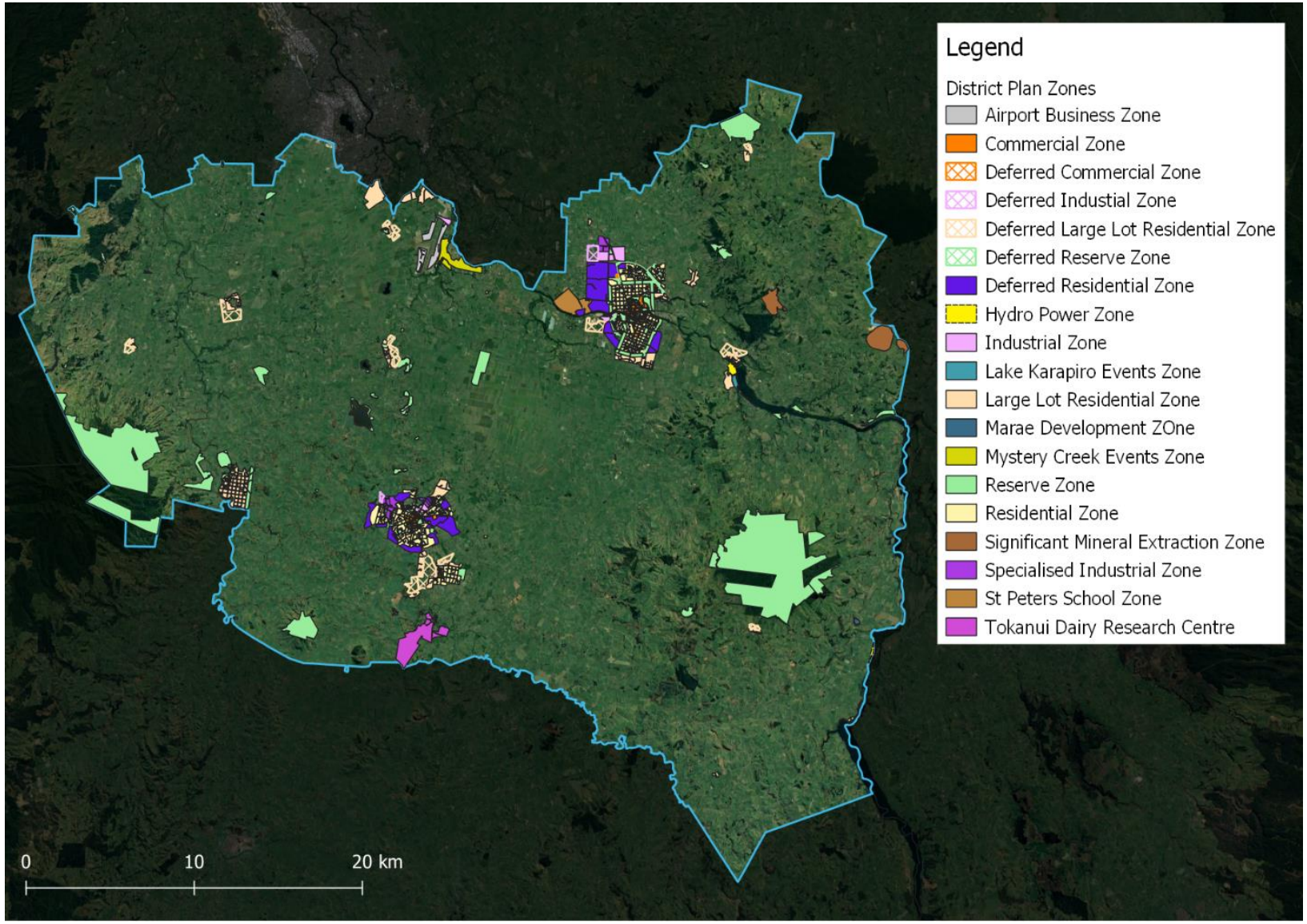
As with the Hamilton City BDCA, the Waikato District BDCA incorporates greenfield structure plan information. Three key greenfields areas around Pokenō, Tuakau and Horotiu have been earmarked for urban industrial uses, so have been included in the BDCA due to the role that they play for the future of the Waikato District business land.

Together, the above zoning and the greenfield structure plan data was used to delineate the urban areas assessed for development under the Waikato District section of the FPP BDCA.

2.2.3 Waipā District

As with the other Future Proof Partners, the Waipā District has a distinctive set of zones that enable a range of uses balancing business, residential, environmental, and recreational land uses. As compared with the other FPP councils however, the zones in Waipā District are less complex to incorporate into the BDCA model. The spatial distribution and full list of zones can be found in Figure 2.7.

Figure 2.7: Land Use Zones in Waipā



The key zones assessed under the Waipā District BDCA are the:

- Airport Business Zone,
- Commercial Zone,
- Deferred Commercial Zone,
- Industrial Zone,
- Deferred Industrial Zone,
- Lake Karapiro Events Zone,
- Mystery Creek Events Zone, and the
- Specialised Industrial Zone.

The Airport Business Zone solely exists as a zoned area around the Hamilton Airport. Although the activities allowed here are relatively restricted due to the sensitivity of the airport, there is the potential for a range of commercial, retail, and industrial uses to occupy the vacant land areas. Currently a 75 hectare mixed use industrial and commercial development is taking place in and around the Airport Business Zone. This development is important for the business land supply of the region and has caused the Airport Business Zone to be included into the BDCA on this basis.

The Commercial Zone is located in clusters within the main urban settlements of Cambridge, Te Awamutu, Kihikihi and Pirongia. The Commercial Zone forms the basis for the town centres within these towns and is home to the main retail and commercial activities that exist. The Deferred Commercial Zone exists solely in Cambridge, in an area that is currently dedicated to industrial type activities. This zone has been earmarked for redevelopment into commercial and retail uses within the District Plan. Together the Commercial and Deferred Commercial Zones form the heart of non-residential urban developments within the Waipā District. Due to their importance in the urban geography of the district, they have been included in the BDCA.

The Industrial, Deferred Industrial, and Specialised Industrial Zones (SIZ) together establish the locations available for industrial land uses throughout the Waipā District. These are primarily located on the outskirts of the urban towns of Cambridge, Te Awamutu and Kihikihi, with a large area of land also zoned to the north of the Hamilton Airport. The Industrial Zone acts as a general catchall for light and heavy industrial activities, including warehousing, factory processing, and yard-based activities. The Deferred Industrial Zone is undeveloped land that has been earmarked for industrial development at a later stage. The SIZ contains key industrial sites, most significantly the Fonterra dairy processing plants. The SIZ is relatively restricted compared to the other industrial zones, only allowing activities that are complementary to dairy processing activities. These three industrial zones together have been included within the BDCA as a means to effectively assess the industrial capacity of the Waipā District.

The Lake Karapiro and Mystery Creek Events Zones have also been included in the BDCA. The two zones provide locally significant areas of land, with the Mystery Creek Events zone totalling nearly 47 hectares. These have been included because of their ability to provide land capacity for commercial and industrial

employment. These sites are largely vacant, and although they are currently reserved for events, their potential land capacity is included in the BDCA for completeness.

3 The District Economy

In this section a broad overview of the Future Proof economy is provided. The structure and make-up of the current economy and broad trends are discussed along with a disaggregation across the three TA's that make up the area. Sectors that are expected to drive future growth are identified and outlined.

3.1 The Current Economy

The Future Proof Area is made up of three TLAs. There are significant differences between the three economies that reflect the different roles each play within the FPP. Hamilton has high relative concentrations of employment in the public sector – public administration and safety, health and education financial and Insurance, and the social assistance and other services sectors. In addition, high concentrations of retailing, manufacturing and utilities reflect its role as the regions prime city.

The economies of both Waikato District and Waipā District are heavily reliant on the primary production sectors for employment (24% and 14% respectively). Hamilton City relies on the primary sector to feed its industrial and service sector base. Hamilton therefore, has an indirect employment relationship with the farming sectors.

Waikato and Waipā are noticeably different from each other. A portion of this difference is driven by the location of minerals such as coal and aggregate and the relative location of the districts relative to Auckland. Waikato District has the highest concentration of construction sector employees as the spill-overs from Auckland begin driving growth in; Pokenō, Tuakau, Te Kauwhata and the large infrastructure projects such as the Southern Motorway extension towards Hamilton. Mining and Quarrying are also highly concentrated in Waikato. The District accounts for over 7% of the nation's employment in this sector, yet less than 1% of total NZ employment. The key drivers are coal and aggregate for Auckland.

Waikato also has lower concentration of tertiary sectors (retail trades, hospitality, financial and professional services, administration, health care social and other services) with both Hamilton and Auckland providing the majority of these services to the district.

Waipā District also has high reliance of the agricultural sectors for employment with a locational quotient of 2.17 (compared with FPP overall). The construction sector is also strongly represented reflecting high levels of residential and civil construction. However, unlike Waikato, Waipā has higher than expected concentrations of retail activity, transport, postal and warehousing and Arts and Recreational services. This last sector is important as it captures the high-performance sports facilities that Waipā District is beginning to see concentrated around Cambridge (Rowing at Karapiro and Cycling at the Velodrome in Cambridge).

Again, as with Waikato, professional and financial services are under-represented in Waipā as Hamilton City businesses meet the wider needs of the FPP.

3.1.1 Sector Level – Employment

Waikato District accounts for 16% of total FPP employment. Employment is highly concentrated into primary production sectors, manufacturing and construction. Agriculture, Forestry and Fishing account for 24% of the total (6,005 MECs in 2020) with Construction a further 14% (3,400 MECs) and Manufacturing 12% (3,030 MECs). Note, as with the original assessment, employment is measured in Modified Employee Counts or MECs. This is a metric composed of employees and working proprietors.

Hamilton City hosts the largest number of employees, making up 68% of the total FPP workforce. Employment is spread over a range of sectors, in line with its role as the main city within the Waikato and New Zealand's 4th largest city.

The Health Care and Social Assistance sector engages 17,000 MECs (16.2% of total employment within Hamilton City), followed by Manufacturing with 10,430 MECs (9.9%), Retail trade with 10,250 MECs (9.5%), Construction with 9,990 MECs (9.5%), Professional, Scientific and Technical Services with 9,950 MECs (9.4%) and Education and Training with 9,380 MECs (8.9%). The level of employment in these sectors reflects Hamilton's role as an urban centre, meeting the needs of a wide population across the FPP and beyond.

Waipā District employs 16% of all MECs within the Future Proof Partners area. As with Waikato District, the largest sectors are Agriculture, Forestry and Fishing (3,560 or 14.4% of the total 24,770), Construction 3,110 or 12.5% of the total and Manufacturing (2,450 or 9.9%). Since the last HBA was prepared, Agricultural employment has declined in the District in absolute terms and as a percentage while Construction has grown strongly.

Compared to Waikato District however, the Retail Trade sector employment in Waipā is higher in absolute numbers (2,430 versus 1,070 MECs), equating to 9.8% of all employees within the District vs 4.3% in Waikato. This trend is reflected in other service sectors as well reflecting the effect of Auckland's proximity to Waikato District driving less internal self-reliance compared with Waipā.

The employment trends are also reflective of urban environments within the Waikato and Waipā Districts. Urban-centric sectors within Waipā District have a higher overall concentration of MECs than the same sectors within Waikato District. Along with the fact that Waipā District is only one-third the size of Waikato District (Section 2.1), the employment trends imply that Waipā District is overall more urban in terms of the economy than Waikato District. This is consistent with the spatial development of the two districts, wherein Waikato District is extensive with many small towns interspersed by rural areas, while Waipā District is centred largely around the two larger townships of Cambridge and Te Awamutu-Kihikihi.

Figure 3.1: FP Partners Employment (MECs), 2020

Sector	Hamilton	Waikato	Waipa	Total FPP
Agriculture, Forestry and Fishing	723	6,005	3,564	**10,292**
Mining	51	423	25	**499**
Manufacturing	10,427	3,031	2,448	**15,906**
Electricity, Gas, Water and Waste Services	1,121	308	181	**1,610**
Construction	9,989	3,404	3,105	**16,497**
Wholesale Trade	4,740	625	978	**6,343**
Retail Trade	10,246	1,069	2,427	**13,743**
Accommodation and Food Services	6,319	1,200	1,465	**8,984**
Transport, Postal and Warehousing	2,412	782	922	**4,116**
Information Media and Telecommunications	1,110	107	129	**1,346**
Financial and Insurance Services	1,789	115	292	**2,197**
Rental, Hiring and Real Estate Services	1,848	557	499	**2,903**
Professional, Scientific and Technical Services	9,946	1,394	1,680	**13,020**
Administrative and Support Services	6,158	716	688	**7,562**
Public Administration and Safety	6,139	943	660	**7,743**
Education and Training	9,382	1,932	2,065	**13,379**
Health Care and Social Assistance	17,002	1,257	1,912	**20,171**
Arts and Recreation Services	1,855	527	739	**3,121**
Other Services	3,997	623	993	**5,614**
TOTAL	105,252	25,018	24,774	**155,044**

Source: Statistics NZ Business Directory, 2020

Figure 3.2: FP Partners Businesses (GEOs), 2020

Sector	Hamilton	Waikato	Waipa	Total FPP
Agriculture, Forestry and Fishing	246	2,585	1,666	**4,497**
Mining	11	28	11	**50**
Manufacturing	835	443	325	**1,603**
Electricity, Gas, Water and Waste Services	53	28	30	**112**
Construction	2,047	1,294	1,016	**4,357**
Wholesale Trade	674	225	245	**1,144**
Retail Trade	1,357	342	418	**2,118**
Accommodation and Food Services	750	192	227	**1,169**
Transport, Postal and Warehousing	464	236	185	**885**
Information Media and Telecommunications	143	50	36	**229**
Financial and Insurance Services	1,039	479	429	**1,947**
Rental, Hiring and Real Estate Services	3,000	1,829	1,437	**6,266**
Professional, Scientific and Technical Services	1,764	716	608	**3,088**
Administrative and Support Services	680	254	204	**1,137**
Public Administration and Safety	115	47	27	**189**
Education and Training	457	217	146	**820**
Health Care and Social Assistance	1,118	314	285	**1,716**
Arts and Recreation Services	286	187	217	**689**
Other Services	917	361	342	**1,620**
TOTAL	15,955	9,828	7,852	**33,634**

Source: Statistics NZ Business Frame, 2020

The composition of businesses within the Future Proof Partnership councils mirror that of the MECs, with Hamilton City largely comprised of urban-centric businesses, while Waikato and Waipā Districts have a large number of Agriculture, Forestry and Fishing sector businesses.[9]

Hamilton houses 47% of the businesses within the FPP area (a drop of 1% compared with 2016) but these businesses are larger on average as it employs 68% of the total employees. The average business in Hamilton employs 6.6 workers (up 0.3 from 2016), whereas the average in Waikato District is only 2.6 and Waipā 3.2 MECs/Geo Unit (0.1 and 0.3 MECs/Geo respectively).

3.1.2 Key economic sectors

In terms of the distribution of employment by sector. Hamilton has high levels of relative employment in the higher order service sectors, (Finance and Insurance, Communications, Administration and Health Care and Social Services). This is as expected given its role as the Waikato Regional Centre.

[9] The large number of Rental, Hiring and Real Estate Services businesses as compared to MECs are the result of inactive companies and shell corporations.

Waikato District has a stronger primary sector, extractive industries and utilities focus (electricity and gas generation and water and waste services).

Figure 3.3: FP Partners Businesses (Share %), 2020

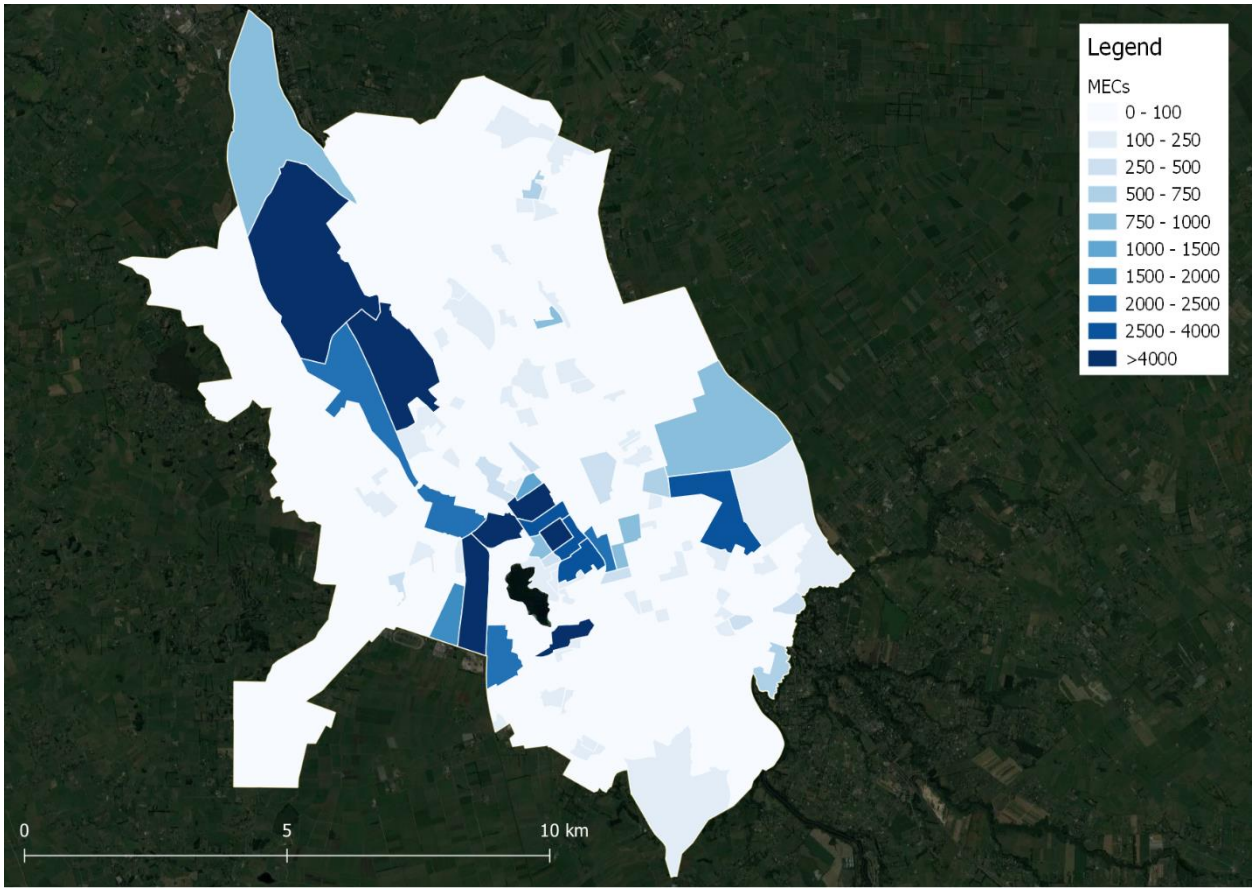
Sector	Hamilton City	Waikato District	Waipa District	Total FPP
Agriculture, Forestry and Fishing	1.5%	26.3%	21.2%	**13.4%**
Mining	0.1%	0.3%	0.1%	**0.1%**
Manufacturing	5.2%	4.5%	4.1%	**4.8%**
Electricity, Gas, Water and Waste Services	0.3%	0.3%	0.4%	**0.3%**
Construction	12.8%	13.2%	12.9%	**13.0%**
Wholesale Trade	4.2%	2.3%	3.1%	**3.4%**
Retail Trade	8.5%	3.5%	5.3%	**6.3%**
Accommodation and Food Services	4.7%	2.0%	2.9%	**3.5%**
Transport, Postal and Warehousing	2.9%	2.4%	2.4%	**2.6%**
Information Media and Telecommunications	0.9%	0.5%	0.5%	**0.7%**
Financial and Insurance Services	6.5%	4.9%	5.5%	**5.8%**
Rental, Hiring and Real Estate Services	18.8%	18.6%	18.3%	**18.6%**
Professional, Scientific and Technical Services	11.1%	7.3%	7.7%	**9.2%**
Administrative and Support Services	4.3%	2.6%	2.6%	**3.4%**
Public Administration and Safety	0.7%	0.5%	0.3%	**0.6%**
Education and Training	2.9%	2.2%	1.9%	**2.4%**
Health Care and Social Assistance	7.0%	3.2%	3.6%	**5.1%**
Arts and Recreation Services	1.8%	1.9%	2.8%	**2.0%**
Other Services	5.7%	3.7%	4.4%	**4.8%**
TOTAL	**100%**	**100%**	**100%**	**100%**

Waipā also has a primary sector focus along with Transport and Warehousing concentration, Rental Hiring and Real estate services and the Arts and Recreational services. The presence of a number of national level sports specialty training centres contributes strongly to this.

3.1.3 Spatial Distribution of Businesses and Employment

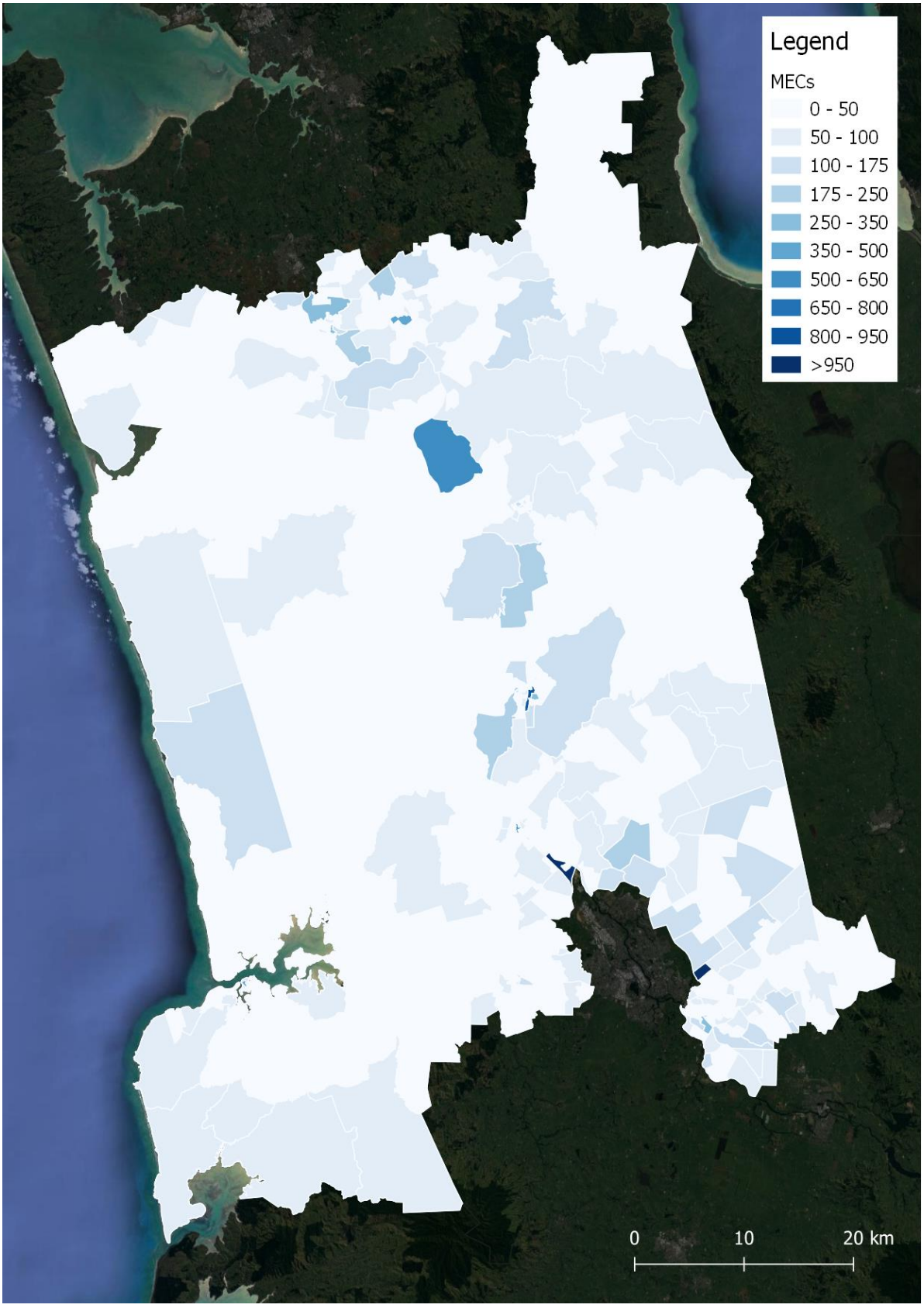
The following figures show the spatial distribution of total MECs across each of the FPP Councils.

Figure 3.4: Distribution of Employment by SA1, Hamilton City, 2020



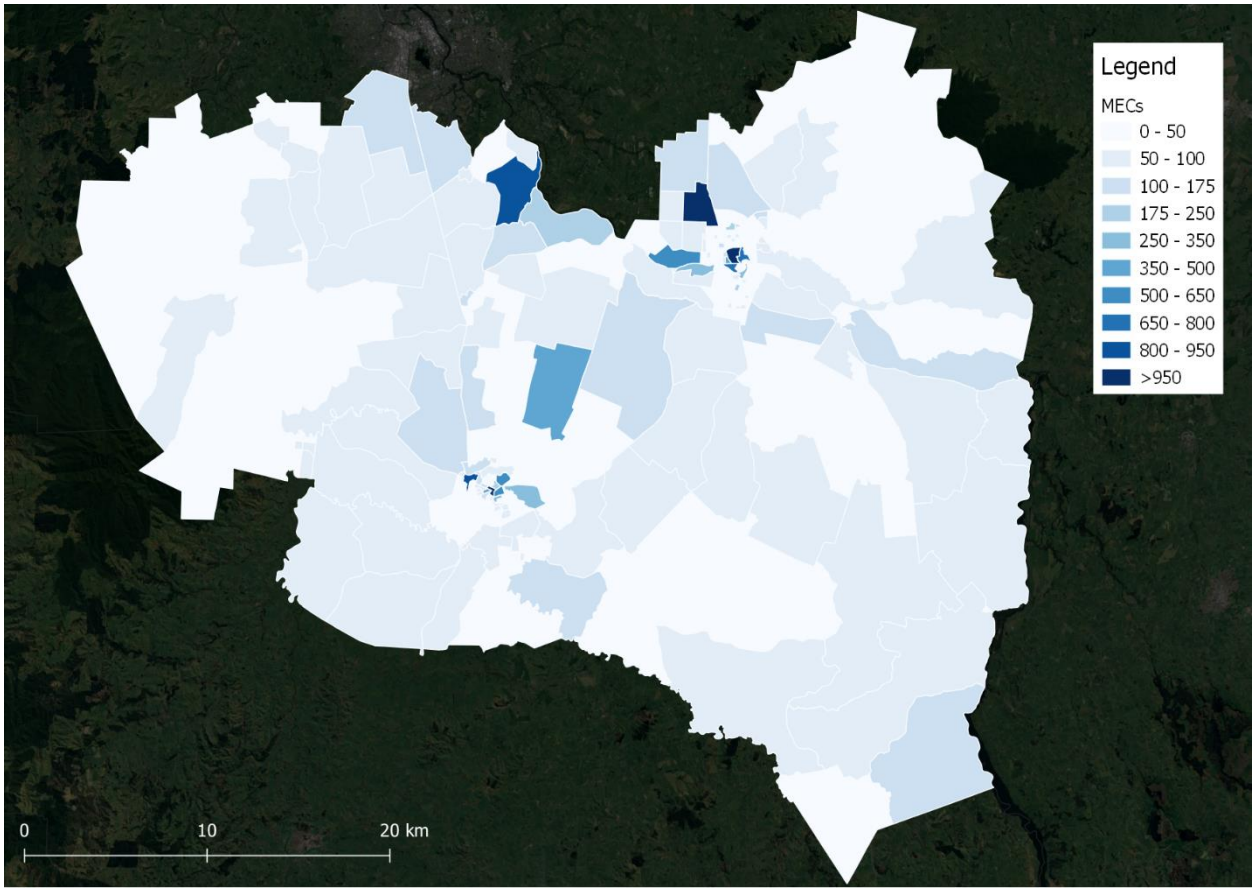
Source: Business Directory 2020

Figure 3.5: Distribution of Employment by SA1, Waikato District



Source: Business Directory 2020

Figure 3.6: Distribution of Employment by SA1, Waipā District, 2020



Source: Business Directory 2020

3.2 Recent Changes in the Economy

3.2.1 Sector Level – Employment

Recent changes in employment within each of the TAs provides solid indications of sectors that are driving the various economies.

Hamilton City

Since 2001 the Hamilton City economy has increased employment by over 36,100 workers or by almost 52% in total. This translates into an average increase of around 2.7% annually. However, this overall average masks significant variation in growth rates. Between 2001 and 2005 the economy grew by 4.3% annually. This high period of growth was followed by 5 years of stagnation as employment between 2005 and 2010 grew by only 0.3% annually. This time period spanned the GFC, that saw many economies halt growth or go into decline. Between 2010 and 2015 the economy slowly recovered at an average of 1.7% annually. However, between 2015 and 2020 the economy has grown strongly at an average of 3.6% annually (Figure 3.7).

The effects of the slowdown attributable to COVID-19 are only beginning to be felt in the economy. In Hamilton's case this is reflected in a growth reduction between 2018 and 2020 to 3.0% average annual (down from an average annual 4.1% growth between 2015 and 2018).

Figure 3.7: Hamilton City Employment Changes (MECs) 2001 - 2020

Sector	2001 - 05	2005-10	2010-2015	2015-2020	Total 2001-2020
Agriculture, Forestry and Fishing	-26	122	-336	206	**-34**
Mining	29	-8	19	8	**48**
Manufacturing	983	-1,046	2,041	443	**2,422**
Electricity, Gas, Water and Waste Services	6	209	265	289	**770**
Construction	1,566	142	673	2,601	**4,982**
Wholesale Trade	762	-116	-249	738	**1,135**
Retail Trade	848	305	439	1,029	**2,621**
Accommodation and Food Services	1,230	-473	635	1,279	**2,671**
Transport, Postal and Warehousing	-137	-565	18	302	**-381**
Information Media and Telecommunications	169	-835	-234	-137	**-1,037**
Financial and Insurance Services	54	5	-40	95	**113**
Rental, Hiring and Real Estate Services	35	-164	82	426	**379**
Professional, Scientific and Technical Services	2,282	213	518	1,893	**4,905**
Administrative and Support Services	1,004	523	-301	1,567	**2,793**
Public Administration and Safety	149	1,153	543	1,202	**3,047**
Education and Training	714	430	410	959	**2,513**
Health Care and Social Assistance	1,139	1,583	2,181	2,460	**7,363**
Arts and Recreation Services	479	-22	312	95	**864**
Other Services	718	-228	-10	464	**945**
TOTAL	12,006	1,228	6,965	15,919	**36,117**

Figure 3.8: Hamilton City Employment Changes (%) 2001 - 2020

Sector	2001 - 05	2005-10	2010-2015	2015-2020	Total 2001-2020
Agriculture, Forestry and Fishing	-3%	17%	-39%	40%	**-4%**
Mining	926%	-24%	78%	18%	**1542%**
Manufacturing	12%	-12%	26%	4%	**30%**
Electricity, Gas, Water and Waste Services	2%	58%	47%	35%	**219%**
Construction	31%	2%	10%	35%	**99%**
Wholesale Trade	21%	-3%	-6%	18%	**31%**
Retail Trade	11%	4%	5%	11%	**34%**
Accommodation and Food Services	34%	-10%	14%	25%	**73%**
Transport, Postal and Warehousing	-5%	-21%	1%	14%	**-14%**
Information Media and Telecommunications	8%	-36%	-16%	-11%	**-48%**
Financial and Insurance Services	3%	0%	-2%	6%	**7%**
Rental, Hiring and Real Estate Services	2%	-11%	6%	30%	**26%**
Professional, Scientific and Technical Services	45%	3%	7%	24%	**97%**
Administrative and Support Services	30%	12%	-6%	34%	**83%**
Public Administration and Safety	5%	36%	12%	24%	**99%**
Education and Training	10%	6%	5%	11%	**37%**
Health Care and Social Assistance	12%	15%	18%	17%	**76%**
Arts and Recreation Services	48%	-1%	22%	5%	**87%**
Other Services	24%	-6%	0%	13%	**31%**
TOTAL	17%	2%	8%	18%	**52%**

In addition to the overall growth rates being variable, growth between sectors has been uneven as the economy continues to evolve. Between 2001 and 2020 approximately 60% of the growth has been in the Professional, Scientific and Technical services, administrative and public service and education, health and social assistance sectors. Strong growth has also occurred in the Construction sector (accounting for 14% of all growth) as the City's residential growth has accelerated.

A few sectors are in decline as either technological change occurs (as with the Information Media and Telecommunications sector) or land use changes (Agriculture is forced out of Hamilton City as the city grows and the land increases in value) (Figure 3.8).

Waikato District

Growth in employment in Waikato District has also varied widely since 2001. In total employment in the District has increased by 44% since 2001, at an average annual rate of 2.3%. This is broadly the same as Hamilton City. Growth has been lumpy with growth of 1.8% annually between 2001 and 2005. This was followed by a decline over the GFC of on average 0.8% annually between 2005 and 2010. However, between 2010 and 2015, the economy has increased employment by an average of 4.2% annually. This slowed between 2015 and 2020 as a result of COVID 19 slowdown (among other things) to an annual average of around 3.1%. In fact, employment growth in the past year (2019 – 2020) was only 1.1%.

The highest levels of employment growth have occurred in the Construction sector which increased by 1,449MECs between 2001 and 2020. , This made up 19% of total growth. Employment in the Primary

sectors has shown sharp decline with a net loss of 940 employees, or 14% of its 2001 total. The professional, scientific technical services, administrative, education, health and social assistance sectors have grown by 122% over the 19 years since 2001. This is noticeably more than in Hamilton City where those sectors grew by 74% in total (Figure 3.9 and Figure 3.10). This points to a maturing of the economy and a move towards meeting the needs of Waikato's growing population locally.

Figure 3.9: Waikato District Employment Changes (MECs) 2001 - 2020

Sector	2001 - 05	2005-10	2010-2015	2015-2020	Total 2001-2020
Agriculture, Forestry and Fishing	-1,049	-894	1,257	-255	**-940**
Mining	182	8	-162	12	**39**
Manufacturing	301	-326	726	748	**1,449**
Electricity, Gas, Water and Waste Services	60	84	109	-146	**106**
Construction	429	85	387	987	**1,889**
Wholesale Trade	40	-54	35	252	**273**
Retail Trade	73	-61	20	171	**203**
Accommodation and Food Services	242	-119	102	253	**479**
Transport, Postal and Warehousing	63	-195	-36	144	**-24**
Information Media and Telecommunications	12	16	33	4	**65**
Financial and Insurance Services	15	23	-37	33	**33**
Rental, Hiring and Real Estate Services	45	-1	69	79	**193**
Professional, Scientific and Technical Services	311	121	277	333	**1,042**
Administrative and Support Services	218	36	61	55	**370**
Public Administration and Safety	48	65	414	121	**648**
Education and Training	63	350	140	198	**751**
Health Care and Social Assistance	121	-10	306	201	**618**
Arts and Recreation Services	32	78	20	112	**241**
Other Services	15	95	50	31	**191**
TOTAL	1,222	-699	3,771	3,330	**7,625**

Figure 3.10: Waikato District Employment Changes (%) 2001 - 2020

Sector	2001 - 05	2005-10	2010-2015	2015-2020	Total 2001-2020
Agriculture, Forestry and Fishing	-15%	-15%	25%	-4%	**-14%**
Mining	47%	1%	-28%	3%	**10%**
Manufacturing	19%	-17%	47%	33%	**92%**
Electricity, Gas, Water and Waste Services	30%	32%	32%	-32%	**53%**
Construction	28%	4%	19%	41%	**125%**
Wholesale Trade	11%	-14%	10%	67%	**77%**
Retail Trade	8%	-7%	2%	19%	**23%**
Accommodation and Food Services	34%	-12%	12%	27%	**66%**
Transport, Postal and Warehousing	8%	-22%	-5%	23%	**-3%**
Information Media and Telecommunications	29%	29%	47%	4%	**155%**
Financial and Insurance Services	18%	24%	-31%	39%	**41%**
Rental, Hiring and Real Estate Services	12%	0%	17%	16%	**53%**
Professional, Scientific and Technical Services	88%	18%	35%	31%	**296%**
Administrative and Support Services	63%	6%	10%	8%	**107%**
Public Administration and Safety	16%	19%	101%	15%	**219%**
Education and Training	5%	28%	9%	11%	**64%**
Health Care and Social Assistance	19%	-1%	41%	19%	**97%**
Arts and Recreation Services	11%	25%	5%	27%	**85%**
Other Services	3%	21%	9%	5%	**44%**
TOTAL	7%	-4%	21%	15%	**44%**

Waipā District

In terms of employment growth Waipā District sits slightly higher than Hamilton City District. In total the district has seen employment growth of 54% since 2001 – an average of 2.9% annually. Focusing on the 4 growth periods, Waipā has shown more growth stability between each period than the other 2 TA's. Between 2001 and 2005 the district added 16% more employment (higher than Waikato District at 7% similar to Hamilton at 17%. Between 2005 and 2010, the effects of the GFC and global slow down saw this drop to 4% total growth (versus -4% for Waikato and 2% for Hamilton). The post GFC recovery period (2010 – 2015) saw the district employ 10% more workers – significantly lower than Waikato at 21% but more than Hamilton at 8%. The most recent period (2015 – 2020) saw the district add 16% more workers Figure 3.11.

IN total the district has grown an average of 2.9% annually – higher than both Hamilton City at 2.7% annually and Waikato District at 2.3% average annual change.

At a sector level growth is more concentrated into the household services sector[10] than Waikato District, and has been similar to Hamilton's. In Waipā these sectors accounted for 31% of total 2001 – 2020 employment growth, compared with 24% in Waikato and 32% in Hamilton. In terms of more business

[10] Education and Training, Health Care and Social Assistance, Arts and Recreation and Other Services.

services[11] Waipā added 21% additional employees between 2001 and 2020. Waikato added 31% whiles Hamilton City added 28% more workers.

In Waipā, the largest single growth sector was the Construction sector that grew by 20% since 2001 – almost twice the additional employment as the next largest growth sector. As with both Hamilton City and Waikato District, Agriculture, Forestry and Fishing sector declined the most. In Waipā District's case losing 610 jobs between 2001 and 2020 or 7% of its workforce.

The effects of a COVID-19 slowdown are also somewhat evident, with growth in the past 2 years (2018 – 2020) running at 2.2% annually compared with 3.8% on average for the 3 previous years (2015 – 2018). This downturn is similar in percentage terms to Hamilton City's downturn over the same periods – but twice the reduction that Waikato District felt (Figure 3.11 and Figure 3.12).

Figure 3.11: Waipā District Employment Changes (MECs) 2001 - 2020

Sector	2001 - 05	2005-10	2010-2015	2015-2020	Total 2001-2020
Agriculture, Forestry and Fishing	-231	-168	258	-471	**-612**
Mining	11	12	-15	-9	**-1**
Manufacturing	551	-209	392	-12	**721**
Electricity, Gas, Water and Waste Services	32	10	-16	69	**95**
Construction	308	-4	310	1,127	**1,741**
Wholesale Trade	184	7	65	123	**379**
Retail Trade	112	-52	486	222	**768**
Accommodation and Food Services	282	257	70	276	**885**
Transport, Postal and Warehousing	74	-4	75	77	**222**
Information Media and Telecommunications	9	-20	28	20	**37**
Financial and Insurance Services	84	5	-70	102	**120**
Rental, Hiring and Real Estate Services	26	54	-28	45	**97**
Professional, Scientific and Technical Services	494	161	55	179	**889**
Administrative and Support Services	49	-7	41	190	**273**
Public Administration and Safety	31	43	50	287	**410**
Education and Training	230	363	134	189	**917**
Health Care and Social Assistance	112	34	104	713	**962**
Arts and Recreation Services	123	43	57	105	**329**
Other Services	16	192	21	265	**494**
TOTAL	2,496	716	2,016	3,496	**8,725**

[11] Information, Media and Telecomms, Financial and Insurance, Rental, Hiring and Real Estate, Professional, Scientific and Technical Services, Admin and Support Services and Public Admin and Safety

Figure 3.12: Waipā District Employment Changes (%) 2001 - 2020

Sector	2001 - 05	2005-10	2010-2015	2015-2020	Total 2001-2020
Agriculture, Forestry and Fishing	-6%	-4%	7%	-12%	**-15%**
Mining	44%	33%	-30%	-27%	**-3%**
Manufacturing	32%	-9%	19%	-1%	**42%**
Electricity, Gas, Water and Waste Services	37%	8%	-12%	61%	**110%**
Construction	23%	0%	19%	57%	**128%**
Wholesale Trade	31%	1%	8%	14%	**63%**
Retail Trade	7%	-3%	28%	10%	**46%**
Accommodation and Food Services	49%	30%	6%	23%	**152%**
Transport, Postal and Warehousing	11%	-1%	10%	9%	**32%**
Information Media and Telecommunications	10%	-20%	35%	18%	**40%**
Financial and Insurance Services	49%	2%	-27%	53%	**70%**
Rental, Hiring and Real Estate Services	7%	13%	-6%	10%	**24%**
Professional, Scientific and Technical Services	62%	13%	4%	12%	**112%**
Administrative and Support Services	12%	-1%	9%	38%	**66%**
Public Administration and Safety	12%	15%	15%	77%	**164%**
Education and Training	20%	26%	8%	10%	**80%**
Health Care and Social Assistance	12%	3%	9%	59%	**101%**
Arts and Recreation Services	30%	8%	10%	17%	**80%**
Other Services	3%	37%	3%	36%	**99%**
TOTAL	16%	4%	10%	16%	**54%**

3.3 Economic Growth Projections

The NPS requires Councils to understand more about the growth pressures they are likely to face over the short, medium and long term. This means developing a set of economic projections that form the basis for generating estimates of the amount of employment land required and the amount of GFA needed to be developed on that land to accommodate growth. In the 2017/18 HBA assessment, we relied on two related economic models to generate employment and GDP projections.

- Waikato Integrated Scenario Explorer (WISE) Model. This has recently undergone a significant update including updating the Land Use files, the Population projections and the Economic Models that reside within the Explorer.
- Unconstrained Economic Futures Model (EFM), to provide an assessment unconstrained by Land Use limits.

The WISE model was developed by ME as part of the Sustainable Pathways stream of research funded by Central Government. Details on its development and background are contained in the 2017 HBA prepared for Future Proof Partners under the NPS-UDC. Those details are not repeated here. However, the model has undergone a significant refresh, with new aspirations, zoning information, population projections

(prepared by NIDEA unit at Waikato University) and a new updated Economic Model prepared by M.E Research.

Following release of the population and household projections contained within WISE, the Future Proof Partners met to discuss and determine the most appropriate basis for assessing growth to inform the HBA. In the 2017/18 iteration of the HBA, each Council was left to determine its own growth future. That led to the situation where Waikato District and Waipā District relied on the high growth future, while Hamilton relied on a low growth future. IN this iteration, the FPP Councils have agreed to base the HBA on the updated High Growth projections contained within WISE.

The rationale for this is that in order to ensure that issues such as housing affordability and unavailability and high price of industrial land are addressed, planning for and catering for a High Growth future is the most prudent approach. Given the Monitoring role Councils are playing, changes or deviation from this approach can lead to adjustments or delays on zoning should the growth be delayed.

In the previous iteration of the HBA under the NPS-UDC, we combined WISE output with an unconstrained EFM that projected growth without the land allocation constraints that WISE operates under. However, in this iteration, the EFM has not been updated to the same level as WISE. Therefore, these comparisons are not possible. Analysis of the previous iteration of the HBA revealed that the differences between relying on WISE alone compared to WISE and the EFM were very small. The key reason for this is that very few constraints to growth were identified in the 2017 modelling that could potentially have driven locational and distributional differences between WISE output and EFM output.

That provides confidence that for this iteration, relying on WISE output will provide a solid basis for assessing demand by type and location.

As with the 2017 assessment, the link between the household capacity assessment and the business assessment is important. The same population and household projections drive both sets of models. This ensures consistency across the reports and ensures Council are fully informed of the effects of alternative growth futures.

Figure 3.13 highlights anticipated growth in employment (MECs) across the FPP are from 2020 to 2050. This data indicates growth will slow significantly over the next 3 years as the effects of COVID-19 work through the economy. This sees average annual growth drop from an average of around 4% between 2015 and 2020 to 1.4% annually from 2020-2023. This is followed by an improvement to 1.6% on average each year from 2023 to 2030 before declining in the long run to 1,1% on average between 2030 and 2050. This long term growth decline is in line with national trends and is driven by declining population growth.

In total the FPP area adds 6,900 employees in the short term, a further 18,800 in the medium term and 40,880 between 2030 and 2050.

Figure 3.13: Future Proof Partners Area Employment Growth (MECs), 2020 - 2050

					Growth		
Sector	2020	2023	2030	2050	2020-2023	2023-2030	2030-2050
Agriculture, Forestry and Fishing	11,300	12,000	13,100	15,100	720	1,080	2,000
Mining	400	500	500	500	90	0	50
Manufacturing	16,600	17,000	19,300	23,900	380	2,290	4,610
Electricity, Gas, Water and Waste Services	1,700	1,800	2,100	2,800	100	300	650
Construction	17,300	18,300	20,500	24,500	1,030	2,250	4,010
Wholesale Trade	6,300	6,600	7,500	9,300	250	900	1,770
Retail Trade	14,000	14,300	15,100	16,300	220	830	1,250
Accommodation and Food Services	9,100	9,400	10,500	12,000	300	1,030	1,560
Transport, Postal and Warehousing	4,300	4,300	4,900	6,000	30	530	1,160
Information Media and Telecommunications	1,700	1,700	2,000	2,500	50	250	560
Financial and Insurance Services	2,300	2,600	3,100	4,100	220	500	1,050
Rental, Hiring and Real Estate Services	3,100	3,100	3,300	3,900	10	250	600
Professional, Scientific and Technical Services	13,100	13,900	15,700	20,400	790	1,860	4,670
Administrative and Support Services	8,200	9,100	10,600	13,900	840	1,540	3,290
Public Administration and Safety	7,400	7,700	8,400	10,400	310	740	1,980
Education and Training	14,100	14,600	16,400	21,000	550	1,760	4,650
Health Care and Social Assistance	19,400	20,000	21,600	25,800	650	1,570	4,220
Arts and Recreation Services	3,200	3,300	3,700	4,600	70	350	950
Other Services	5,700	6,000	6,800	8,700	310	780	1,850
Total	**159,200**	**166,200**	**185,100**	**225,700**	**6,920**	**18,810**	**40,880**

Source: WISE

At the sector level there are some key trends that will have a significant impact on provision of land and capacity. The most employment growth out to 2050 occurs in;

- Professional, Scientific and Technical Services which adds over 7,300 MECs to 2050 (56% increase on 2020).
- Construction which adds just 7,300 jobs to 2050 (42% growth)
- Manufacturing, 7,280 additional jobs to 2050 (44% growth).

In percentage terms the highest growth occurs in financial and Insurance Services sector (78% growth to 2050 followed by Admin and Support Services (70% growth) and Utilities sector (65% growth).

While the details of growth at the local level and how they translate into demand for land and space are covered in the next sector, the key points that emerge from economic growth at the macro level are;

- Overall growth in employment expectations have reduced compared with the 2017 assessment. Current growth to 2050 is 66,60 MECs (over 30 years). In 2017 growth between 2021 and 2051 (30 years) was expected to be 69,000 – or 4% more.
- COVID-19 is expected to dampen growth over the short term
- Growth, overall tapers off over time in line with population growth declines..

Note that the growth projections have been generated by NIDEA in consultation with Councils. In the previous HBA under the NPS-UDC, each Council debated and selected a growth future that aliged with internal modelling and Council strategic view of the future. In this iteration, FPP have debated and elected to adhere to a single view of the future. That is, they have selected a High Growth future path upon which to base assessment of capacity and sufficiency of supply to meet demands.

The High growth future projected by NIDEA, sits slightly lower than the Statistics New Zealand's High growth future.

3.3.1 Drivers of Growth

As with the previous assessment, the economics module that sits within WISE, generates estimates of future Employment, Output and contributions to GDP. These estimates are driven by a set of "Business as Usual" commodity and service parameters, translated into demands. In the model framework these demands are called 'Final Demands'.

Within the model, final demands are made up of five categories: household consumption, international exports, inter-regional exports, gross fixed capital formation (GFKF), and changes in inventory. The process for deriving future BAU estimates for each category is as follows:

a) Household Consumption: The household consumption final demand is made up of four sub-consumption categories, 'Households', 'Private non-profit institutions servings households', 'Central Government' and 'Local Government'. Future estimates of demand in each sub-category is primarily driven by changes in future population. The Model uses NIDEAs 5-year age sex cohort population projections covering all FPP TA's. It is assumed that each person within the region consumes a constant mix of goods and services. Thus, any population growth for the area will result in a proportional increase in the amount of goods and services consumed within each sub-categories.

   In addition, the model includes the implications of changing demographic structure on household consumption. For all sub-categories, future demands by each cohort are adjusted by a cohort-specific consumption scalar. These scalars define the ratio of spending by an average person across all cohorts, to the spending of an average person within the subject cohort.

   Resulting value for a particular year provides an estimate of the growth in total household consumption from the base year.

b) International Exports: are overseas demand of goods and services produced by an area and are exogenous inputs to the model. The growth projections used include BAU projections of international exports and future projections for each industry are generated by applying long-run average growth rates to the base year international export values as obtained from the Multi-Regional Input-Output Table (MRIO).

   The growth rates were generated using a number of different statistical methods. Selection of the time series techniques applied depended on the availability of the data and underlying production structure of the industry output being analysed. For example, long-run growth rates for agricultural industries were estimated based on long-run projections of physical stocks and land

availability constraints. Conversely, industries with less physical constraints, such as services, were estimated based on long-run national export trends.

c) Inter-regional Exports: are demands of good and services produced within a study area by areas outside the study area, but within New Zealand. In other words, trades between FPP areas and the rest of New Zealand affects demand for the production activities in each area.
d) Gross Fixed Capital Formation (GFKF): Future increases in investment demand are represented as a change in GFKF and is an exogenous input into the model. The future GFKF projections for each industry is generated by applying long-run average growth rates to the base year GFKF values as obtained from the MRIO. The growth rates were determined by econometric time-series analysis. The data utilised in the time-series analysis of GFKF are derived from SNZ's National Accounts gross fixed capital formation by industry time series.
e) Changes in Inventory: these are an endogenous variable within the model, where it's future projections are weighted average of future values of other final demand categories. Within the national accounts framework, the changes in inventory is an accounting balancing item and records changes in financial inventory stocks. Note: for many industries changes in inventory are very small compared with international exports, inter-regional exports, and GFKF.

In the FPP area the economy is driven by the following key drivers;

- Dairy Farming: Dairy farming is not a large employer of workforce (less than 2% of the national total), it is a key driver of employment in other sectors. Waikato Region is New Zealand Dairy hub with Hamilton City as the key support centre. Dairy farming drives everything from manufacturing of dairy products, to farm machinery and equipment, IT, research sector, retail and whole sale as well as construction. While the Dairy sector is not a high growth sector it is large and will remain the key driver of the FPP economy for the foreseeable future.

- Population Growth: This is driven by natural increases and the FPP proximity to Auckland. Significant growth in the north of the FPP area (Pokenō, Tuakau and even Te Kauwhata) is driven by spill-over from Auckland. Population growth drives a range of other sectors including; retail, construction, health and education services and social and personal services. These are highly concentrated in Hamilton and employ large number of workers.

- Tainui: Local iwi are major players in a wide range of FPP based economic activity. Waikato iwi have an asset base worth in excess of $6bn (around 15% of the total iwi asset base). They are engaged in farming, forestry and tourism ventures across the FPP and are developing the Ruakura Freight hub to the West of Hamilton. The role this hub plays in future functioning of both Ports of Auckland and Ports of Tauranga will significantly impact on FPP growth futures. Decisions Tainui make with respect to the long term investments and the manner in which they engage with their people and the wider Waikato economy will drive future economic performance.

- Waikato Expressway and other Transport links: The recently completed Waikato Expressway reduces the relative distance to the large Auckland market. This makes locating business activities – especially industrial activities in the FPP significantly more attractive. This combined with high volumes of relatively low cost serviced industrial land will drive growth to the north of

Hamilton. In addition, the H2A project will drive transport and logistics related growth over the coming decades along with decisions on the location of Ports to serve the upper North Island

The FPP area forms one corner of the Golden Triangle. Taking advantage of these locational characteristics, its natural resources, historical and cultural capital, the skills and training of local workforce and entrepreneurial nature of its people will see ongoing solid growth across the FPP area. Productive land in the FPP area is highly developed and highly utilised. The environmental impacts of this are beginning to be felt in degraded water quality in regional rivers and lakes. This will lead to changes in land use patterns and potentially reductions in pasture-based output. Waikato is well placed to make these changes given the depth of infrastructure, the strength of its institutions and the will of it people to effect positive change.

4 Business Land and Floorspace Demand

Businesses demand land and built space to carry out their business activities, to accommodate their workforce and production processes. Therefore business demand for land and space is derived from their need to operate in a location and house their workers. This means that economic growth in employment - generated in most economic projection models - can be used to estimate the resulting growth in business land and built space demand.

This section provides estimates of employment growth translated into growth in demand for business land and built space by sector across the FPP area.

4.1 Sector – Space Relationships

Employment projections have been translated into the likely floorspace and land use requirements using the average floorspace per worker and land area per worker ratios presented in Figure 4.1. These averages are derived from current data relating to employment and land use/space types.

Figure 4.1: Employment to Space and Land conversions

Range	Office---Commercial	Office---Retail	Shops---Commercial	Shops---Retail	Accom.	Ware house	Factory
Floor Space per Employment (SQM)							
Min	13.0	20.0	10.0	15.0	15.0	100.0	80.0
Max	100.0	100.0	100.0	100.0	200.0	200.0	200.0
In use	**20.0**	**27.0**	**27.0**	**47.0**	**100.0**	**167.0**	**138.0**
Land Use per Employment (SQM)							
Min	13.0	20.0	10.0	15.0	15.0	100.0	80.0
Max	100.0	100.0	100.0	200.0	400.0	600.0	500.0
In use	**25.0**	**45.0**	**45.0**	**78.3**	**142.9**	**417.5**	**345.0**
Range	Yard---Commercial	Yard---Industrial	Other Built---Commercial	Other Built---Industrial	Education	Outdoor---Commercial	Outdoor---Industrial
Floor Space per Employment (SQM)							
Min	50.0	50.0	20.0	20.0	30.0	10.0	10.0
Max	150.0	150.0	120.0	120.0	100.0	100.0	100.0
In use	**85.0**	**100.0**	**60.0**	**60.0**	**60.0**	**20.0**	**20.0**
Land Use per Employment (SQM)							
Min	100.0	100.0	20.0	20.0	50.0	10.0	10.0
Max	350.0	350.0	500.0	500.0	500.0	1,000.0	1,000.0
In use	**200.0**	**200.0**	**100.0**	**150.0**	**120.0**	**33.3**	**50.0**

Diversity of space and land needs on a business-by-business basis result in wide variations between the maximums and minimums in this table. As with the original assessment, averages have been used. These averages have been informed by a combination of FPP rating data and M.E.s MECs. We have relied on our

previous experience in similar analyses as well as information published by other commercial entities[12] to cross-check these values. Retaining the same values throughout the period means that we do not specifically take account of increased land-use or floorspace efficiencies that may occur into the future. This means that our floorspace and land demand requirements are potentially conservative, although this does have advantages when assessing sufficiency in that it likely causes an over-estimate of demand. If capacity then exceeds demand (or demand + margin), then it is fairly certain that demand is catered for appropriately.

Given the similarity of activities carried out by employees across a range of sectors, there are a smaller number of space types than there are activity types or economic sectors. For example, commercial office space may be occupied by a wide range of businesses and organisations across a number of sectors. For the purposes of the NPS-UD, all space and land types have been condensed into 3 broad categories;

- Industrial: This covers both Heavy and Light Industry. The distinction between the 2 rests on the type and nature of emissions into the wider environment. Heavy Industrial activities need to be appropriately buffered from more sensitive activities such as residential land uses. Light Industrial activities may capture the same set of ANZSIC codes, yet due to scale or nature of production processes, do not require the same level of buffering. In addition, activities that may not be manufacturing in nature are categorised as Light Industrial for the purposes of the NPS-UD. These include, yard-based storage, transport and distribution, construction, utilities, and wholesaling activities
- Commercial: As well as capturing commercial office activities and public administration. Commercial captures the paid accommodation sectors as well as health and education. This is due to the nature of the space types they occupy.
- Retail: This captures all forms of retail activity and personal retail-based services such as repairs and maintenance of household goods, hairdressing and other personal services plus a few categories of commercial activity including real estate agencies, dentists and optometrists.

However, to provide a degree of flexibility, employment has initially been allocated by 6 digit ANZSIC sectors to 15 different space types (for ease of use, this has been aggregated to 48 sectors x 15 Space types). The concordance matrix can be found in the accompanying appendix.

By outlining the information in a matrix format, we have allowed a single sector to split its activity between different space types. This is important as it is unlikely that all employment in any one industry occupies the exact same space type. A simple example is a large industrial business with a large industrial footprint, but also a warehouse area and a head office in commercial office space.

By utilising a matrix structure, we allow growth to translate much more realistically to the type of space it generates.

[12] For example Colliers and JLL

4.1.1 Plan Zones to Space Types

Having established an appropriate listing of space types, a matrix that aligns space types (above) with the planning zones that facilitate the space types has been developed for each of the partnership Councils. These concordance matrices have been developed based on the activity status tables within the various District Plans. Activities that have a designation of Permitted, Discretionary, or Restricted Discretionary have been assumed to provide capacity for those activities within a given zone. A loose coupling exists between the described activities (within the District Plans) and the above space types developed based on the 6 Digit ANZSIC x space type concordance described above.

4.1.2 Exclusion of Rural activity

The framework also captures rural activity in the form of farms. This has been excluded as it is not relevant in an urban development capacity assessment. However, any employment growth that would normally be associated with farms has been allocated to farms – and excluded from the amount Councils need to zone space for.

The following section contains the outputs for future business land demand across the Future Proof Partners area.

4.2 Future Demand for Urban Business Land

Future demand for Urban Business Land has been estimated based on population and employment growth projections based on inputs into the WISE model and the FPP EFM at the local level. These projections have been translated into localised space type demand based on the matrices and area ratios described in Section 4.1 for each of the Councils individually.

A summary of total business land demand by broad sector across the Future Proof Partners network can be seen in Figure 4.2.

Figure 4.2: FPP Total Business Land Demand by Broad Sector, 2020-2050 (ha)

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	101	19	17	137
Retail	41	7	6	54
Industrial	540	145	108	793
Total Bus. Land Demand	**681**	**171**	**131**	**983**

At the total FPP scale it is clear that the majority of the business land demand is concentrated within Hamilton City, largely due to the expected population and employment growth that is concentrated in the city over the long term.

In all TAs, total industrial land demand significantly outweighs commercial and retail land demand. Much of this can be attributed to the higher land use per employee metric, as demonstrated in Figure 4.1. Generally industrial space types utilise a much larger land area than commercial or retail space types, due to development typologies such as yard-based and warehouse type activities. Although actual industrial employment numbers may be equivalent or smaller than those for the commercial or retail sector, industrial land demand outstrips those other sectors solely due to the much higher average land/employee.

It should be noted that demand values are cumulative over the short, medium, and long term so that totals in the long term column of each figure represents the total expected demand as at 2050.

4.2.1 Hamilton City Future Business Land Demand

Hamilton's future demand for business land has been disaggregated into the three broad categories and allocated across the 6 reporting areas within the City. While it is important that the city provides a range of locations for different type of economic activity to occur, it is not necessary to ensure that every area provides for every type of business activity. In fact, this leads to extremely inefficient cities as any benefits that arise from agglomeration are not captured and the city's urban form is compromised.

Commercial Land

In total we estimate that Hamilton City requires an additional 101ha of commercial land to cater for anticipated growth over the long term (total over 30 years). Approximately 12.1ha is required in the short term (next 3 years) and 40.1ha in total over the next 10 years.

Figure 4.3: Hamilton Commercial Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Te Rapa	5.2	13.7	26.0
Chartwell	- 0.0	0.2	0.9
Frankton	1.8	4.7	12.5
CBD	- 0.1	4.8	16.6
Ruakura	0.0	0.5	2.0
Other	5.3	16.3	42.9
Total	**12.1**	**40.1**	**100.9**

The largest areas of demand growth are in Te Rapa in the north of the City and across other parts of the city – reflecting expansion across the city. There is also strong growth within the CBD, as would be expected due to it's nature as a hub of commercial activity. As described above, it is important not to become too aligned with ensuring each of these areas provide sufficient land or built space to meet the needs arising within. Commercial office activity tends to congregate in centres whereas many of the areas listed above are purely residential or industrial catchments. It is not efficient to have commercial space distributed

widely and evenly across the urban landscape as this minimises any agglomeration benefits[13] that arise from the clustering of activities. The importance of colocation is reflected in the Multi-criteria analysis framework where the ability to collocate with other businesses has been allocated a high share of the locational decision process.

It is rare that Commercial land is zoned independently of retail land, as the aggregation of workforce and businesses naturally stimulates demand for retail and hospitality goods and services. In addition, most commercial activities have an ability to locate on upper levels of retail centres, making an independent requirement for space redundant.

This is obviously not the case for the education sector or potentially most of the health sector, where specific areas of land must be catered for in the planning provisions.

Retail Land

Hamilton's retail land demand is tied closely with residential growth. In addition, changes in household demand characteristics means that on average households are increasing their demand for retail goods and services by approximately 1% annually (in real terms).

Over the next 30 years, Hamilton City is expected to require an additional 41ha of retail land. 4.9ha of this demand is expected in the next 3 years (short term) and 16.7ha of this demand within the next 10 years.

Figure 4.4: Hamilton Retail Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Te Rapa	1.9	4.8	8.0
Chartwell	0.1	0.5	1.4
Frankton	0.0	1.4	5.1
CBD	0.2	1.8	5.3
Ruakura	- 0.0	0.3	1.1
Other	2.7	7.9	19.9
Total	**4.9**	**16.7**	**40.8**

Industrial Land

Industrial activities are land extensive, in that they require large amounts of land relative to the levels of employment they sustain. In addition, industrial activities are extremely sensitive to land price and are easily outbid for space by (mostly) large format retail activities. However, this does not mean that industrial activities are not valuable to the city or area – quite the contrary. Industrial activities often have deep linkages back through the wider economy sustaining much employment in supporting industries and

[13] These include reduced transactional costs, easier transfer of skills and technologies and deep access to both potential clients and a large labour force.

service sectors. In addition, in Hamilton's case in particular, they support the upstream activities as well. Dairy factories and meat processing plants ensure that the high value outputs from the pastoral sectors are transformed into high value commodities within the region, maximising employment and GDP retention.

Industrial land requires strong policy protection and robust planning frameworks within which to operate. If left to the free market to generate highest and best returns from the land, industrial activities will be out bid and face pressures to shift. By protecting the land resource for industrial activities, TA's are helping to ensure that market failure is avoided and an overall efficient economy results.

Market failure occurs when those that are forcing the change – i.e. those that are being allowed to bid for industrial land for non-industrial purposes are not paying the full costs associated with that decision. The resulting inefficient economy is not being paid for by the retailers, because the market cannot monetise those costs. Large format retailers are not able to respond to market price signals as a result.

Figure 4.5: Hamilton Industrial Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Te Rapa	42.8	147.5	285.8
Chartwell	0.4	1.5	4.1
Frankton	0.7	21.5	80.3
CBD	4.3	17.5	56.1
Ruakura	0.3	5.0	19.2
Other	3.7	28.5	94.1
Total	**52.2**	**221.5**	**539.6**

In total over the next 30 years, Hamilton City requires an additional 540ha of industrial land. 52ha are required in the short term (next 3 years) and 222ha over the next 10 years (medium term).

Note that this is the estimated demand, it does not include the additional of 20% in the short to medium term and 15% in the long term to account for the proportion of feasible development capacity that may not be developed. This is discussed in section 7.4, below.

4.2.2 Waikato District Future Business Land Demand

As discussed above, demand for Waikato and Waipā Districts have been estimated at a proxy-town level based around the significant townships, urban areas and their connectivity.

In terms of commercial land demand. Waikato District is estimated to require 19.2ha of commercial land over the long term (30 years). The demand is spread across the Waikato – in the 'Rest of Waikato' designation with 6.4ha, in Tuakau with 3.5ha, and Te Kauwhata and Raglan each demanding approximately 2.4-2.5ha.

Figure 4.6: Waikato Commercial Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Pokeno	0.2	0.6	1.3
Tuakau	0.9	2.2	3.5
Te Kauwhata	0.4	1.4	2.4
Huntly	0.2	0.7	1.6
Ngaruawahia	0.0	0.4	1.5
Raglan	0.4	1.0	2.5
Rest of Waikato	- 0.1	1.5	6.4
Total	**1.9**	**7.7**	**19.2**

In the short term 1.9ha is demanded over the next 3 years and a total of 7.7ha over the medium term (10 years).

Retail Land

In terms of retail land demand, Waikato District is estimated to require 6.5ha over the long term. The most demand arises in the North as Tuakau grows on the back of Auckland's expansion. The rest is distributed across the rest of Waikato (2.0ha long term), although some further demand needs to be met in Raglan (1.1ha long term). In the short term (3 years) retail land demand is less than 1ha, with 2.6ha demanded over the next 10 years (Figure 4.7).

Figure 4.7: Waikato Retail Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Pokeno	0.1	0.2	0.4
Tuakau	0.5	1.3	1.9
Te Kauwhata	0.2	0.3	0.4
Huntly	- 0.1	- 0.0	0.2
Ngaruawahia	0.0	0.1	0.5
Raglan	0.2	0.5	1.1
Rest of Waikato	- 0.3	0.2	2.0
Total	**0.6**	**2.6**	**6.5**

Industrial Land

Industrial land demand in Waikato District is high. Over the long term over 145ha of land is estimated to be required. Of this, 12.4ha are required in the short term and 55.1ha in the medium term. As with commercial and retail demand, much of the demand is spread across the Rest of Waikato reporting area (59ha), while Pokenō, Tuakau, and Raglan also have strong demand for industrial land (Figure 4.8).

Figure 4.8: Waikato Industrial Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Pokeno	- 0.0	4.2	19.7
Tuakau	7.6	14.1	20.9
Te Kauwhata	1.1	8.0	13.7
Huntly	1.9	4.3	9.5
Ngaruawahia	- 1.7	0.1	5.4
Raglan	2.2	6.5	17.0
Rest of Waikato	1.5	17.8	58.7
Total	**12.4**	**55.1**	**144.9**

4.2.3 Waipā District Future Business Land Demand

As with Waikato District, demand in Waipā is recorded at conglomerated town representative areas. Over the next 30 years, there is demand for almost 17ha of commercial land, 6.3ha of retail land and 108ha of industrial land. The majority of land demand is concentrated into and around the large centres of Cambridge-Karapiro (7.3ha of commercial, 3.2ha of retail and 51.9ha of industrial) and Te Awamutu-Kihikihi (6.9ha of commercial, 2.5ha of retail, and 34.8ha of industrial). The Rukuhia-Ngahinapouri-Ohaupo-Pirongia reporting area also shows strong demand growth for industrial land of 17ha in the long term.

Figure 4.9: Waipā Commercial Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Cambridge-Karapiro	0.2	2.4	7.3
Te Awamutu-Kihikihi	0.6	2.1	6.9
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.1	0.7	2.0
Rest of Waipa	0.1	0.2	0.6
Total	**1.0**	**5.4**	**16.9**

Figure 4.10: Waipā Retail Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Cambridge-Karapiro	0.3	1.3	3.2
Te Awamutu-Kihikihi	0.0	0.6	2.5
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	- 0.1	0.1	0.6
Rest of Waipa	- 0.1	- 0.0	0.1
Total	**0.2**	**1.9**	**6.3**

Figure 4.11: Waipā Industrial Land Demand (ha)

Name	Short Term	Medium Term	Long Term
Cambridge-Karapiro	5.4	15.9	51.9
Te Awamutu-Kihikihi	2.3	9.9	34.8
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.6	4.4	17.0
Rest of Waipa	0.4	1.4	4.5
Total	**8.6**	**31.5**	**108.2**

In the short term, the district requires 1.0ha of commercial land, 0.2ha of retail and 8.6ha of industrial. In the medium term this increases to 5.4ha of commercial, 1.9ha of retail and 31.5ha of industrial. The strong growth in industrial land reflects the requirement for large land areas for industrial uses, as well as strong in industrial employment generally.

4.3 Future Demand for Urban Business Floorspace

For the majority of retail and commercial sectors, floorspace is a more meaningful metric than land. The nature of floorspace differs between the three broad economic categories as well as discussed below. In total to cater for anticipated economic growth over the next 30 years, the FPP area requires over 4.5 million sqm of gross floor area of build space (GFA). 3.3million sqm of that for the industrial sectors, 884,000sqm for commercial activities and 322,000sqm for retail.

Figure 4.12: FPP Total Business Floorspace (GFA) Demand by Broad Sector, 2020-2050 ('000 sqm)

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	652	122	109	884
Retail	245	39	38	322
Industrial	2,234	609	456	3,299
Total Bus. GFA Demand	**3,132**	**770**	**603**	**4,505**

4.3.1 Hamilton City Future Business Floorspace Demand

Translating economic growth in commercial employment terms into a floorspace requirement to house them results in overall demand of over 652,000sqm of built GFA over the long term. Much of this growth is focussed across Hamilton (Other representing 42% of total), in Te Rapa (26% of total), and in the CBD (17% of total commercial demand). A further 12% arises in the Frankton area.

Figure 4.13: Hamilton Commercial Space Demand (GFA sqm), Short, Medium and Long Term

Name	Short Term	Medium Term	Long Term
Te Rapa	33,803	88,392	166,990
Chartwell	- 334	1,599	6,329
Frankton	11,360	29,823	79,855
CBD	- 231	32,379	110,106
Ruakura	92	3,579	13,510
Other	33,465	104,586	275,556
Total	**78,155**	**260,358**	**652,346**

Approximately 78,200sqm of GFA is required in the short term and 260,400sqm GFA over the next 10 years.

Retail demand growth sees a requirement to accommodate 245,000sqm GFA over the long term in Hamilton. Again, the majority is spread across Hamilton but with large amount focused on Te Rapa, Frankton, and the CBD as well.

Figure 4.14: Hamilton Retail Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Te Rapa	11,657	29,054	48,190
Chartwell	520	2,799	8,286
Frankton	27	8,253	30,426
CBD	1,259	10,943	32,082
Ruakura	- 162	1,589	6,683
Other	16,316	47,666	119,182
Total	**29,618**	**100,303**	**244,848**

In the short term (next 3 years) there is demand for almost 30,000sqm of GFA and over 100,000sqm of GFA over the next 10 years.

Industrial demand growth translates into over 2.2m sqm GFA in the long term. Over half of this demand is expected to be focused on the Te Rapa reporting area, with a further 15% in Frankton and approximately 18% spread across the rest of Hamilton. On average across the next 3 years around over 70,000sqm are required each year. That increases to 91,000sqm over the 10 year period and then drops down to approximately 75,000sqm of GFA over the entire 30 year period (Figure 4.15).

Figure 4.15: Hamilton Industrial Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Te Rapa	175,459	605,601	1,175,173
Chartwell	1,769	6,128	17,355
Frankton	2,523	89,217	332,986
CBD	17,794	72,997	233,977
Ruakura	1,333	21,131	80,408
Other	16,326	120,167	394,503
Total	**215,205**	**915,240**	**2,234,402**

4.3.2 Waikato District Future Business Land Demand

Waikato District commercial space demand over the long term is over 120,000sqm GFA. As with land demand, the majority is in the north is spread across the district. Solid growth is also observed in in Tuakau, Te Kauwhata and Raglan.

Over the short term the District will require around 12,00sqm of GFA while over the medium term this grows to almost 49,000sqm GFA (Figure 4.16).

Figure 4.16: Waikato Commercial Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Pokeno	1,070	3,637	8,564
Tuakau	5,387	14,469	23,146
Te Kauwhata	2,419	8,507	14,746
Huntly	1,196	4,048	9,677
Ngaruawahia	134	2,794	9,598
Raglan	2,410	6,627	15,970
Rest of Waikato	- 665	8,977	40,482
Total	**11,949**	**49,060**	**122,183**

Retail demand in built floorspace terms increases to almost 40,000sqm GFA in the long term. As with commercial space, the largest individual portion is in the North with Tuakau increasing by 11,400sqm while almost 12,000 is spread across the Rest of Waikato reporting area. In the short term, Waikato District requires approximately 3,340sqm Retail GFA, or around 1,100sqm annually. This increases to 15,450sqm GFA over 10 years of by 1,540sqm / annum (Figure 4.17).

Figure 4.17: Waikato Retail Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Pokeno	875	1,292	2,521
Tuakau	2,977	7,749	11,401
Te Kauwhata	950	1,748	2,639
Huntly	- 839	- 98	1,044
Ngaruawahia	6	554	3,170
Raglan	1,265	2,836	6,417
Rest of Waikato	- 1,895	1,374	11,966
Total	**3,339**	**15,454**	**39,159**

Figure 4.18: Waikato Industrial Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Pokeno	- 209	17,514	82,138
Tuakau	31,227	58,136	86,455
Te Kauwhata	4,725	33,801	57,785
Huntly	7,979	18,396	40,119
Ngaruawahia	- 7,310	351	22,736
Raglan	9,118	27,239	70,486
Rest of Waikato	7,373	76,072	249,306
Total	**52,902**	**231,509**	**609,026**

Industrial space in Waikato is expected to grow by around 610,000sqm of GFA over 30 years. The largest volume is expected in the North with Pokenō experiencing 82,000sqm of growth and Tuakau experiencing 86,000sqm of growth. There are significant levels of growth spread across the rest of the district however, with almost 250,000sqm GFA of growth in the Rest of Waikato reporting area over the next 30 years.. Over the next 3 years almost 53,000sqm GFA is required and this grows to over 230,000sqm GFA over 10 years (Medium term) (Figure 4.18).

4.3.3 Waipā District Future Business Land Demand

Waipā District's commercial space growth is estimated to be almost 110,000sqm GFA over 30 years. This is dominated by Cambridge-Karapiro and Te Awamutu-Kihikihi as the two largest urban areas. Growth increases from approximately 7,000sqm in the short term, to over 35,000sqm GFA in the medium term.

Figure 4.19: Waipā Commercial Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Cambridge-Karapiro	2,023	16,057	47,894
Te Awamutu-Kihikihi	3,664	13,590	44,582
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	671	4,119	13,009
Rest of Waipa	607	1,551	3,824
Total	**6,965**	**35,317**	**109,309**

Retail demand translates into total additional GFA of almost 38,000sqm over the long term in Waipā. Again, this is dominated by the 2 large centres Cambridge-Karapiro and Te Awamutu-Kihikihi at 19,400sqm and 14,700sqm GFA respectively. Retail demand in the short term is less than 1,000sqm. This rises to almost 12,000sqm over the medium term.

Figure 4.20: Waipā Retail Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Cambridge-Karapiro	1,526	7,504	19,382
Te Awamutu-Kihikihi	163	3,576	14,716
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	- 328	747	3,381
Rest of Waipa	- 454	- 235	320
Total	**907**	**11,593**	**37,798**

Finally, industrial demand in Waipā translates to over 450,000 sqm GFA over the long term. As with commercial and retail GFA, The majority of this around Cambridge-Karapiro (217,000sqm or 48% of total demand) and Te Awamutu-Kihikihi (148,000 or 33% of total). The Rukuhia-Ngahinapouri-Ohaupo-Pirongia reporting area does show strong growth however, with growth of almost 71,000sqm GFA (16%) in the long term. Demand in the short term is just over 37,000sqm GFA and almost 135,000sqm GFA in the medium term.

Figure 4.21: Waipā Industrial Space Demand (GFA sqm), Short Medium and Long Term

Name	Short Term	Medium Term	Long Term
Cambridge-Karapiro	23,030	67,427	217,157
Te Awamutu-Kihikihi	10,233	42,859	148,277
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	2,494	18,362	70,928
Rest of Waipa	1,442	5,845	19,240
Total	**37,198**	**134,494**	**455,601**

5 Business Land and Floorspace Capacity

In general, capacity estimates for each of the districts in the Future Proof Partnership are based on the final capacity estimates generated as part of the original HBA carried out in 2017 to meet the requirements of the NPS-UDC. From the final agreed parcel sets, parcels with CCC's issued for new buildings are removed from vacant capacity set. Larger greenfield parcels that have been split into smaller lots and either fully or partially developed have been identified and consumed capacity removed from the totals. Any additional land that has been earmarked for commercial use into the future has been identified and coded according to the current estimate of time it will become available.

In this section, we will review capacity from the HBA carried out under the NPS-UDC for each Council, then for each, identify changes in capacity due to uptake and any rezoning that has occurred. Final estimates of capacity will be presented for each TA divided into logical aggregations that will be used in the final assessments of sufficiency.

It is important to note that the RMA 1991 is an enabling Act, which means that as a guiding principle of land use planning, landowners should be enabled to develop their land for the uses they desire. This translates to provisions in district plans being broad - most parcels identified as vacant can meet a relatively wide range of needs. This means that capacity may not be exclusively sheeted back to one usage type or another. In this assessment we have identified the total amount of capacity – regardless of use and the amount available to each of the three broad economic activity types. They may not add to the same total if a piece of land enables both commercial activities and retail activities as will often be the case in town centres, but we make no call as to which activity has precedence[14].

5.1 Vacant Land Identified

As with the HBA 2017, vacant land capacity has been identified at the parcel level based on zone-specific rules that dictate the development typologies that may occur. Vacant land parcels were identified using a combination of existing built floor area metrics and improvement values, derived from each of the Council rating databases. A base level of development of 50sqm GFA or 2.5% site cover have been used as the lower limits of occupancy, in other words parcels either empty or with a building up to 50sqm are considered vacant. In addition, parcels where the built form exceeds 50sqm, but covers less than 2.5% of the total property are also considered vacant. This is a new classification from the 2017 assessment designed to capture large parcels – often on the urban edge, that have been earmarked for future non-residential uses, but may still have a farmhouse or some similar structure on them. They are effectively vacant and are now able to be recorded as such. This may lead to slight differences in measures of vacant capacity and make comparison between 2017 and 2020 problematic, but it is important that as the HBA process evolves, improvements are made.

[14] The exception being that we assume that retail activities will outbid commercial activities for ground floor space on the land.

Vacant land on each parcel was categorised into three broad sector types (Commercial, Retail, Industrial), based on the development types allowed within each zone.[15] Figure 5.1 contains the vacant land capacities output from M.E's model for entire period 2020 to 2050.[16] Feedback from each of the Councils (ground truthing) was incorporated where necessary to increase, reduce or remove specific areas from the capacity assessment. Data contained within Hamilton City Council plans indicated where roads, reserves, and other infrastructure was required to be removed. Within Waikato and Waipā Districts, M.E reduced the vacant land capacity of all vacant parcels over 1 hectare by 30% to take account of development requirements.

M.E also removed the ability for the Commercial – Other Built floorspace type to locate on industrial zones within the Waikato 2070 areas. This was to better reflect the expected *industrial* nature of businesses within these areas, rather than commercial.

Figure 5.1: FPP Long term Vacant Business Land by broad sector, 2020-2050 (ha)

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	565	316	173	1,053
Retail	161	69	11	241
Industrial	640	1,174	231	2,045
Total Vacant Bus. Land*	**744**	**1,231**	**242**	**2,216**

Across the Councils at the TA level, there are significant areas of vacant land with non-residential capacity.

Vacant commercial land capacity within Hamilton City and Waipā District represent large proportions of total vacant business land identified within them. Within Hamilton City, the 565 hectares of vacant commercial land represents 76% of the total 744 hectares of vacant business capacity. Waipā District's commercial capacity represents 75% of the total vacant business land capacity, with 173 hectares of the total 242 hectares identified. Waikato District's commercial land capacity represents 316 hectares or 27% of the total 1,231 hectares identified, though the proportion is lower largely because so much industrial land has been earmarked in the district.

For all Partners, vacant retail land capacity represents the smallest proportion of total vacant land capacity available in the TA. Hamilton City contains the absolute largest amount of vacant retail land capacity, with 161 hectares (22% of 744 ha total). Waikato District contains the next largest amount of vacant retail land available, with 69 hectares representing 6% of the total 1,231 hectares identified. Waipā District contains the smallest total amount of vacant retail land capacity, with 11 hectares (4.5%) of the 242 hectares total.

For all the partnership councils, vacant industrial land capacity represents the largest proportion of total vacant capacity identified, with 640 hectares (86% of 744 ha total) in Hamilton City, 1,174 hectares (95% of 1,231 ha total) in Waikato District, and 231 hectares (95% of 242 hectares) in Waipā District. This is as a result of the fact that each of the councils have zoned or earmarked large swathes of land enabled for

[15] Vacant capacity values across each sector are additive within each individual Territorial Authority. There is no double-counting of vacant areas across the sectors.

[16] Note that the Industrial total for Hamilton City is the long term capacity once all Te Rapa North becomes available.

industrial development, reflecting the high proportion of primary, manufacturing, and related industries that exist in their economies. Waikato District in particular has enabled significant areas of land south of Auckland as they look to provide for some of the over-spill of businesses from the Auckland market.

5.2 Vacant Business Capacity

After identifying vacant land capacity by type, plan enabled gross floor area (GFA) was determined on each parcel based on the attached zoning rules. Rules relating to site coverages, building heights and floor area ratios were used in the calculation of GFA based on the zoning applied to each parcel.

The activity status tables from each of the Councils' District Plans were used to determine the floorspace activity types allowed, which have then been aggregated to the broad business categories used above. Figure 5.2 and Figure 5.3 provide examples of how the activity status table for Business Zones within Hamilton City have been broadly matched to M.E's floorspace types. Permitted, discretionary, and restricted discretionary activities have been incorporated under the assumption that these are essentially allowed under the various District Plans. Both Waikato and Waipā Districts have had similar frameworks applied, based on rules specific to zoning within their District Plans.

Figure 5.2: Example of District Plan Activity Table (Hamilton City District Plan)

	Character (for information only)						
	Commercial fringe	Major Event Facilities	Sub-Regional centre	Large Format Retail	Suburban Centre	Neigh bour-hood Centre	Frankton Comm-ercial Fringe
Business Zone	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Buildings							
a) New buildings, alterations and additions	RD*	RD*	RD*	RD*	RD*	RD*	RD*
b) Minor works	P	P	P	P	P	P	P
c) Accessory buildings	RD*	RD*	RD*	RD*	RD*	RD*	RD*
d) Demolition, removal , maintenance or repair of existing buildings (except heritage buildings scheduled in Volume 2, Appendix 8, Schedule 8A: Built Heritage)	P	P	P	P	P	P	P
e) Demolition or removal of existing buildings on Lot 129 DPS 930	-	-	-	-	-	NC	-

Industry							
f) Industrial activity i. excluding light or service industry ii. noxious or offensive activities	D NC	NC NC	NC NC	D NC	NC NC	NC NC	D NC
g) Light industry	RD	D	D	D	D	NC	P
h) Service industry	P	D	P	P	D	D	P
i) Transport depot	RD	D	NC	D	D	NC	RD
j) Emergency service facility	RD*	D	RD*	RD*	RD*	D	RD*
k) Research and innovation activities	P	NC	NC	NC	NC	NC	RD
Offices							
l) Ancillary office	P	P	P	P	P	P	P
m) Offices (excluding offices on land zoned Business 3 on The Base site shown on Figure 6.1b) i. <250m^2 GFA site ii. 250m^2 – 500m2 GFA per site iii. >500m^2 GFA per site whereby site excludes Unit Titles and Cross Leases in i – iii above	 P RD* D	 P D NC	 P D NC	 D NC NC	 P D NC	 D NC NC	 NC NC NC

Figure 5.3: Relationship between Space types and Zones

Zone	SubZone	Office-Commercial	Office-Retail	Shops-Commercial	Shops-Retail	Accommodation	Warehouse	Factory	Yard-Commercial	Yard-Industrial	Other Built-Commercial	Other Built-Industrial	Education	Outdoor-Commercial	Outdoor-Industrial	Outdoor-Rural
Business Zone	Business 5 Zone	1	1	1	1	1	1	0	1	1	0	0	1	0	0	0
Business Zone	Business 7 Zone	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1
Business Zone	Business 6 Zone	0	0	1	1	0	0	0	0	1	0	0	1	0	0	0
Business Zone	Business 4 Zone	0	1	1	1	1	1	1	1	1	0	0	1	0	0	0
Business Zone	Business 3 Zone	1	1	1	1	1	1	0	1	1	0	0	1	0	0	0
Business Zone	Business 1 Zone	1	1	1	1	1	1	1	0	1	1	0	1	0	0	0
Business Zone	Business 2 Zone	1	1	1	1	1	1	0	0	1	0	0	1	0	0	0
Central City Zone	Precinct 1	1	1	1	1	1	0	0	0	0	1	0	1	0	0	0
Central City Zone	Precinct 2	1	1	1	1	1	1	0	1	1	1	0	1	0	0	0
Central City Zone	Precinct 3	1	1	1	1	1	0	0	0	0	1	0	1	0	0	0

Figure 5.4 contains M.E's estimates of business floorspace capacity on vacant land across the Future Proof Partner councils over the short-to-long term, 2020 to 2050. Once again, feedback from each of the councils has been incorporated to include, reduce, or remove floorspace on a case-by-case basis where necessary.

M.E have applied a reduced site coverage of 38.3% to industrial zoned land across the partnership councils.[17] This is to better reflect the reality that industrial businesses do not tend to use the total plan-enabled floor area on sites. Oftentimes more emphasis is placed on yard- and outdoor-type activities, than on activities that require floorspace. As such, we have reduced the site coverage from the plan-enabled capacity to a more realistic measure.

Figure 5.4: FPP Long term Vacant Business Capacity (GFA) by broad sector, 2020-2050 ('000 sqm)

Broad Sector	Hamilton City	Waikato District	Waipa District	Total FPP Area
Commercial	10,013	4,115	1,774	15,902
Retail	756	341	95	1,192
Industrial	3,501	4,436	872	8,809
Total Vacant Bus. Land*	**12,416**	**8,785**	**2,742**	**23,942**

Within Hamilton City and Waipā District, the commercial sector has the greatest GFA capacity. Within Hamilton City plan-enabled commercial GFA represents 10 million sqm (81%) of the total 12.4 million sqm enabled in the city, and 63% of the total 15.9 million sqm in the total sub-region. Within Waipā, plan-enabled commercial floorspace represents 1.77 million sqm (65%) of the total 2.74 million sqm in the district. Within Waikato District, commercial floorspace represents the second-largest amount of plan-enabled floorspace with 4.1 million (47%) of the total 8.8 million square metres available.

The significant capacities determined for commercial floorspace are generally a function of the relatively intensive development patterns that commercial land uses occupy. Land uses as defined in the FPP Capacity Model allow for commercial occupation of levels above the ground floor. As well as this, zones that allow for commercial land uses often have higher coverage allowances, or floor area ratios (where applicable). Some forms of commercial land uses may also occupy space in a range of zones, including some mixed usage zones. These factors combined mean that plan enabled commercial capacity represents a much larger proportion of total enabled capacity than the vacant land capacity (from section 5.1, above) would imply.

Retail floorspace capacity across the TAs represents the smallest proportion of total floorspace capacity in all cases. Retail floorspace capacity within Hamilton City represents 0.76 million sqm (6% of the total 12.4 million sqm), 0.34 million sqm (4% of the total 8.78 million sqm) in Waikato District, and 0.09 million sqm

[17] The 38.3% site coverage was derived from the average site coverage in the Te Rapa North industrial zones, and reflects our assumption for industrial space availability going forward. District Plan rules indicate site coverages of between 58 and 80% for industrial type zones.

(3% of the total 2.74 million sqm) in Waipā District. 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 outcompete other land uses on the ground floor.

Vacant realistic industrial space (RIS) within Hamilton City represents 3.5 million (28%) of the total 12.4 million sqm enabled within the TA. RIS capacity in the Waikato District totals 4.4 million sqm (51%) of the 8.8 million sqm enabled. Vacant RIS in the Waipā District equates to 0.87 million sqm, or 32% of the total 2.7 million sqm of business capacity in the area. Much of Hamilton City's previous industrial floorspace capacity has been taken up since the last assessment in 2017, especially in areas near Horotiu and Te Rapa. As with vacant industrial land, much of Waikato's industrial floorspace capacity exists in greenfields areas that are being developed into the future.

5.3 Discussion

5.3.1 Limitations

One of the key possible limitations in the identification of vacant land is the currency of the Rating Databases provided to M.E by each of the Councils. Due to the nature of these as a snapshot in time, there is the potential for key indicators of vacancy (e.g. improvement values, built floor area) to be out of date. This may cause the model to identify vacant capacity where none actually exists. Although calibrating with GIS building footprints may help with this, in some cases the GIS data too is non-representative due to age. To help remedy this limitation, some local knowledge has been supplied by the Councils relating to occupied sites, or sites with consents issued that may reduce or set capacity for the future. This knowledge has been incorporated in where applicable.

In some cases vacant capacity has been identified in this assessment where none was identified previously. This is especially prevalent where new greenfields developments have been identified for the future. We have incorporated information where it has been supplied – specifically for Waikato District and Hamilton City. This means that land that may not be vacant at this point in time (e.g. rural land with farmhouse on it) has been identified as capacity at some point in the future.

There are also some limitations with using the 2017 assessment as an indisputable baseline. In some cases, we've identified vacant capacity where there was none previously due to changes in modelling rules (e.g. less than 2.5% coverage) or where demolitions have occurred. Because we have used 2017 as a baseline however, this means that these parcels are not included in the final capacity assessment. Future iterations of the assessment should re-base capacity with updated data, in-line with policies of the NPS-UD.

We have made the assumption that most of the land earmarked for investigation under the Waikato 2070 strategy could become capacity into the future. There is no guarantee that the areas under investigation will be re-zoned or result in capacity.

Applying a blanket reduction in site area of 30% for parcels greater than 1 hectare in Waikato and Waipā Districts does remove some nuance from what may happen on the ground in future developments, but

overall we have assumed that this is a reasonable measure in light of development patterns we have seen elsewhere.

Using a realistic industrial space measure also changes the level of capacity identified across the sub-region. It necessarily causes industrial floorspace measurements to be more conservative than what is 'plan-enabled', but we believe it does more accurately reflect what will happen on the ground. The use of it may cause some sufficiency issues at the local level, but the fact is that if there is upward pressure for more capacity, businesses are able to develop to a higher floorspace than what has been identified in this report.

5.3.2 Cross over with Housing Capacity

The results presented above provide an indication of what the Business capacity is across the Future Proof Partner network, if all vacant business-zoned land was occupied by business activities. There is, however, an issue in some specific mixed use type zones where both residential and business land activities could occur.

In zones such as the City Centre Zone in Hamilton City, 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 the potential double-counting that might occur.

5.3.3 Unoccupied Premises

When undertaking some ground truthing checks across the Future Proof Partners, it was noted that there exist some developed – but unoccupied – premises. The FPP Business Capacity Model does not take these unoccupied premises into account in terms of capacity, due to the difficulty required to isolate these sites and distinguish them from other developed (but occupied) sites. Adding to this, the number and size of unoccupied premises are often in flux, with occupation and relocation of businesses. This essentially means that there may be some extra capacity available for some less-specialised industries to occupy, but these are unable to be modelled effectively.

By excluding this from the assessment, the report presents a conservative picture with respect to capacity.

5.3.4 Redevelopment Capacity

There will be additional capacity available through the redevelopment process. Redevelopment occurs when a piece of already occupied land is purchased and additional development occurs to either change its usage, or to increase the amount of use that is made of it currently.

One way to estimate the amount of additional capacity potentially available in an area is to look at the average level of development intensity (number of storeys or floor area ratios) achieved across the entire area, then look at the level of intensity on sites that are significantly lower than the average. These may be

sites that have redevelopment potential to bring them closer to the revealed development intensity of the balance of the area.

This can be done across commercial centres and industrial areas. However, there are issues with redevelopment capacity that arise when the type and nature of business land use is not taken into consideration. For example, it may be that through an analysis of an industrial area, a number of seemingly under-utilised sites are identified that may represent capacity. However, they may exist as important parts of the production process either as turning bays for trucks or as storage areas for completed or partially completed goods.

In this study we have adopted a conservative stance and have assumed that the only capacity that is truly available is **vacant capacity**. This is an area that could be investigated further by Councils wishing to understand the depth of true capacity within the FPP area.

If the FPP area proves to have provided for sufficient capacity by simply providing for vacant capacity, then redevelopment capacity is not required. The amount of redevelopment capacity that is taken up over the short, medium and long term will obviously have an effect on the take up of vacant capacity.

We recommend Council monitor this.

5.3.5 Capacity in Rural Environment

Given the nature of the NPS-UD, M.E has only modelled business capacity in primarily urban environments and urban-type zones. Although the FPP-BCM does incorporate greenfield development where information is available, these greenfields are often within or adjacent to the urban environment and have specified activities associated. The FPP-BCM does not take into account other areas of the Rural Environment that could potentially enable capacity of some business activities, especially outdoor industrial activities or similar. Rural zones could potentially support a significant level of capacity, especially within Waikato and Waipā District Councils where the Rural zones are extensive. Although the exact capacity has not been modelled in these zones, it should be noted that the potential capacity for (currently) non-complying business activities may be high.

We recommend council monitor the growth of non rural industrial activities in rural locations by type and location.

6 Development Suitability

In the NPS-UD, development capacity to accommodate business activities is laid out in sections 3.28, 3.29 and 3.30. In 3.29, the NPS-UD states that development capacity provided by each Council should be plan enabled, infrastructure ready and suitable for each sector. In 3.29 (2) the NPS states that it is up to the local authority to define what it means for development capacity to be suitable, but that suitability must be (at a minimum) suitable in terms of location and site size.

Unlike assessing capacity to meet housing demand, to assess business capacity does not specifically require an assessment of 'Development Feasibility'. It is sufficient to provide suitable land in terms of location and scale.

In the 2017 assessment the approach focused on establishing plan-enabled capacity. That is, the amount of theoretical capacity that arises by way of the plans zoning and other provisions. This volume of capacity may not translate to actual business properties available to accommodate growth unless it is "feasible" to develop. The NPS-UDC defined "feasible" as follows:

> *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.*

The intent of that definition is that local authorities assess whether development capacity is feasible to a developer. The definition refers to the costs and revenue that would be faced by a developer, to develop capacity that is enabled by a plan and supported by public infrastructure.

This cost and revenue based approach for residential development was relatively simple, in that the numbers of development options for a residential developer are usually relatively small – as are the ownership options. This meant development feasibility could usually be determined with a simple residual value type development model. This type of model starts with the anticipated final sale price and deducts all the costs associated with development – including a developers margin. The difference then between the final sale price and all of the developers costs is the amount the developer can pay for the land and remain viable.

If the land is priced higher than that, then the development is not feasible and won't be developed – regardless of the zoning.

For business land, the situation is far more complex. 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. Industrial land may be developed in a bespoke manner by a particular manufacturer that may wish a purpose-built plant and plan to operate it for as long as the business is viable. This type of developer may be able to amortise costs across a very long timeframe, so is motivated very differently from a developer looking to build more generic tilt slab industrial units for rapid sale.

Because of these complexities a residual land value type model is not appropriate for business land assessments. This was a key driver of the change between the NPS-UDC and the NPS-UD. IT was recognised that assessing the amount of business land that provided a developer margin was impossible, therefore

local authorities should not be judged on whether they had achieved this rather spurious goal – given the diversity of development options available to businesses, few of which occurred with the aim of achieving a 'developer margin'.

However, Multi-Criteria Analysis provides a way for Councils to frame the development opportunities within their district by scoring them against a set of agreed criteria in terms of suitability to develop. Each criteria 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 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.

6.1 Multi Criteria Framework Analysis

The MCA approach has been used because it allows council and other stakeholders to identify the key metrics that are important in the selection and development process for the land. The following tables present results that draw from both the stakeholder workshop plus longer term studies ME have carried out across industrial and commercial areas in other locations.

Figure 6.1: Retail Criteria, Weighting and FPP Area Scores, 2021

		1 to 10	1 to 10	1 to 15	1 to 15	1 to 5	1 to 10	1 to 15	1 to 5	1 to 5	1 to 5	1 to 5	Total Score	
		10	10	15	15	5	10	5	5	5	5	5	90	
TA	2020 Spatial Frame	Access to major Road / transport routes; good transport access, especially road/motorway	Proximity to market - households within 5km	Co-location or clustering with associated business activities - Retail Centre	Parking availability	Proximity to market - households within 5km - 10km	Proximity to labour	Proximity to market - tourist accommodation within 1km	Low level of traffic congestion in vacinity	Exposure / profile / visibility	Existing or proposed public transport	Access to complementary / supporting business services	TOTAL (out of 90)	Adjusted to 100%
Hamilton	Te Rapa	10	10	12	15	5	10	2	2	5	4	5	80	89
Hamilton	Frankton	4	9	10	10	5	9	2	3	3	4	5	64	71
Hamilton	Ruakura	10	9	1	10	5	9	1	5	4	4	5	63	70
Hamilton	Chartwell	6	10	10	10	5	10	1	4	3	4	5	68	76
Hamilton	CBD	6	9	15	15	5	9	5	1	5	4	5	79	88
Hamilton	Other	6	9	6	10	5	9	2	3	3	4	5	62	69
Waikato	Huntly	9	4	4	15	3	4	2	4	5	2	3	55	61
Waikato	Ngaruawahia	6	4	2	12	2	4	1	5	2	3	3	44	49
Waikato	Pokeno	9	3	1	15	3	3	1	5	4	2	1	47	52
Waikato	Tuakau	6	4	2	10	3	4	1	4	3	3	2	42	47
Waikato	Raglan	3	3	3	10	2	3	3	4	1	1	2	35	39
Waikato	Te Kauwhata	3	2	1	10	2	2	1	4	1	1	2	29	32
Waipa	Rukuhia/Ngahinapouri /Ohaupo/Pirongia	6	2	1	15	3	2	2	4	3	2	3	43	48
Waipa	Cambridge/Karapiro	8	6	11	10	4	6	2	3	3	2	4	59	66
Waipa	Te Awamutu/Kihikihi	5	5	11	10	4	5	1	3	3	2	4	53	59

Figure 6.2: Industrial Criteria, Weighting and FPP Area Scores, 2021

		1 to 20	1 to 20	1 to 15	1 to 20	1 to 10	1 to 10	1 to 5	1 to 5	1 to 10	1 to 5	TOTAL	
		20	10	15	15	10	20	5	10	5	5	115	
TA	2020 Spatial Frame	Access to major Road / transport routes; good transport access, especially road/motorway	Flat land, large land parcel (minimum size??) contiguous site	Service Infrastructure in place or proposed	Area has potential for co-location or clustering with associated business activities or is contiguous with existing business land zoned for industrial activities	Proximity to labour	Ability to buffer adverse effects from residential and sensitive activities, distance from sensitive land uses	Low level of traffic congestion in vacinity	Exposure / profile / visibility	Existing or proposed public transport	Access to complementary / supporting business services	TOTAL Score (out of 115)	TOTAL (out of 100)
Hamilton	Te Rapa	19	9	12	14	10	20	2	9	4	5	104	91
Hamilton	Frankton	8	6	15	13	9	20	3	5	4	5	88	77
Hamilton	Ruakura	19	10	11	2	9	20	5	7	4	5	92	80
Hamilton	Chartwell	12	5	15	4	10	5	4	5	4	5	69	60
Hamilton	CBD	12	2	15	10	9	5	1	8	4	5	71	62
Hamilton	Other	13	6	13	7	10	8	3	6	4	5	76	66
Waikato	Huntly	18	8	8	9	4	20	4	9	2	3	85	73
Waikato	Ngaruawahia	17	9	8	8	1	19	5	6	3	3	79	69
Waikato	Pokeno	18	8	10	4	3	18	5	7	2	1	76	66
Waikato	Tuakau	12	8	10	5	4	15	4	5	3	2	68	59
Waikato	Raglan	5	3	6	3	3	10	4	2	1	2	39	34
Waikato	Te Kauwhata	6	4	8	4	2	15	4	2	1	2	48	41
Waipa	Rukuhia/Ngahinapouri /Ohaupo/Pirongia	12	6	9	8	2	15	4	6	2	3	67	58
Waipa	Cambridge/Karapiro	15	6	14	10	6	15	3	6	2	4	81	70
Waipa	Te Awamutu/Kihikihi	10	6	14	10	5	15	3	5	2	4	74	64

Figure 6.3: Commercial Criteria, Weighting and FPP Area Scores, 2021

		1 to 10	1 to 10	1 to 5	1 to 15	1 to 15	1 to 10	1 to 5	1 to 5	1 to 10	1 to 10	1 to 5	TOTAL
		10	10	5	15	15	10	5	5	10	10	5	100
TA	2020 Spatial Frame	Access to major Road / transport routes; good transport access, especially road/motorway	Proximity to market - households within 5km	Exposure / profile / visibility	Co-location or clustering with associated business activities - Retail Centre	Parking availability	Proximity to labour	Low level of traffic congestion in vacinity	Existing or proposed public transport	Access to complementary / supporting business services	Secure infrastructure - high speed fibre, power etc.	Diversity of Space types	Total
Hamilton	Te Rapa	10	7	5	10	15	10	2	4	7	8	5	83
Hamilton	Frankton	4	9	3	9	7	9	3	4	6	10	2	66
Hamilton	Ruakura	10	8	4	5	15	9	5	4	3	7	5	75
Hamilton	Chartwell	6	8	3	5	7	10	4	4	3	10	2	62
Hamilton	CBD	8	10	4	15	13	9	1	4	10	10	5	89
Hamilton	Other	6	8	3	6	7	9	3	4	4	9	3	62
Waikato	Huntly	9	3	5	5	10	4	4	2	3	5	1	51
Waikato	Ngaruawahia/Horotiu	7	2	2	3	10	3	5	3	2	6	1	44
Waikato	Pokeno	9	1	4	1	10	3	5	2	1	7	1	44
Waikato	Tuakau	6	3	3	3	10	4	4	3	2	5	2	45
Waikato	Raglan	3	2	1	3	8	3	4	1	2	5	2	34
Waikato	Te Kauwhata	3	1	1	2	10	2	4	1	1	5	1	31
Waipa	Rukuhia/Ngahinapouri /Ohaupo/Pirongia	6	1	3	3	12	2	4	2	2	5	2	42
Waipa	Cambridge/Karapiro	8	5	3	9	10	6	3	2	5	9	4	64
Waipa	Te Awamutu/Kihikihi	5	5	3	9	10	5	3	2	5	9	4	60

7 Sufficiency of Capacity

In this section the results of the demand and capacity assessments are brought together to provide a quantitative comparison between them in order to determine the sufficiency of capacity provided for in the FPP area. Under Section 3.3 of the NPS-UD it states that local authorities must provide *"at lease sufficient development capacity in its region or district to meet the expected demand for business land"*. It goes on to define sufficiency as being capacity that must be;

- Plan enabled,
- Infrastructure ready,
- Suitable to meet the demands of different business sectors, and,
- Meets the expected demand plus the appropriate competitiveness margin

In practice, that means that the land required is zoned and feasible for the next 10 years (short to medium term) and has been identified in the various plans and strategic documents over the next 30 years (the long term).

Sections 7.1, 7.2 and 7.3 below report sufficiency levels based on base demand projections. Section 7.4 incorporates a margin above the base demand. In this section demand estimates have been increased by 20% in the short and medium terms and by 15% in the long term to meet the requirements of Section 3.22 of the NPS-UD, which states;

> *"A competitiveness margin of development capacity, over and above raw expected demand that tier 1 and 2 local authorities are required to provide, that is required in order to support choice and competitiveness in housing and business land markets*
>
> *The competitiveness margins for both housing and business land are;*
>
> - *For the short term, 20%,*
> - *for the medium term, 20%,*
> - *for the lang term, 15%*

In most, if not all cases, local authorities have provided sufficient business land capacity to exceed the requirements at the territorial authority-wide level over the 10-year period. Most have ample supply for the full 30-year period, available today or planned for the future. There are some localised insufficiencies and other areas where margins are close, but overall there is more than enough supply.

7.1 Hamilton Area Results

This section presents compares the results of the demand and capacity modelling together across the Hamilton City spatial framework. Results are presented for both land and floor space for each council, across the three broad economic sector types.

It is important to note that for land areas that are enabled for both commercial and retail activities the total has been split between the two categories. To a certain extent, this means that demand and supply for these should be read together, as there is no way of knowing what type of activity will actually occupy the land (at this distance). It is also the case that if either retail or commercial demand exceeds the amount of land allocated, there is the potential for competing land uses to either drive up prices or for the land to be dominated by the activity that can pay the most for the land. In addition, pressure is brought to bear on other land types (Industrial in particular and residential).

While this is the market operating in a normal manner and potentially leads to efficient outcomes, it may also have unintended consequences due to not all costs being captured in the price developers pay for the land. We highly recommend Council monitor this situation – should it arise.

Figure 7.1 shows that Hamilton has around 565ha of land zoned and available for Commercial development (Commercial type development as defined above) this has reduced from 643ha identified in the 2017/18 HBA. Figure 7.2, shows that on this land over 10 million sqm of GFA could potentially be constructed.

Given that in the long term some 101ha of land which translates into 652,300sqm of GFA is required, there remains a significant surplus as was the case in 2017/18. However, demand is lumpy and supply is concentrated into a few distinct areas (Te Rapa and the Rest of Hamilton account for 68% of total demand), local shortfalls may occur. They are indicated in Figure 7.1 in red with the word Insufficient in either the short, medium or long term.

Commercial activities are relatively foot loose, in that they are less tied to a single location, this means that capacity provided in other areas is likely to be suitable to meet the majority of needs.

Figure 7.1: Hamilton City Long term Commercial Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Te Rapa	5.2	13.7	26.0	123.5			
Chartwell	- 0.0	0.2	0.9	0.1		Insufficient	Insufficient
Frankton	1.8	4.7	12.5	22.5			
CBD	- 0.1	4.8	16.6	7.8			Insufficient
Ruakura	0.0	0.5	2.0	336.8			
Other	5.3	16.3	42.9	74.1			
Total	**12.1**	**40.1**	**100.9**	**564.8**			

Figure 7.2: Hamilton City Long term Commercial Space Sufficiency Summary (GFA)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Te Rapa	33,803	88,392	166,990	1,051,561			
Chartwell	- 334	1,599	6,329	1,228		Insufficient	Insufficient
Frankton	11,360	29,823	79,855	136,047			
CBD	- 231	32,379	110,106	221,788			
Ruakura	92	3,579	13,510	6,993,291			
Other	33,465	104,586	275,556	1,608,671			
Total	**78,155**	**260,358**	**652,346**	**10,012,586**			

Plan enabled Retail capacity sits at just under 161ha of land (down from 186ha identified in the 2017/18 HBA). On this could be developed approximately 755,700sqm retail GFA. However, the demand models indicate that only around 41ha of retail land accommodating 245,000sqm of GFA are likely to be required in the long run.

As with the Commercial, Hamilton's plan provisions significantly over provide for retail development in the short, medium and long term – in total. Retail is a little different from commercial in that there is a portion of retail that needs to sit locally with residential areas. It is not as foot loose as commercial activities.

Figure 7.3: Hamilton City Long term Retail Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Te Rapa	1.9	4.8	8.0	24.3			
Chartwell	0.1	0.5	1.4	0.1	Insufficient	Insufficient	Insufficient
Frankton	0.0	1.4	5.1	1.4			Insufficient
CBD	0.2	1.8	5.3	7.6			
Ruakura	- 0.0	0.3	1.1	60.9			
Other	2.7	7.9	19.9	66.5			
Total	**4.9**	**16.7**	**40.8**	**160.7**			

Figure 7.4: Hamilton City Long term Retail Space Sufficiency Summary (GFA)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Te Rapa	11,657	29,054	48,190	121,325			
Chartwell	520	2,799	8,286	307	Insufficient	Insufficient	Insufficient
Frankton	27	8,253	30,426	7,217		Insufficient	Insufficient
CBD	1,259	10,943	32,082	55,968			
Ruakura	- 162	1,589	6,683	233,300			
Other	16,316	47,666	119,182	337,548			
Total	**29,618**	**100,303**	**244,848**	**755,665**			

We note that there are some areas where little or no capacity exists, yet demand is strong (Chartwell and Frankton). Retail demand is mobile and alternatives are relatively proximate to these areas. However, we still recommend Council monitor these areas to ensure households are able to meet their retail needs in an efficient manner.

Hamilton's Industrial land supply is unevenly distributed. Some 96% of vacant industrial land occurs in 2 areas (Te Rapa and Ruakura). This is often the way in cities that have identified clear areas where industrial activities are able to locate. This is efficient and ensures any potential emissions and their negative impacts can be minimised.

Figure 7.5: Hamilton City Long term Industrial Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Te Rapa	42.8	147.5	285.8	278.0			Insufficient
Chartwell	0.4	1.5	4.1	-	Insufficient	Insufficient	Insufficient
Frankton	0.7	21.5	80.3	21.1		Insufficient	Insufficient
CBD	4.3	17.5	56.1	-	Insufficient	Insufficient	Insufficient
Ruakura	0.3	5.0	19.2	336.6			
Other	3.7	28.5	94.1	4.1		Insufficient	Insufficient
Total	**52.2**	**221.5**	**539.6**	**639.7**			

Figure 7.6: Hamilton City Long term Industrial Space Sufficiency Summary (GFA)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Te Rapa	175,459	605,601	1,175,173	2,050,237			
Chartwell	1,769	6,128	17,355	-	Insufficient	Insufficient	Insufficient
Frankton	2,523	89,217	332,986	131,864			Insufficient
CBD	17,794	72,997	233,977	-	Insufficient	Insufficient	Insufficient
Ruakura	1,333	21,131	80,408	1,293,383			
Other	16,326	120,167	394,503	25,421		Insufficient	Insufficient
Total	**215,205**	**915,240**	**2,234,402**	**3,500,905**			

The industrial space available to be developed on the land is significantly more than demand requires. Demand grows from 215,200 sqm GFA to 2,234,400 sqm GFA over the long term. This compares with capacity of over 3,500,000 sqm GFA in the long term.

What is important is that the areas identified as being "industrial development areas" are protected from encroachment by other uses (notably large format retail). In Hamilton, the difference between demand and supply in the long run is much less for industrial land than for either retail or commercial. Demand is expected to require 540 ha of land in the long term. Hamilton City has 640ha of industrial land currently identified and zoned. Demand in the long term accounts for 84% of capacity – the closest gap of the three land use types.

7.2 Waikato Area Results

In Waikato District there is approximately 280ha of plan-enabled Commercial business land that could potentially accommodate over 3.5 million sqm of commercial GFA in the short term. This grows to 316ha of land available over the total long term period able to accommodate over 4.1 million sqm of commercial GFA (if developed in line with the plan provisions) should zoning aspirations play out as indicated by Council. Note that the figures represented in Figures 7.7 and 7.8 are the maximum development capacity for each of the sub areas in Waikato. The amount of plan enabled supply greatly exceeds demand over the long

term – this is partly because the plan provisions allow significant flexibility to develop commercial activities in the commercial zones. In total 19.2ha of land are estimated to be required over 30 years which translates into 122,200 sqm GFA. This represents approximately 6% of the available land capacity.

Waikato District has sufficient commercial capacity for almost any development future.

Figure 7.7: Waikato District Long term Commercial Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Pokeno	0.2	0.6	1.3	34.5			
Tuakau	0.9	2.2	3.5	94.0			
Te Kauwhata	0.4	1.4	2.4	28.2			
Huntly	0.2	0.7	1.6	9.1			
Ngaruawahia	0.0	0.4	1.5	73.3			
Raglan	0.4	1.0	2.5	4.4			
Rest of Waikato	- 0.1	1.5	6.4	72.2			
Total	**1.9**	**7.7**	**19.2**	**315.6**			

Figure 7.8: Waikato District Long term Commercial Space Sufficiency Summary (GFA sqm)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Pokeno	1,070	3,637	8,564	504,775			
Tuakau	5,387	14,469	23,146	1,427,266			
Te Kauwhata	2,419	8,507	14,746	340,409			
Huntly	1,196	4,048	9,677	129,404			
Ngaruawahia	134	2,794	9,598	634,655			
Raglan	2,410	6,627	15,970	61,414			
Rest of Waikato	- 665	8,977	40,482	1,017,518			
Total	**11,949**	**49,060**	**122,183**	**4,115,441**			

In terms of retail land, Waikato District has 52ha of vacant retail-enabled land in the short term. This could potentially accommodate 281,700sqm of retail built floorspace. Again, this is in excess of the long term demand of 6.5ha of retail land or almost 39,200sqm of GFA. Waikato has sufficient retail land and space in all urban locations.

Capacity increases in the medium term to around 65ha and to 69ha in the combined long term as the various plans and developments anticipated come into fruition. This facilitates additional retail GFA of 281,700 sqm in the short term rising to 325,300 sqm in the medium term and on to just over 341,000 sqm GFA in the combined long term (Figure 7.10).

Figure 7.9: Waikato District Long term Retail Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Pokeno	0.1	0.2	0.4	21.5			
Tuakau	0.5	1.3	1.9	18.1			
Te Kauwhata	0.2	0.3	0.4	14.1			
Huntly	- 0.1	- 0.0	0.2	5.8			
Ngaruawahia	0.0	0.1	0.5	3.5			
Raglan	0.2	0.5	1.1	3.2			
Rest of Waikato	- 0.3	0.2	2.0	3.0			
Total	**0.6**	**2.6**	**6.5**	**69.2**			

Figure 7.10: Waikato District Long term Retail Space Sufficiency Summary (GFA sqm)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Pokeno	875	1,292	2,521	82,703			
Tuakau	2,977	7,749	11,401	71,388			
Te Kauwhata	950	1,748	2,639	88,743			
Huntly	- 839	- 98	1,044	34,655			
Ngaruawahia	6	554	3,170	19,355			
Raglan	1,265	2,836	6,417	25,834			
Rest of Waikato	- 1,895	1,374	11,966	18,408			
Total	**3,339**	**15,454**	**39,159**	**341,086**			

Waikato District has identified 415ha of vacant industrial land in the short term under the Operative District Plan. This land could accommodate approximately 1.5 million sqm of GFA under the realistic industrial space scenario of 38.3% site coverage. While demand for industrial land in the short term is low (12.4ha over three years) over the long term total land demand rises to 145ha. This figure remains significantly lower than provision for Industrial land – even in the short term. However, Waikato District is best placed of the three Councils within the FPP to benefit from any Auckland industrial land demand spill over that may occur.[18] Over the long term, industrial land capacity reaches 1,174 hectares largely due areas identified under the Waikato 2070 strategy.

We recommend Council monitor demand growth and uptake of industrial land in Waikato District in order to ensure appropriate volumes of land are provided for in appropriate locations. In the medium and long term, Council have identified significant additional tranches of land to potentially be zoned should additional demand be required. These are mostly located along the northern edge, adjacent to Auckland Region and adjacent to State Highway 1 at Ohinewai. However, we note that Huntly faces demand growth in the short, medium and long term that is not likely to be able to be meet locally. The same is true for Raglan in the medium and long term. Council have identified only 5ha available in Raglan to cater for growth of 6.5ha in the medium term and 17 ha in the combined long term. We recommend Council identify additional industrial land in both these locations to endure those economies are not constrained due to capacity constraints.

[18] No analysis has been done on any spill over that may occur. Broadly, if land of a low enough price is located within short enough distance of requirements, then businesses will be willing to relocate. Up-zoning swathes of (lower-value) rural land in northern Waikato may be all the incentive that certain businesses need to relocate.

Figure 7.11: Waikato District Long term Industrial Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Pokeno	- 0.0	4.2	19.7	53.3			
Tuakau	7.6	14.1	20.9	103.0			
Te Kauwhata	1.1	8.0	13.7	14.0			
Huntly	1.9	4.3	9.5	3.3		Insufficient	Insufficient
Ngaruawahia	- 1.7	0.1	5.4	258.8			
Raglan	2.2	6.5	17.0	1.2	Insufficient	Insufficient	Insufficient
Rest of Waikato	1.5	17.8	58.7	740.8			
Total	**12.4**	**55.1**	**144.9**	**1,174.4**			

Figure 7.12: Waikato District Long term Industrial Space Sufficiency Summary (GFA sqm)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Pokeno	- 209	17,514	82,138	198,603			
Tuakau	31,227	58,136	86,455	393,554			
Te Kauwhata	4,725	33,801	57,785	46,974			Insufficient
Huntly	7,979	18,396	40,119	11,058		Insufficient	Insufficient
Ngaruawahia	- 7,310	351	22,736	957,991			
Raglan	9,118	27,239	70,486	4,013	Insufficient	Insufficient	Insufficient
Rest of Waikato	7,373	76,072	249,306	2,824,206			
Total	**52,902**	**231,509**	**609,026**	**4,436,399**			

7.3 Waipā Area Results

Waipā District has identified 173ha of commercial land capacity in their various planning documents. This is significantly more than the 17ha of demand over the combined long term. This capacity is concentrated in Rukuhia/Ngahinapouri/Ohaupo/Pirongia areas (54%). A further 20% is in Cambridge/Karapiro and 4% in Te Awamutu/Kihikihi. Only growth anticipated for Te Awamutu comes close to matching capacity.

Figure 7.13: Waipā District Long term Commercial Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Cambridge-Karapiro	0.2	2.4	7.3	34.2			
Te Awamutu-Kihikihi	0.6	2.1	6.9	9.7			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.1	0.7	2.0	94.4			
Rest of Waipa	0.1	0.2	0.6	34.2			
Total	**1.0**	**5.4**	**16.9**	**172.5**			

Figure 7.14: Waipā District Long term Commercial Space Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Cambridge-Karapiro	2,023	16,057	47,894	459,221			
Te Awamutu-Kihikihi	3,664	13,590	44,582	153,696			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	671	4,119	13,009	759,676			
Rest of Waipa	607	1,551	3,824	401,694			
Total	**6,965**	**35,317**	**109,309**	**1,774,287**			

In total almost 1.8 million sqm of commercial GFA is provided for, whereas demand over the long term is only 109,300sqm. Within Cambridge demand in the long term is 47,900sqm compared with capacity of

460,000sqm of GFA. In Te Awamutu demand in the long term is 44,580sqm GFA while capacity is estimated to be 153,700sqm GFA

Waipā has provided for 10.6ha of retail land upon which 95,430sqm GFA could be developed. At the District level this exceeds the demand even in the long term. However Council will need to monitor Cambridge and Te Awamutu for demand-supply balance in the long term. In these towns retail land demand is expected to consume over 60% of available retail land in the long run (Figure 7.15).

Figure 7.15: Waipā District Long term Retail Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Cambridge-Karapiro	0.3	1.3	3.2	5.3			
Te Awamutu-Kihikihi	0.0	0.6	2.5	4.0			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	- 0.1	0.1	0.6	1.3			
Rest of Waipa	- 0.1	- 0.0	0.1	-			Insufficient
Total	**0.2**	**1.9**	**6.3**	**10.6**			

From a floorspace perspective the situation is less of an issue with capacity provided in both the major centres exceeding demand in the long term by more of a margin. Growth is expected to have consumed only 40% of available capacity by then. However, once a buffer of 15% is added to facilitate a competitive market (Figure 7.35) this increase to 46% of capacity.

Figure 7.16: Waipā District Long term Retail Space Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Cambridge-Karapiro	1,526	7,504	19,382	47,847			
Te Awamutu-Kihikihi	163	3,576	14,716	35,991			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	- 328	747	3,381	11,593			
Rest of Waipa	- 454	- 235	320	-			Insufficient
Total	**907**	**11,593**	**37,798**	**95,431**			

We recommend that Council continue to monitor uptake of this land to ensure that all sectors are enabled.

Waipā's District Plan enables 231ha of industrial land – this is more than identified in 2017/18 HBA where some 193ha of land was identified as vacant and available for Industrial purposes. Capacity is concentrated into the Rukuhia/Ngahinapouri/Ohaupo/Pirongia areas (42%) and Cambridge/Karapiro, (25%). This is highly concentrated in and around Titanium Park and Hautapu, both of which are identified as strategic industrial nodes by the partners. In total the amount of land provided exceeds demand over the long term (231ha provided compared with 108ha demanded). We suggest that Council monitor industrial land uptake in Cambridge-Karapiro and Te Awamutu-Kihikihi, where the difference between land supply and demand are slim in the long term.

Figure 7.17: Waipā District Long term Industrial Land Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	Short Term	Medium Term	Long Term
Cambridge-Karapiro	5.4	15.9	51.9	56.6			
Te Awamutu-Kihikihi	2.3	9.9	34.8	44.2			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.6	4.4	17.0	95.9			
Rest of Waipa	0.4	1.4	4.5	34.3			
Total	**8.6**	**31.5**	**108.2**	**230.9**			

Figure 7.18: Waipā District Long term Industrial Space Sufficiency Summary (ha)

Name	Short Term	Medium Term	Long Term	Total GFA Capacity (sqm)	Short Term	Medium Term	Long Term
Cambridge-Karapiro	23,030	67,427	217,157	203,920			Insufficient
Te Awamutu-Kihikihi	10,233	42,859	148,277	166,567			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	2,494	18,362	70,928	386,396			
Rest of Waipa	1,442	5,845	19,240	114,931			
Total	**37,198**	**134,494**	**455,601**	**871,814**			

One potential insufficiency for industrial floorspace has been identified in the Cambridge-Karapiro area over the long term. Floorspace demand is expected to exceed the estimated realistic industrial space in the long term by 13,200 sqm. The margins in Te Awamutu-Kihikihi also come close under the base demand scenario. We strongly advise council to monitor these two areas to ensure that industrial land (and floorspace) are reserved for industrial uses. Overall, Waipā has more than enough industrial floorspace capacity at the district-level, with the long term total demand of 455,600 sqm representing only 52% of the 871,800 sqm of realistic industrial space identified.

7.4 Incorporating a Margin Over and Above Demand

As part of NPS-UD Part 3, Implementation Councils are asked, in 3.26 to estimate what is feasible and reasonably expected to be realised. This is in recognition that portions of plan enabled and serviced capacity may not be realised as capacity. This means that Councils must allow more land than is actually demanded to allow for a shortfall that may not be realised. In addition, the NPS-UD requires that Councils allow for an appropriate competitiveness margin. This is set at 20% over and above projected demand in the short and medium term and 15% in the long term.

The tables that follow first outline land sufficiency across the FPP area by incorporating the additional margins over and above demand. The structure follows the structure above. The main points are;

- At the TA level, all Councils provide sufficient capacity for demand including margin across all sectors.
- Localised industrial land demand plus margin is the most likely demand type to significantly exceed capacity. This is especially true for much of Hamilton City, Huntly, Raglan and Te Kauwhata in Waikato, and Cambridge-Karapiro in Waipā.
- Localised industrial floorspace demand plus margin follows a similar trend to land, above.
- There is generally enough commercial and retail land and floorspace capacity to accommodate projected growth plus margin.

The appearance of insufficiency at the local level requires some investigation. In several places, the margins of insufficiency are low and could easily be met with minor re-zoning where required. In others demand apportioned to specific reporting areas could easily be met in other parts of the TA or the wider sub-region.

Particularly for industrial land and floorspace demand, there appears to be a lack of capacity at the local level. This is appears true for Hamilton City, but it obscures the fact that much of the demand can be accommodated within two areas – Ruakura and Te Rapa (615ha capacity out of 621ha demand + margin). This is ideal, since co-locating industrial businesses in similar areas has a range of benefits, and stops the spread of industrial businesses across the city. Similarly, all of Huntly's industrial demand could easily be provided for in nearby Ngāruawāhia and Horotiu (Rest of Waikato). In this way then, it makes sense to look at demand and capacity as somewhat trans-locational and see the sub-region as a reasonably well-connected network of nodes. In most cases areas where there are insufficiencies will have adjacent areas with ample capacity which are easy to access or make sense from a co-location point of view. The main exception to this is Raglan where it appears that industrial land is insufficient for demand requirements across all time-scales. The main issue here however is the topography, which does not allow for much re-zoning of land near the town. Overall though, ample capacity has been supplied in or adjacent to the places where it is required long term.

7.4.1 Land Sufficiency plus Margin Results

Figure 7.19: Hamilton Commercial Land Sufficiency plus Margin (ha)

	Demand Growth + Margin (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Te Rapa	6.3	16.4	29.9	123.5	123.5	123.5			
Chartwell	- 0.1	0.3	1.1	0.1	0.1	0.1		Insufficient	Insufficient
Frankton	2.1	5.6	14.4	22.5	22.5	22.5			
CBD	- 0.2	5.7	19.0	7.8	7.8	7.8			Insufficient
Ruakura	0.0	0.7	2.4	146.1	212.8	336.8			
Other	6.3	19.5	49.3	40.3	46.5	74.1			
Total	**14.5**	**48.2**	**116.0**	**340.3**	**413.1**	**564.8**			

Figure 7.20: Hamilton Retail Land Sufficiency plus Margin (ha)

	Demand Growth + Margin (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Te Rapa	2.3	5.8	9.2	24.3	24.3	24.3			
Chartwell	0.1	0.6	1.6	0.1	0.1	0.1	Insufficient	Insufficient	Insufficient
Frankton	0.0	1.7	5.8	1.4	1.4	1.4		Insufficient	Insufficient
CBD	0.3	2.2	6.1	7.6	7.6	7.6			
Ruakura	- 0.0	0.3	1.3	60.9	60.9	60.9			
Other	3.3	9.5	22.8	32.7	38.9	66.5			
Total	**5.9**	**20.1**	**46.9**	**126.9**	**133.1**	**160.7**			

Figure 7.21: Hamilton Industrial Land Sufficiency plus Margin (ha)

	Demand Growth + Margin (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Te Rapa	51.4	177.0	328.7	99.3	99.3	278.0		Insufficient	Insufficient
Chartwell	0.5	1.7	4.8	-	-	-	Insufficient	Insufficient	Insufficient
Frankton	0.8	25.8	92.3	21.1	21.1	21.1		Insufficient	Insufficient
CBD	5.2	21.0	64.5	-	-	-	Insufficient	Insufficient	Insufficient
Ruakura	0.3	6.0	22.0	145.8	212.6	336.6			
Other	4.5	34.2	108.2	4.1	4.1	4.1	Insufficient	Insufficient	Insufficient
Total	**62.7**	**265.8**	**620.6**	**270.3**	**337.0**	**639.7**			

Figure 7.22: Waikato District Commercial Land Sufficiency plus Margin (ha)

	Demand Growth + Margin (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Pokeno	0.2	0.7	1.5	26.8	34.5	34.5			
Tuakau	1.0	2.7	4.1	87.5	94.0	94.0			
Te Kauwhata	0.4	1.6	2.7	22.8	24.2	28.2			
Huntly	0.3	0.8	1.8	5.2	9.1	9.1			
Ngaruawahia	0.0	0.5	1.7	70.0	72.7	73.3			
Raglan	0.5	1.2	2.8	4.4	4.4	4.4			
Rest of Waikato	- 0.1	1.7	7.4	63.1	72.2	72.2			
Total	**2.3**	**9.3**	**22.1**	**279.8**	**311.0**	**315.6**			

Figure 7.23: Waikato District Retail Land Sufficiency plus Margin (ha)

	Demand Growth + Margin (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Pokeno	0.2	0.3	0.5	15.8	21.5	21.5			
Tuakau	0.6	1.5	2.2	16.6	18.1	18.1			
Te Kauwhata	0.2	0.3	0.5	8.8	10.2	14.1			
Huntly	- 0.2	- 0.0	0.2	3.3	5.8	5.8			
Ngaruawahia	0.0	0.1	0.6	1.6	2.9	3.5			
Raglan	0.3	0.6	1.2	3.2	3.2	3.2			
Rest of Waikato	- 0.4	0.3	2.3	2.6	3.0	3.0			
Total	**0.7**	**3.1**	**7.5**	**51.9**	**64.6**	**69.2**			

Figure 7.24: Waikato District Industrial Land Sufficiency plus Margin (ha)

	Demand Growth + Margin (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Pokeno	- 0.0	5.1	22.6	15.5	17.5	53.3			
Tuakau	9.1	16.9	24.0	97.9	103.0	103.0			
Te Kauwhata	1.3	9.7	15.8	14.0	14.0	14.0			Insufficient
Huntly	2.3	5.2	10.9	2.0	3.3	3.3	Insufficient	Insufficient	Insufficient
Ngaruawahia	- 2.1	0.1	6.2	68.4	222.8	258.8			
Raglan	2.6	7.8	19.5	1.2	1.2	1.2	Insufficient	Insufficient	Insufficient
Rest of Waikato	1.8	21.3	67.5	216.4	343.1	740.8			
Total	**14.9**	**66.1**	**166.6**	**415.3**	**705.0**	**1,174.4**			

Figure 7.25: Waipā District Commercial Land Sufficiency plus Margin (ha)

Name	Demand Growth + Margin (ha)			Total Vacant Land (ha)	Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)		Short Term	Medium Term	Long Term
Cambridge-Karapiro	0.3	2.9	8.4	34.2			
Te Awamutu-Kihikihi	0.7	2.6	8.0	9.7			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.1	0.8	2.4	94.4			
Rest of Waipa	0.1	0.3	0.7	34.2			
Total	**1.3**	**6.5**	**19.4**	**172.5**			

Figure 7.26: Waipā District Retail Land Sufficiency plus Margin (ha)

Name	Demand Growth + Margin (ha)			Total Vacant Land (ha)	Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)		Short Term	Medium Term	Long Term
Cambridge-Karapiro	0.3	1.5	3.7	5.3			
Te Awamutu-Kihikihi	0.0	0.7	2.8	4.0			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	- 0.1	0.1	0.6	1.3			
Rest of Waipa	- 0.1	- 0.0	0.1	-			Insufficient
Total	**0.2**	**2.3**	**7.2**	**10.6**			

Figure 7.27: Waipā District Industrial Land Sufficiency plus Margin (ha)

Name	Demand Growth + Margin (ha)			Total Vacant Land (ha)	Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)		Short Term	Medium Term	Long Term
Cambridge-Karapiro	6.5	19.1	59.7	56.6			Insufficient
Te Awamutu-Kihikihi	2.7	11.8	40.1	44.2			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.7	5.2	19.5	95.9			
Rest of Waipa	0.4	1.6	5.2	34.3			
Total	**10.3**	**37.8**	**124.5**	**230.9**			

7.4.2 Floorspace Sufficiency plus Margin Results

Once a margin is added to floorspace requirements some insufficiencies start to appear or appear more rapidly. Generally, there are fewer insufficiencies associated with floorspace than there are with land, as floorspace can be developed more intensively than land – especially for commercial and retail uses.

Hamilton City

At a TA-level, Hamilton is very well provided for with respect to commercial, retail and industrial floorspace under the current District plan provisions. There are some points of local insufficiencies especially for industrial land, but for reasons outlined above, these are not as critical as Council looks to focus industrial activity into a few key locations. Frankton appears to have a deficit in the level of retail floorspace capacity available, however this could easily be met in the CBD, or further afield in the planned developments near Rotokauri. Once again, the industrial floorspace estimates here are much lower than what is actually plan enabled, as M.E have applied the realistic industrial space measure to it.

Figure 7.28: Hamilton Commercial Floorspace Sufficiency plus Margin (sqm GFA)

	Demand Growth + Margin (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Te Rapa	40,563	106,071	192,038	1,051,561	1,051,561	1,051,561			
Chartwell	- 401	1,918	7,279	1,228	1,228	1,228		Insufficient	Insufficient
Frankton	13,632	35,787	91,833	136,047	136,047	136,047			
CBD	- 277	38,855	126,621	221,788	221,788	221,788			
Ruakura	110	4,295	15,537	2,610,205	4,143,677	6,993,291			
Other	40,159	125,504	316,890	764,332	918,343	1,608,671			
Total	**93,786**	**312,430**	**750,198**	**4,785,160**	**6,472,643**	**10,012,586**			

Figure 7.29: Hamilton Retail Floorspace Sufficiency plus Margin (sqm GFA)

	Demand Growth + Margin (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Te Rapa	13,989	34,865	55,418	121,325	121,325	121,325			
Chartwell	624	3,359	9,529	307	307	307	Insufficient	Insufficient	Insufficient
Frankton	32	9,904	34,990	7,217	7,217	7,217		Insufficient	Insufficient
CBD	1,511	13,132	36,894	55,968	55,968	55,968			
Ruakura	- 194	1,906	7,685	233,300	233,300	233,300			
Other	19,580	57,199	137,059	168,680	199,482	337,548			
Total	**35,542**	**120,364**	**281,576**	**586,797**	**617,599**	**755,665**			

Figure 7.30: Hamilton Industrial Floorspace Sufficiency plus Margin (sqm GFA)

	Demand Growth + Margin (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Te Rapa	210,551	726,721	1,351,448	620,473	620,473	2,050,237		Insufficient	
Chartwell	2,123	7,353	19,958	-	-	-	Insufficient	Insufficient	Insufficient
Frankton	3,028	107,060	382,933	131,864	131,864	131,864			Insufficient
CBD	21,353	87,596	269,073	-	-	-	Insufficient	Insufficient	Insufficient
Ruakura	1,599	25,357	92,469	562,869	818,447	1,293,383			
Other	19,591	144,200	453,679	25,421	25,421	25,421		Insufficient	Insufficient
Total	**258,245**	**1,098,287**	**2,569,562**	**1,340,626**	**1,596,205**	**3,500,905**			

Waikato District

Broadly, the Waikato District has ample capacity for commercial and retail floorspace at all levels. Areas of undersupply only exist in the industrial sector – mainly in Huntly and Raglan, with some insufficiency in Te Kauwhata in the long term. Again, Huntly and Te Kauwhata's deficits can largely be met by capacity in adjacent areas. Raglan may require further though and pro-active zoning if possible. Again, realistic industrial space capacity estimates come in below what the district plan rules and may cause local insufficiencies that may not actually be realised in the future. The overall position is that Waikato remains well served by its District Plan in terms of the amount of built floorspace the provisions allow.

Figure 7.31: Waikato District Commercial Floorspace Sufficiency plus Margin (sqm GFA)

	Demand Growth + Margin (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Pokeno	1,284	4,364	9,848	382,248	504,775	504,775			
Tuakau	6,464	17,363	26,618	1,323,728	1,427,266	1,427,266			
Te Kauwhata	2,902	10,209	16,957	254,933	276,625	340,409			
Huntly	1,435	4,857	11,128	68,042	129,404	129,404			
Ngaruawahia	161	3,353	11,038	582,315	625,027	634,655			
Raglan	2,892	7,952	18,366	61,414	61,414	61,414			
Rest of Waikato	- 799	10,773	46,555	873,638	1,017,518	1,017,518			
Total	**14,339**	**58,872**	**140,511**	**3,546,319**	**4,042,029**	**4,115,441**			

Figure 7.32: Waikato District Retail Floorspace Sufficiency plus Margin (sqm GFA)

	Demand Growth + Margin (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Pokeno	1,050	1,550	2,899	63,322	82,703	82,703			
Tuakau	3,573	9,299	13,111	66,481	71,388	71,388			
Te Kauwhata	1,140	2,098	3,035	70,427	75,075	88,743			
Huntly	- 1,006	- 118	1,201	26,028	34,655	34,655			
Ngaruawahia	7	665	3,645	12,687	17,291	19,355			
Raglan	1,518	3,403	7,380	25,834	25,834	25,834			
Rest of Waikato	- 2,274	1,648	13,761	16,957	18,408	18,408			
Total	**4,007**	**18,545**	**45,033**	**281,737**	**325,355**	**341,086**			

Figure 7.33: Waikato District Industrial Floorspace Sufficiency plus Margin (sqm GFA)

	Demand Growth + Margin (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
Name	**Short Term (+20%)**	**Medium Term (+20%)**	**Long Term (+15%)**	**Short Term**	**Medium Term**	**Long Term**	**Short Term**	**Medium Term**	**Long Term**
Pokeno	- 251	21,017	94,459	54,088	61,741	198,603			
Tuakau	37,472	69,764	99,424	374,005	393,554	393,554			
Te Kauwhata	5,670	40,561	66,453	46,974	46,974	46,974			Insufficient
Huntly	9,575	22,076	46,137	6,583	11,058	11,058	Insufficient	Insufficient	Insufficient
Ngaruawahia	- 8,772	422	26,146	229,328	819,969	957,991			
Raglan	10,941	32,686	81,059	4,013	4,013	4,013	Insufficient	Insufficient	Insufficient
Rest of Waikato	8,848	91,286	286,702	819,826	1,301,274	2,824,206			
Total	**63,482**	**277,811**	**700,380**	**1,534,816**	**2,638,583**	**4,436,399**			

Waipā District

Generally, Waipā District remains well provided for even in the face of the additional competitiveness margins. As with the other partnership councils, there are some local insufficiencies for industrial floorspace capacity in the Cambridge-Karapiro and Te Awamutu-Kihikihi reporting areas. The Cambridge-Karapiro reporting area has the largest deficit when taking into account demand + margin, with a deficit of 45,800 sqm.

Figure 7.34: Waipā District Commercial Floorspace Sufficiency plus Margin (sqm GFA)

Name	Demand Growth + Margin (sqm)			Total Vacant GFA (sqm)	Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)		Short Term	Medium Term	Long Term
Cambridge-Karapiro	2,427	19,268	55,078	459,221			
Te Awamutu-Kihikihi	4,397	16,307	51,269	153,696			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	805	4,943	14,961	759,676			
Rest of Waipa	729	1,861	4,397	401,694			
Total	**8,358**	**42,380**	**125,705**	**1,774,287**			

Figure 7.35: Waipā District Retail Floorspace Sufficiency plus Margin (sqm GFA)

Name	Demand Growth + Margin (sqm)			Total Vacant GFA (sqm)	Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)		Short Term	Medium Term	Long Term
Cambridge-Karapiro	1,832	9,005	22,289	47,847			
Te Awamutu-Kihikihi	195	4,291	16,923	35,991			
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	- 394	897	3,888	11,593			
Rest of Waipa	- 545	- 282	368	-			Insufficient
Total	**1,088**	**13,911**	**43,468**	**95,431**			

Figure 7.36: Waipā District Industrial Floorspace Sufficiency plus Margin (sqm GFA)

Name	Demand Growth + Margin (sqm)			Total Vacant GFA (sqm)	Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)		Short Term	Medium Term	Long Term
Cambridge-Karapiro	27,636	80,913	249,730	203,920			Insufficient
Te Awamutu-Kihikihi	12,279	51,431	170,519	166,567			Insufficient
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	2,993	22,035	81,567	386,396			
Rest of Waipa	1,730	7,014	22,126	114,931			
Total	**44,637**	**161,393**	**523,942**	**871,814**			

7.5 FPP Level Results

At the Total Future Proof Partners level, the plan enabled capacity across all three broad economic areas is sufficient to meet the anticipated growth needs. Figure 7.37 shows that commercial and retail land demand over the long term is significantly less than the amount of land provided for in the various district plans. Demand for commercial land is approximately 15% of commercial land capacity over the long term, while retail demand is 26% of retail land capacity. Across the FPP area, industrial land demand reaches approximately 45% of total industrial land capacity in the long term, although margins within Hamilton City (97%) are much closer than Waikato (14%) and Waipā (54%).

Figure 7.37: Future Proof Business Land Sufficiency Summary (ha)

Sector	Demand Growth (ha)			Estimated Land Availability (ha)			Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)	Short Term	Medium Term	Long Term	Short Term	Medium Term	Long Term
Commercial									
Hamilton City	14.5	48.2	116.0	340.3	413.1	564.8			
Waikato District	2.3	9.3	22.1	279.8	311.0	315.6			
Waipa District	1.3	6.5	19.4	172.5	172.5	172.5			
TOTAL FUTURE PROOF	**18.1**	**64.0**	**157.6**	**792.6**	**896.7**	**1,052.9**			
Retail									
Hamilton City	5.9	20.1	46.9	126.9	133.1	160.7			
Waikato District	0.7	3.1	7.5	51.9	64.6	69.2			
Waipa District	0.2	2.3	7.2	10.6	10.6	10.6			
TOTAL FUTURE PROOF	**6.8**	**25.5**	**61.7**	**189.5**	**208.3**	**240.5**			
Industrial									
Hamilton City	62.7	265.8	620.6	270.3	337.0	639.7			
Waikato District	14.9	66.1	166.6	415.3	705.0	1,174.4			
Waipa District	10.3	37.8	124.5	230.9	230.9	230.9			
TOTAL FUTURE PROOF	**87.9**	**369.6**	**911.6**	**916.5**	**1,272.9**	**2,045.0**			

As with land supply, there are significant levels of business floorspace capacity across all sector types within the FPP area. Total commercial floorspace demand reaches just over 6% of supply long term, while retail demand reaches 31% of plan-enabled floorspace long term. Industrial floorspace demand plus margin reaches 43% of the realistic industrial space identified across the partnership councils.

Figure 7.38: Future Proof Business Space Sufficiency Summary (sqm GFA)

Sector	Demand Growth (sqm)			Estimated GFA Availability (sqm)			Sufficiency Measure		
	Short Term (+20%)	Medium Term (+20%)	Long Term (+15%)	Short Term	Medium Term	Long Term	Short Term	Medium Term	Long Term
Commercial									
Hamilton City	93,786	312,430	750,198	4,785,160	6,472,643	10,012,586			
Waikato District	14,339	58,872	140,511	3,546,319	4,042,029	4,115,441			
Waipa District	8,358	42,380	125,705	1,774,287	1,774,287	1,774,287			
TOTAL FUTURE PROOF	**116,483**	**413,681**	**1,016,414**	**10,105,766**	**12,288,959**	**15,902,313**			
Retail									
Hamilton City	35,542	120,364	281,576	586,797	617,599	755,665			
Waikato District	4,007	18,545	45,033	281,737	325,355	341,086			
Waipa District	1,088	13,911	43,468	95,431	95,431	95,431			
TOTAL FUTURE PROOF	**40,636**	**152,820**	**370,077**	**963,964**	**1,038,385**	**1,192,182**			
Industrial									
Hamilton City	258,245	1,098,287	2,569,562	1,340,626	1,596,205	3,500,905			
Waikato District	63,482	277,811	700,380	1,534,816	2,638,583	4,436,399			
Waipa District	44,637	161,393	523,942	871,814	871,814	871,814			
TOTAL FUTURE PROOF	**366,365**	**1,537,491**	**3,793,883**	**3,747,257**	**5,106,602**	**8,809,119**			

These results indicate that there is more than enough capacity enabled to meet demand across the Future Proof Partnership area in terms of both vacant land and floorspace supply.

7.6 MCA Sufficiency Results

In this section results from the multi-criteria analysis are placed alongside the sufficiency tables to highlight any mismatches between areas where Council are providing for capacity, areas that are growing strongly and the areas that appear to have the most favourable development characteristics.

Note that in this section, the MCA has been applied across the key urban centres, rather than across the entirety of each district within FPP. This means that there are no specific scores for 'Other' or 'Rest of Waikato', because they are not locations with locational characteristics.

7.6.1 Hamilton City MCA

Figure 7.39: Hamilton City Commercial Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Te Rapa	5.2	13.7	26.0	123.5	83
Chartwell	- 0.0	0.2	0.9	0.1	62
Frankton	1.8	4.7	12.5	22.5	66
CBD	- 0.1	4.8	16.6	7.8	89
Ruakura	0.0	0.5	2.0	336.8	75
Other	5.3	16.3	42.9	74.1	
Total	**12.1**	**40.1**	**100.9**	**564.8**	

For the most part, there is alignment between areas with high amount of capacity and areas that score highly via the MCA process for Commercial land. The exception being the CBD. This area scores highest for locating Commercial land therefore it is highly developed with limited vacant capacity. In fact, in commercial land terms, the CBD runs short of vacant capacity in the long run. This is not the case with respect to the ability of that land to provide commercial GFA, where the land available supports GFA capacity significantly in excess of long term demand.

Other than the CBD the areas with the next 2 highest MCA scores are those with the most capacity. This indicates that Hamilton City Council's plan provisions closely match the commercial development market (Figure 7.39).

Retail land is reasonably well aligned with areas that show the potential for development. However there is some mismatch here. Te Rapa and the CBD score the highest with respect to provision of Retail Land – yet the most capacity is located at Ruakura – which scores the lowest. All areas have provision in excess of demands in the long run – with the exception of Chartwell, where 1.4 ha is demanded but only 0.1ha is provided for. The new centre to the north or Chartwell at Rototuna, will meet plenty of the growth needs of the Chartwell catchment although this is an area that needs monitoring.

Second, Hamilton's CBD has 7.6ha of land potentially available for Retail development and raw demand in the long run for 5.3ha. This combined with demand for retail land in Frankton (immediately adjacent to the CBD) of 5.1ha with provision for only 1.4 ha, places the CBD and central Hamilton under pressure (10.4ha of long run demand but only 9ha of provision) (Figure 7.40).

Figure 7.40: Hamilton City Retail Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Te Rapa	1.9	4.8	8.0	24.3	89
Chartwell	0.1	0.5	1.4	0.1	76
Frankton	0.0	1.4	5.1	1.4	71
CBD	0.2	1.8	5.3	7.6	88
Ruakura	- 0.0	0.3	1.1	60.9	70
Other	2.7	7.9	19.9	66.5	
Total	**4.9**	**16.7**	**40.8**	**160.7**	

Hamilton City's industrial land supply most closely aligns with high development potential areas. Those that score over 80% account for 96% of total plan enabled capacity. This is unsurprising as Hamilton's industrial capacity is more concentrated into fewer appropriate areas than commercial or retail.

Figure 7.41: Hamilton City Industrial Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Te Rapa	42.8	147.5	285.8	278.0	91
Chartwell	0.4	1.5	4.1	-	60
Frankton	0.7	21.5	80.3	21.1	77
CBD	4.3	17.5	56.1	-	62
Ruakura	0.3	5.0	19.2	336.6	80
Other	3.7	28.5	94.1	4.1	
Total	**52.2**	**221.5**	**539.6**	**639.7**	

In summary, Hamilton City's plan enabled capacity broadly aligns with areas that score well through the MCA process. This means that Hamilton City's capacity is likely to be developed in line with demand, that there are unlikely to be significant issues that may halt development or cause bottlenecks in supply of land to meet growth needs.

The one exception that requires monitoring is the long term shortfall in the CBD and Frankton, where 10.4ha of retail land demand is met by only 9ha of retail land.

7.6.2 Waikato District MCA

Development areas in Waikato District, in general score lower than those in Hamilton City. Only the Industrial land competes effectively with Hamilton City from a development perspective. This is to be expected as the size and growth potential in the urban parts of the FPP area 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 Waipā more attractive.

Figure 7.42: Waikato District Commercial Land Sufficiency and MCA scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Pokeno	0.2	0.6	1.3	34.5	44
Tuakau	0.9	2.2	3.5	94.0	45
Te Kauwhata	0.4	1.4	2.4	28.2	31
Huntly	0.2	0.7	1.6	9.1	51
Ngaruawahia	0.0	0.4	1.5	73.3	44
Raglan	0.4	1.0	2.5	4.4	34
Rest of Waikato	- 0.1	1.5	6.4	72.2	
Total	**1.9**	**7.7**	**19.2**	**315.6**	

Of the areas assessed there is a reasonable match between areas that score highly for commercial land development and capacity. The largest areas all score in the upper middle range across Waikato District (Ngāruawāhia, Pōkeno and Tuakau).

Waikato Retail land is also reasonably aligned, with the two largest plan enabled capacity areas (Pōkeno and Tuakau) scoring in the upper middle bracket.

Figure 7.43: Waikato District Retail Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Pokeno	0.1	0.2	0.4	21.5	52
Tuakau	0.5	1.3	1.9	18.1	47
Te Kauwhata	0.2	0.3	0.4	14.1	32
Huntly	- 0.1	- 0.0	0.2	5.8	61
Ngaruawahia	0.0	0.1	0.5	3.5	49
Raglan	0.2	0.5	1.1	3.2	39
Rest of Waikato	- 0.3	0.2	2.0	3.0	
Total	**0.6**	**2.6**	**6.5**	**69.2**	

Industrial land plan enabled capacity in Waikato District is broadly aligned with the MCA scores. The largest area of capacity (Ngāruawāhia in the long run) scores highly on the MCA framework (second only to Huntly as a location) meaning there is a good fit between planning provisions and development potential.

The only area of concern is Huntly, which scores highly as a location for industrial activity, yet has only 3.3ha of vacant industrial land provided. In the long run, demand likely to be focused on Huntly is 9.5ha.

Figure 7.44: Waikato District Industrial Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Pokeno	- 0.0	4.2	19.7	53.3	66
Tuakau	7.6	14.1	20.9	103.0	59
Te Kauwhata	1.1	8.0	13.7	14.0	41
Huntly	1.9	4.3	9.5	3.3	73
Ngaruawahia	- 1.7	0.1	5.4	258.8	69
Raglan	2.2	6.5	17.0	1.2	34
Rest of Waikato	1.5	17.8	58.7	740.8	
Total	**12.4**	**55.1**	**144.9**	**1,174.4**	

7.6.3 Waipā District MCA

Development potential in Waipā District is really limited to the two large urban centres (Cambridge and Te Awamutu) and Titanium Park contained within Rukuhia-Ngahinapouri/Ohaupo/Pirongia area. Lack of differentiation within each of these areas means the MCA is limited. What it does tell us is that the majority of commercial plan enabled capacity identified in Titanium Park, scores lower than the rest. This is because of its location away from the population centres of Waipā.

This pattern is repeated across the industrial areas, however retail vacant capacity is aligned with the MCA in that Cambridge scores highest and has the most capacity (Figure 7.46 and Figure 7.47).

Figure 7.45: Waipā District Commercial Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Cambridge-Karapiro	0.2	2.4	7.3	34.2	64
Te Awamutu-Kihikihi	0.6	2.1	6.9	9.7	60
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.1	0.7	2.0	94.4	42
Rest of Waipa	0.1	0.2	0.6	34.2	
Total	**1.0**	**5.4**	**16.9**	**172.5**	

Figure 7.46: Waipā District Retail Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Cambridge-Karapiro	0.3	1.3	3.2	5.3	66
Te Awamutu-Kihikihi	0.0	0.6	2.5	4.0	59
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	- 0.1	0.1	0.6	1.3	48
Rest of Waipa	- 0.1	- 0.0	0.1	-	
Total	**0.2**	**1.9**	**6.3**	**10.6**	

Figure 7.47: Waipā District Industrial Land Sufficiency and MCA Scores

Name	Short Term	Medium Term	Long Term	Total Vacant Land (ha)	MCA Score
Cambridge-Karapiro	5.4	15.9	51.9	56.6	70
Te Awamutu-Kihikihi	2.3	9.9	34.8	44.2	64
Rukuhia-Ngahinapouri-Ohaupo-Pirongia	0.6	4.4	17.0	95.9	58
Rest of Waipa	0.4	1.4	4.5	34.3	
Total	**8.6**	**31.5**	**108.2**	**230.9**	

7.7 Conclusions

In general, the MCA framework has aligned well with Plan enabled capacity across the FPP area. The key exception is in Hamilton's CBD where Retail Land is potentially in short supply in the long term and the MCA scores this area highest for retail potential. In Waipā, Industrial and Commercial Land capacity is over supplied in Titanium Park which scores lower than the major centres (Cambridge and Te Awamutu). This may mean that uptake of this land (Titanium Park) may be slower than growth in demand indicates. When aligned with the limited surplus vacant capacity within the rest of Waipā (as discussed in the sufficiency sections above), means that Waipā District will need to monitor uptake and land use closely to ensure it provides sufficient capacity.

Overall, the various Future Proof Partners have, through their planning documents, structure plans and other strategic documents, made sound provision for growth in demand for business land and floorspace. The potential pressure likely to be felt in Hamilton's CBD and Waipā District with respect to land is not necessarily reflected in floorspace as commercial floorspace co-exists with retail ground floorspace well. What it may indicate is that there is pressure brought to bear on existing business land areas to maximise their potential across the Cambridge and Te Awamutu areas. Redevelopment potential tends to occur when other options are either not available or are poorly located or too expensive as redevelopment is relatively costly and carries a higher risk.

Key points include;

- In Hamilton and Waipā, the gap between Industrial land supply and industrial land demand is closer than for either retail or commercial. This means these Councils should be particularly vigilant in terms of monitoring uptake and usage of industrial land. Industrial land is particularly sensitive to being used for other purposes. Due to its relatively low value, it is often targeted by large format retail operators who seek large footprint sites at relatively low cost. As they are destinations in and of themselves, they have the ability to drive trade their way. This changes the dynamics of cities and can lead to very significant adverse outcomes as trade is drawn away from traditional centres impacting on their ability to function and deliver amenity to the city.
- In Waikato District there appears to have been some effort to identify and recognise very large areas for future industrial capacity. As it currently stands, in the long run demand makes up less than 15% of the identified capacity to meet that demand (167ha demand + margin and provision

of over 1,170ha). Some reduction in developable site area and floor coverage has reduced the total level of capacity downward somewhat. Although swathes of land have been earmarked for investigation, these are by no means set in stone nor legislated. Decision-makers should be aware that re-zoning such large areas of land has the potential to muddy the waters in the future as technologies change and needs shift. It is likely that the majority of this land won't be needed – yet by identifying it may limit its use for other purposes.

- High level of cross over between retail and commercial in terms of land requirements means that they could potentially be viewed as a single entity.
- Reasonably strong alignment between results of the MCA framework and plan enabled capacity indicate Councils are zoning land that is appropriately located and is likely to meet developer requirements.
- Price is the key factor when establishing whether land will be developed or not. Land price encompasses a range of the variables identified within the MCA. Price is often the first hurdle to development, but not the only factor. While it is important to get the price right, price will not necessarily compensate for deficiencies in either location or other physical characteristics of a parcel of land.

7.8 Monitoring

The National Policy Statement requires that Councils carry out a range of monitoring of business land development, uptake and redevelopment. While most areas appear to be well served by plan enabled capacity and that this capacity appears to be well chosen within the development MCA framework, there are areas of concern which requires Council to carry out monitoring.

Concerns and monitoring areas include;

- Shortage of identified Industrial Capacity in Huntly and Raglan in relation to growth in demand.
- It will be helpful to monitor the update of all vacant business land to understand the rate, space type and GFA of that development. Especially in the major centres and development cells across the sub-region.
- All Councils will need to monitor the development of retail and commercial floorspace across the major centres to assess the impact of out of centre developments – in particular retail in Te Rapa and impact on Hamilton CBD.
- Monitoring the redevelopment of existing sites – by location and land use type. If capacity is provided by increasing the number of storeys, this should be identified and tracked by location.
- Monitor the spread of non-rural industrial activity into rural areas – by location and type.
- Monitor the actual occupation of development by activity type (using an ANZSIC framework) to understand how locational trends might be shifting.

- Waipā and Waikato are advised to monitor closely the uptake of commercial retail and industrial land – especially in the key centres (Pōkeno, Tuakau, Huntly, Horotiu, Cambridge, Te Awamutu,). Monitoring of building consents and the nature of occupation by ANZSIC to ensure locational trends are captured.
- Last, Councils are advised to monitor trends in business and employment activity occurring in non-business zones in the urban environment.

8 Future Updates

The NPS-UD requires high growth Councils to carry out this assessment every three years. In that light the 2020/21 study is the first update from the 2017/18 baseline. The important point from this assessment is that the FPP have ensured that there is sufficient business land capacity to cater for anticipated growth in the short to medium term (with a few localised exceptions). Given that the long term covers 30 years, shortfalls identified at the extreme are areas that will cause Councils to consider, but they are unlikely to be significantly impacted in terms of land use decisions made in the near future.

As with the key findings in the 2017/8 report, the most important thing Councils can do to ensure they remain in touch with growth and change, is to constantly monitor business land development. By consistently updating datasets on development and occupancy, Councils will be well placed to address development and broader economic trends as they begin to emerge.

8.1 Overview of Process

The process followed in this report is based strongly on that outlined in the Guidance on Evidence and Monitoring, published by MfE and MBIE, June 2017, updated to reflect the NPS-UD guidance published in 2020 to align with the NPS-UD. It is noted that the base assessment processes are the same between the NPS-UDC and the NPS-UD with a very few exceptions. The overall purpose and intent of the work is to provide Councils with more information about demand, supply and sufficiency, such that they are able to make better informed decisions about business land.

The assessment process breaks down into 2 workstreams; a Demand Assessment based on WISE – particularly the population projections and economic model within, and a Capacity assessment based on existing supply and future zone ambitions. Capacity is estimated based on Council data including spatial data and property ratings data. Assumptions and results of the capacity assessment are also 'ground-truthed' by Council to ensure they truly reflect current conditions. These are brought together at the end to draw conclusions about sufficiency of the various plans to provide for capacity. In the 2017/18 assessment, Council officers spent significant time in the field carrying out the ground truthing of the raw data. In this iteration, that baseline ground-truthed capacity was updated using building consent information, updated aerials and CCC's – rather than field time.

In addition, the development community was consulted to provide inputs into an assessment framework covering the potential of different pieces of land to be developed. This picked up on locational and physical characteristics of the areas development opportunities and provided a weighting in terms of how important each aspect is to the development decision. Each broad area was then assessed against this framework to produce an overall development score out of 100 for the MCA.

In 2021, this process was not repeated, rather the existing scores have been realigned to reflect the adjusted spatial framework (brought about by Statistics New Zealand updating their geographies to Statistical Areas, from Census Area Units).

By aligning the MCA scores with the sufficiency results it becomes clear whether the district plans are providing capacity in appropriate locations on appropriate land.

It is the combination of volume of land and how appropriate it is that provides the final measure of sufficiency.

8.2 Key Issues Faced

As with the original assessment in 2017/18, there have been a number of issues faced in preparing this report;

1. While there have been updates over the past 2 years, a key issue remains the state of the base data sets. Significant time was required to align the core datasets – ratings database, planning zone shapefiles, structure plan information and other sets of spatial data.

   While the overall process is a relatively simple one – assuming a set of robust reasonably granular economic projections can be sourced or produced, issues with the capacity information have significantly impacted on the delivery timings of this report.

2. Having relied on the 2017/18 data as the starting point and taking Council's lead that the 2017/18 information was to be updated – rather than replaced, has highlighted a few issues with the base data. These have been addressed as they have emerged, but it is our opinion that rebasing the information each year will be important moving forward. This may require additional work on the ground truthing phase (to be carried out by Council).

3. Delays in receiving the population and economic projections from WISE meant that the analysis phase has been compressed into a 3-week window prior to release of the draft report. In future it will be important to allow more time for interpretation prior to delivery. The WISE delays were caused by Statistics New Zealand delays in releasing updated projections that draw from the problematic 2018 Census. This is unlikely to be the case for future assessments.

4. As with the 2017/18 assessment, translation of activity tables into distinct amounts of capacity across each core economic category is problematic. Often land has permissive zoning – especially deferred business development land. This means that allocating capacity between the economic codes is problematic as there is no way to tell which type of business will out-bid the other into the future. This requires Councils to continually monitor the uptake and occupancy of business land, to ensure that all sectors of the growth economy are provided for and changing trends can be applied in future updates.

8.3 Key Learnings

The key learnings from the 2020/21 study are similar to those from the 2017/18 study.

The first relates to capacity data. Having established with Council the type and nature of data required to carry out this work, it is becoming a simpler task to update the plan enabled capacity. Now that the FPP and M.E know what data is required for future updates, a comprehensive list can be created and supplied to all involved that defines the key datasets and inclusions into those.

The second key learning is that a point needs to be reached whereby all data received is final, so that cogent and efficient modelling can be undertaken without further issues being created toward the end of the process. This lesson goes hand in hand with lesson one above and may be informed by inter-departmental communication within Councils and M.E. In this iteration, issues with the demand projections and the processes around agreeing to those caused modelling and analysis to become compressed. The unique circumstances that surrounded those processes this time, are unlikely to be repeated for future assessments.

The third and final relates to the monitoring of data. After bringing the data together, it has become clear where gaps exist in the data. Several of these gaps are due to non-existent data, while others are due to old or out-of-date data. Monitoring of business land uptake and trends help with both future capacity and help with ground-truthing exercises.

Appendix 1 – NPS Objectives

Objective 1: New Zealand has well-functioning urban environments that enable all people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety, now and into the future.

Objective 2: Planning decisions improve housing affordability by supporting competitive land and development markets.

Objective 3: Regional policy statements and district plans enable more people to live in, and more businesses and community services to be located in, areas of an urban environment in which one or more of the following apply:

a) the area is in or near a centre zone or other area with many employment opportunities
b) the area is well-serviced by existing or planned public transport
c) there is high demand for housing or for business land in the area, relative to other areas within the urban environment.

Objective 4: New Zealand's urban environments, including their amenity values, develop and change over time in response to the diverse and changing needs of people, communities, and future generations.

Objective 5: Planning decisions relating to urban environments, and FDSs, take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

Objective 6: Local authority decisions on urban development that affect urban environments are:

a) integrated with infrastructure planning and funding decisions; and
b) strategic over the medium term and long term; and
c) responsive, particularly in relation to proposals that would supply significant development capacity.

Objective 7: Local authorities have robust and frequently updated information about their urban environments and use it to inform planning decisions.

Objective 8: New Zealand's urban environments:

a) support reductions in greenhouse gas emissions; and
b) are resilient to the current and future effects of climate change.

Appendix 2 – EFM Drivers of Growth

The economic projections of the economic models contained within WISE are driven by a set of "Business as Usual" commodity and service parameters, translated into demands. However, the key drivers of future demand are based on projections of population growth and tourism flows provided by Rationale. In the Input-Output framework (the basis of the Multi-Regional Input-Output Table (MRIO)) these demands are termed 'final demands'.

Within the model final demands are made up of five categories: household consumption, international exports, inter-regional exports, gross fixed capital formation (GFKF), and changes in inventory. The process for deriving future BAU estimates for each category is as follows:

a) Household Consumption: The household consumption final demand is made up of four sub-consumption categories, 'Households', 'Private non-profit institutions servings households', 'Central Government' and 'Local Government'. Future estimates of demand in each sub-category is primarily driven by changes in future population. The Model uses Rationales recommended projections covering all of QLD. It is assumed that each person within the region consumes a constant mix of goods and services. Thus, any population growth for the area will result in a proportional increase in the amount of goods and services consumed within each sub-category.

   In addition, the model includes the implications of changing demographic structure on household consumption. For all sub-categories, future demands by each cohort are adjusted by a cohort-specific consumption scalar. These scalars define the ratio of spending by an average person across all cohorts, to the spending of an average person within the subject cohort.

   The resulting value for a particular year provides an estimate of the growth in total household consumption from the base year.

b) International Exports: are overseas demand of goods and services produced by an area and are exogenous inputs to the model. The growth projections used include BAU projections of international exports and future projections for each industry are generated by applying long-run average growth rates to the base year international export values as obtained from the MRIO. The exception to this is for sectors that are driven primarily by tourism flows. For these, growth projections of tourism nights developed by Rationale have been used in place of the long run averages for the export performance of the Accommodation, retail, transport, recreational activity and personal services sectors.

   The growth rates were generated using a number of different statistical methods. Selection of the time series techniques applied depended on the availability of the data and underlying production structure of the industry output being analysed. For example, long-run growth rates for agricultural industries were estimated based on long-run projections of physical stocks and land availability constraints. Conversely, industries with less physical constraints, such as services, were estimated based on long-run national export trends. The data utilised in these time series analyses were derived from SNZ's Overseas Trade Exports – Trade, Merchandise: Monthly Estimates of all Harmonised System Items 1989–2014.

c) Inter-regional Exports: are demands of good and services produced within a study area by areas outside the study area, but within New Zealand. In other words, trades between QLD areas and the rest of New Zealand affects demand for the production activities in each area.

d) Gross Fixed Capital Formation (GFKF): Future increases in investment demand are represented as a change in GFKF and is an exogenous input into the model. The future GFKF projections for each industry is generated by applying long-run average growth rates to the base year GFKF values as obtained from the MRIO. The growth rates were determined by econometric time-series analysis. The data utilised in the time-series analysis of GFKF are derived from SNZ's National Accounts gross fixed capital formation by industry time series.

e) Changes in Inventory: these are an endogenous variable within the model, where future projections are the weighted average of future values of other final demand categories. Within the national accounts framework, the changes in inventory is an accounting balancing item and records changes in financial inventory stocks. Note: for many industries changes in inventory are very small compared with international exports, inter-regional exports, and GFKF.

Appendix 3 – Sector to Land Use Relationships

48 Sector Description	Office---Commercial	Office---Retail	Shops---Commercial	Shops---Food and Beverage	Accommodation	Warehouse	Factory	Yard---Commercial	Yard---Industrial	Other.Built---Commercial	Other.Built---Industrial	Education	Outdoor---Commercial	Outdoor---Industrial	Outdoor---Rural	Total
Horticulture and fruit growing	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	90%	100%
Sheep, beef cattle and grain farming	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	90%	100%
Dairy cattle farming	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	90%	100%
Poultry, deer and other livestock farming	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	0%	0%	0%	90%	100%
Forestry and logging	0%	0%	0%	0%	0%	0%	9%	0%	17%	0%	0%	0%	0%	0%	74%	100%
Fishing and aquaculture	0%	0%	0%	0%	0%	19%	0%	0%	0%	0%	47%	0%	0%	0%	35%	100%
Agriculture, forestry and fishing support services	20%	0%	0%	0%	0%	20%	20%	0%	0%	0%	0%	0%	40%	0%	0%	100%
Mining, quarrying, exploration and other mining support services	0%	0%	0%	0%	0%	0%	10%	0%	20%	0%	0%	0%	70%	0%	0%	100%
Oil and gas extraction	0%	0%	0%	0%	0%	0%	10%	0%	20%	0%	0%	0%	70%	0%	0%	100%
Meat and meat product manufacturing	2%	0%	0%	0%	0%	23%	75%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Dairy product manufacturing	2%	0%	0%	0%	0%	11%	88%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Other food manufacturing	2%	0%	0%	0%	0%	17%	69%	0%	12%	0%	0%	0%	0%	0%	0%	100%
Beverage and tobacco product manufacturing	2%	0%	0%	0%	0%	23%	75%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Textile, leather, clothing and footwear manufacturing	2%	0%	0%	0%	0%	12%	83%	0%	2%	0%	0%	0%	0%	0%	0%	100%
Wood product manufacturing	2%	0%	0%	0%	0%	11%	60%	0%	28%	0%	0%	0%	0%	0%	0%	100%
Pulp, paper and converted paper product manufacturing	2%	0%	0%	0%	0%	20%	63%	0%	16%	0%	0%	0%	0%	0%	0%	100%
Printing	2%	0%	0%	0%	0%	21%	78%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Petroleum and coal product manufacturing	2%	0%	0%	0%	0%	11%	20%	0%	68%	0%	0%	0%	0%	0%	0%	100%
Chemical, polymer and rubber product manufacturing	2%	0%	0%	0%	0%	20%	63%	0%	16%	0%	0%	0%	0%	0%	0%	100%
Non-metallic mineral product manufacturing	2%	0%	0%	0%	0%	11%	50%	0%	38%	0%	0%	0%	0%	0%	0%	100%
Primary metal and metal product manufacturing	2%	0%	0%	0%	0%	6%	60%	0%	33%	0%	0%	0%	0%	0%	0%	100%
Fabricated metal product manufacturing	2%	0%	0%	0%	0%	38%	40%	0%	20%	0%	0%	0%	0%	0%	0%	100%
Transport equipment manufacturing	2%	0%	0%	0%	0%	11%	68%	0%	20%	0%	0%	0%	0%	0%	0%	100%
Machinery and equipment manufacturing	2%	0%	0%	0%	0%	11%	68%	0%	20%	0%	0%	0%	0%	0%	0%	100%
Furniture and other manufacturing	2%	0%	0%	0%	0%	11%	68%	0%	20%	0%	0%	0%	0%	0%	0%	100%
Electricity generation and supply	9%	0%	0%	0%	0%	14%	0%	0%	18%	0%	58%	0%	0%	0%	0%	100%
Gas supply	0%	0%	0%	0%	0%	15%	0%	0%	20%	0%	65%	0%	0%	0%	0%	100%
Water, sewerage, drainage and waste services	2%	0%	0%	0%	0%	15%	0%	0%	27%	0%	56%	0%	0%	0%	0%	100%
Construction	2%	0%	0%	0%	0%	15%	6%	0%	16%	31%	31%	0%	0%	0%	0%	100%
Wholesale trade	5%	0%	0%	0%	0%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Retail Trade	0%	0%	66%	0%	0%	0%	0%	34%	0%	0%	0%	0%	0%	0%	0%	100%
Accommodation and food services	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Road transport	3%	0%	0%	0%	0%	10%	10%	0%	78%	0%	0%	0%	0%	0%	0%	100%
Other transport, postal, courier, transport support and warehousing services.	5%	0%	0%	0%	0%	21%	10%	0%	24%	0%	40%	0%	0%	0%	0%	100%
Air and space transport	10%	0%	0%	0%	0%	10%	60%	0%	10%	0%	10%	0%	0%	0%	0%	100%
Information media and telecommunications	59%	0%	0%	0%	0%	23%	18%	0%	0%	0%	0%	0%	0%	0%	0%	100%
Finance	98%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	100%
Insurance and superannuation funds	98%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	100%
Auxiliary finance and insurance services	98%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	100%
Rental, hiring and real estate services	14%	15%	6%	0%	0%	12%	0%	12%	10%	3%	0%	0%	0%	0%	27%	100%
Owner Occupied Dwellings	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Professional, scientific, technical, administrative and support services	22%	0%	27%	0%	0%	15%	10%	0%	13%	13%	0%	0%	0%	0%	0%	100%
Central government administration, defence and public safety	16%	0%	0%	0%	0%	10%	0%	0%	10%	56%	0%	0%	10%	0%	0%	100%
Local government administration	50%	0%	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	0%	0%	100%
Education and training	27%	0%	19%	0%	0%	0%	0%	0%	0%	0%	0%	54%	0%	0%	0%	100%
Health care and social assistance	17%	21%	21%	0%	0%	0%	0%	0%	0%	40%	0%	0%	0%	0%	0%	100%
Arts and recreation services	25%	0%	29%	0%	0%	3%	3%	0%	0%	40%	0%	0%	0%	0%	0%	100%
Personal and other services	11%	0%	39%	0%	0%	14%	10%	0%	0%	26%	0%	0%	0%	0%	0%	100%

Source: M.E., based on national averages

Appendix 4 - Evaluation Criteria Index

TO BE UPDATED…..

The following table identifies the section(s) of this BDCA that are relevant to each of the criteria identified in the MBIE Evaluation Sheet (DRAFT, November 2017). It is included as a check list for M.E and Council and to assist with MBIE's evaluation.

Content	
The assessment produces an estimate of demand for business space in the short, medium and long term.	
Does the assessment provide a rigorous narrative on the key sectors, trends and possible future changes in the local economy? *Does this cover broad sectoral composition, employment densities, spatial characteristics and emerging trends and the sectors that are expected to drive future land/space demands?*	Section 3.1 covers all sectors by TA within FPP, along with distribution. Section 3.2 looks at recent change over past 16 years by sector, by TA. Section 3.3 provides sector and location specific projections and discusses key driving sectors.
Does the assessment analyse different business demands for different locations, property types, sizes and tenure?	Section 4 focuses on demand by sector translated into land and GFA, by location and space type.
Does the assessment contain future medium and long term projections of demand (especially for industrial land) by discussing the key drivers to business demand space?	Section 4.2: By subzone and ward within each TA in FPP. Appendix 3
The assessment produces an estimate of capacity for business space	
Does the assessment reasonably identify all business development capacity enabled by relevant proposed and operative RPSs, regional plans and district plans (including a stocktake of vacant land by zone and type and redevelopment potential), and is the assessment clear about what enabled capacity is also supported by development infrastructure?	Section 4.3 Yes, Section 4 and Section 7
Have these assessments been qualitatively assessed or ground-truthed*? For example have they been tested and supplemented by visual inspections or surveys of business occupiers?*	Section 5.1
Does the assessment consider the feasibility of capacity, particularly for industrial land? *E.g. has a multicriteria analysis been used?*	Section 6 describes the process Section 7.6 presents results.

Are the methods and assumptions used in this assessment clear?	
Is there a rigorous conclusion on whether development capacity for business is sufficient now and in the short, medium and long terms? *Is there a quantitative comparison between the demand and capacity assessments?* *Is sufficiency measured by zone type, geographical area and in the short, medium and long terms?* *Are there more detailed sufficiency measures for the short and medium terms?* *Are the industrial zone land price differentials used to inform a conclusion about whether zoning matches demand of different activities for particular locations?*	Section 7.6 and 7.7 Section 7.6 Section 7.6 Same level of detail provided for short, medium and longer terms No, price differentials do not inform about necessity of industrial zoned land. Highest and best use a fallacy with respect to Industrial land demand.
Does the assessment analyse the contributing factors to any shortfall in sufficiency*? I.e. how do different factors (enablement in plans, development infrastructure or feasibility) contribute to a shortfall in sufficiency?*	Section 7.6
The assessment considers interactions between housing and business activities and their impact on each other	
Does the assessment consider the interactions between business and housing capacity? *Does the assessment ensure that capacity is not double counted or under- or over-estimated?* *Does it consider the positive and negative spatial interactions between housing and business capacity, and impacts on accessibility and transport?* *Does it analyse barriers and opportunities for development and change?*	Section 5.3 Section 5.3 Section 5.3
The assessment explicitly uses market and price efficiency indicators	
Are results from the quarterly monitoring of market indicators reflected in the assessment and are they consistent with the final assessments of housing and business land sufficiency?	Handled elsewhere in supporting report.
Does the assessment include consideration of price efficiency indicators as a package and an analysis of what these suggest about the sufficiency of supply and location of development capacity?	Handled elsewhere by Council's other reporting
Communication	
Clarity *Is the capacity assessment easy to read and understand?*	Yes

Does it use appropriate headings, plain English, exec summary and visuals or spatial information where appropriate? *Is it of a readable length?*	Yes It is a necessary length to cover the material required.
Narrative *Does the assessment provide a clear narrative about the urban markets for housing and business space and their interaction with land use planning?* *Is the analysis of the indicators clearly grounded in the local context?* *Is it an appropriate level of detail for the local authority in question?*	Section 1 and Section 2 Section 2.3 outlines spatial context Yes
Usefulness to decision-makers *Will the assessment inform targets, plan changes and future development strategies (where relevant), and long term plans?* *Does it draw clear conclusions on the 'so what' and next steps (possibly through a recommendations section)?* *Does it link the HBA to other key responsive planning requirements under the NPS?* *Does it contain the key information necessary for further decisions?* *Are key risks and timing issues highlighted?*	Yes Section 7.7 and Section 7.8, Section 8 N/A Yes Section 8
Process	
Agreement between the relevant councils on the geographic area of focus for the assessment *Is this clearly delineated and does it have some logical basis e.g. the functional market, coordination arrangements, the application of planning decisions?*	Section 2 outlines the spatial framework used.
Local expertise sought and used *Is there evidence that the input of iwi authorities, the property development sector, significant land owners, social housing providers, requiring authorities, and the providers of development infrastructure and other infrastructure has been sought and used?*	Section 1.6 Section 6
Transparency *Are the methodology and assumptions clear, even when work has been procured?* *If there is a disclosure statement, does this detail key gaps, strengths and weaknesses?* *Are options for filling these gaps explored?* *Has consideration been given to releasing the report to the public?*	Yes Section 8.2 Section 8.3

Appendix 5 - Acronyms

The following acronyms can be found in this report:

- ANZSIC – Australia New Zealand Standard Industrial Classification
- BDCA – Business Development Capacity Assessment
- BMU – Business Mixed Use
- EFM – Economic Futures Model
- FDS – Further Development Strategy
- GDP – Gross Domestic Product
- GFA – Gross Floor Area
- GU – Geographic Unit (Business)
- HA – Hectare
- HDCA – Housing Development Capacity Assessment
- LDR – Low Density Residential
- LTP – Long Term Plan
- MCA – Multi Criteria Analysis
- MDR – Medium Density Residential
- M.E – Market Economics Limited
- MEC – Modified Employee Count
- NPS – National Policy Statement
- NPS-UD – National Policy Statement – Urban Development
- NZTA – New Zealand Transport Agency
- ODP – Operative District Plan
- EW – Environment Waikato
- PDP – Proposed District Plan
- HCC – Hamilton City Council
- RMA – Resource Management Act 1991
- SHA – Special Housing Area

- SNZ – Statistics New Zealand
- SQM – Square meters
- VA – Visitor Accommodation