# **APPENDIX N**

# Greenfield Housing Policy Options Assessment for Hamilton

Dwelling Demand and Feasibility Assessment

October 2020







# Greenfield Housing Policy Options Assessment for Hamilton

## Prepared for

## Hamilton City Council

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#### **Executive Summary**

Hamilton City Council is looking to advance a plan change process that will enable an increased housing yield over the Peacocke growth area. To inform this plan change Market Economics and 4Sight Consulting have undertaken assessments of the commercial feasibility of development options as well as options to for promoting density and housing diversity. This report reflects the findings from the two consultancies, and are report separately.

#### Part 1: Market Economics' Assessment

Hamilton City Council seeks to understand whether more sustainable patterns of urban development can be achieved within its greenfield areas. M.E have been commissioned to assess current and future patterns of residential dwelling demand across Hamilton City, and then examine the feasibility (for commercial developers) of different development options within the greenfield areas. The assessment informs the development of planning parameters relating to density and dwelling typologies within the Peacocke greenfield area.

The demand assessment estimates the dwelling demand profile of current and future households in Hamilton City. Patterns of demand by dwelling value band and typology are generated from the underlying household demographic structures and gradual shifts in preferences through time. It considers both the total existing household base as well as the net increases in households to identify the total market size that may take up capacity within the greenfield areas.

An additional 3,500 households are projected for Hamilton City in the short-term (to 2023), and an additional 32,000 households in the long-term (to 2050). Smaller, 1-2 person, households are projected to account for over half of the growth, making up around half of the long-term household base.

Approximately 80% of the existing household base demand is for detached dwellings. The modelled changes in the demographic structure and gradual shifts in household preferences result in decreases in the share of demand for detached dwellings through time under the medium to high preference shift scenarios. The long-term projected increase in dwelling demand (+32,000 dwellings) equates to an additional demand for 18,000 to 26,000 detached dwellings, and 6,000 to 14,000 attached dwellings, with the distribution dependant upon the level of preference shift.

Approximately two-thirds of the existing dwelling demand occurs in the mid dwelling value bands (\$400k to \$800k), with 9% in the higher (\$800k+) dwelling value bands. The value band profile is projected to increase through time as a function of household income growth. Increases are smaller under the medium and higher preference shift scenarios due to an increasing share of demand for smaller, and correspondingly lower value, dwellings.

The feasibility modelling estimates the range of dwelling densities within each size and typology that are feasible to construct, at a 15%-20% and 20%+ profit margin, for a commercial developer. The current patterns of feasibility reflect past patterns of demand within Hamilton City's greenfield areas, and are dominated by detached 3+ bedroom dwellings.

Higher density dwelling typologies are projected to become feasible to construct in Peacocke through time. Larger attached dwellings are projected to become feasible within the short-term, with an increasing range of dwelling densities and options becoming feasible during the medium-term. These higher density developments are estimated to have a 15%-20% margin in the short-term (slightly below the modelled

threshold of 20% for feasibility), which reflects the small share of higher density dwellings currently being delivered in Peacocke by the market. The full range of modelled dwelling typologies and densities are projected to become feasible in Peacocke in the long-term.

Higher density apartment dwellings are also projected to become feasible within Peacocke at the end of the medium-term. These have a greater area of market overlap as demand for smaller attached dwellings is concentrated into the lower dwelling value bands. The feasibility of this higher density development option is likely to be contingent upon the establishment of a high amenity node within Peacocke, with feasibility constrained to location within and around the higher density node rather than spread across the greenfield area.

Larger detached dwellings have the greatest areas of market demand overlap, when considering the dwelling value band profile, as these reflect the dominance of this dwelling type within the existing structure of demand. There are smaller areas of projected market overlap for higher density dwelling typologies. However, the size of these segments are projected to increase through time as a function of structural changes in demand and gradual shifts in demand preferences through time as households make trade-offs between price, location and dwelling type/size.

#### Part 2: 4Sight's Assessment

4Sight's assessment has focused on an options assessment for a strategic planning framework for promoting density and housing diversity through enabling the feasible development options as identified by Market Economics. This focused on how short term demand can be met without compromising future yield, how a high quality built environment can be maintained, and what tools are available for achieving this.

Several factors are critical for delivering density and diversity, including linking subdivision and land use, walkability, mixed uses, and a consultative and collaborative design process. A case study approach was employed to assess the tools that have been employed in areas that have successfully delivered medium density greenfield residential development. All assessed examples employed at least one, detailed urban design exercise for the entire or mapped part of the greenfield area. This is used in conjunction with a high degree of prescriptiveness surrounding typologies and dwelling yields to deliver development in a comprehensive (subdivision and land use) development process.

The current strategic planning framework employs components of best practice; however, this assessment has shown, and previous development are evidence of, that it is no longer fit for purpose for achieving the desired housing outcomes for Peacocke. A number of general and specific recommendations have been made for a revised structure plan and for the plan change. The strengths and weaknesses of the different tools for implementing these recommendations were explored. A recommended approach for Hamilton City Council has then been provided that involves a revised structure plan, bespoke Peacocke Special Purposes Zone, Peacocke Design Guide, and Precinct spatial overlays that seek to promote and achieve housing outcomes that give effect to the Peacocke Structure Plan.

4Sight's analysis has identified that there is not one single planning tool for achieving density and diversity, rather it is necessary to employ a number of complementary tools that can be integrated to achieve the desired housing outcome.

# Part 1: Market Economics' Assessment

### 1 Introduction

Hamilton City is a high growth urban area within the upper north island. It has experienced significant population growth over the last decade, with a share of growth being met through urban expansion into the greenfield areas. Further high growth is anticipated within Hamilton City, with greenfield areas, including Peacocke, providing for a significant share of the growth. It is important to achieve development patterns in greenfield areas that contribute towards sustainable urban form and a well-functioning urban economy.

Past patterns of greenfield growth in Hamilton have been dominated by lower density outward expansion with larger standalone dwellings on relatively large sites. However, the market in Hamilton is changing, with a greater range of typologies and densities being achieved across the urban environment. Higher density dwelling typologies are increasingly being developed within existing urban areas through infill and redevelopment processes; and are beginning to emerge in small amounts within recent greenfield developments.

#### 1.1 Assessment Objectives

Hamilton City Council seeks to understand whether more sustainable patterns of urban development can be achieved within Hamilton's greenfield areas. These include higher density development patterns that are more efficient spatially, as well as residential capacity that better reflects the changing needs of the market. These core aspects have important implications for the social and economic well-being of households, including through effects on housing affordability.

The Council have commissioned M.E to undertake analyses on the potential development options within the Peacocke greenfield area. The key objective is to provide economic assessment to inform the development of appropriate planning parameters to be applied by Council within the greenfield area. Council seeks to understand whether proposed planning provisions on density and dwelling typologies, to enable more sustainable urban form, are also likely to enable feasible development options for developers within the Peacocke greenfield area. The assessment has been commissioned jointly with Tauranga City Council, where the same analyses have also been undertaken within the Tauriko and Te Tumu greenfield areas.

The first part of this assessment is to understand the demand for dwellings across the Hamilton market. This includes identifying the demand for different dwelling typologies and sizes, and how these patterns may change through time as households make tradeoffs between price, size/type of dwelling and location. This is important to examine the potential size of the market that may be available to take up capacity within the greenfield areas. The second part then assesses the commercial feasibility of potential planning parameters that affect dwelling development options within the greenfield areas. These assessments are then drawn together to provide input to Council to facilitate the establishment of appropriate planning parameters for the Peacocke greenfield area.

The assessment has been undertaken over different time periods – the short-term (to 2023), medium-term (to 2030) and long-term (to 2050). This is critical as it takes into account how the market may change through time in relation to both overall size, structure and relative patterns of demand, as well as the

commensurate changes in development commercial feasibility through time. A time-stages approach is key to inform the potential stage implementation of greenfield planning parameters or development through time.

#### 1.2 Structure

The report is structured as follows. Section 2 provides an analysis of demand across Hamilton City. Section 3 contains an assessment of the commercial feasibility of different dwelling density development options for each dwelling typology/size within the Peacocke greenfield area. The demand and feasibility assessments are then drawn together in Section 4 which shows how the identified feasible development ranges correspond to the overall demand profile for dwellings within Hamilton City. Concluding remarks are contained in Section 5.



# 2 Demand for Dwellings

It is important to understand the potential future dwelling demand within Hamilton City when establishing appropriate dwelling density and type parameters within the Peacocke greenfield area. This section projects the total household demand for dwellings within the Hamilton market overall. It translates the projected household growth into demand for different types and sizes of dwellings across the short (2023), medium (2030) and long-term (2050) based on the underlying structure of household demand.

Future demand across each time period is projected by dwelling type (detached vs. attached), and within these, by dwelling size (1-2 bedroom vs. 3+ bedroom). The demand within each dwelling type/size is further projected by dwelling value bands. This is an important component to understand how the projected dwelling demand corresponds to the projected feasible development options within the Peacocke greenfield area.

Crucially, this section considers the total market demand as well as the net increases in demand. This is a critical aspect in assessing the potential market size for greenfield development options where a large share of the demand for greenfield dwellings occurs through the movement of existing households into the higher value greenfield areas.

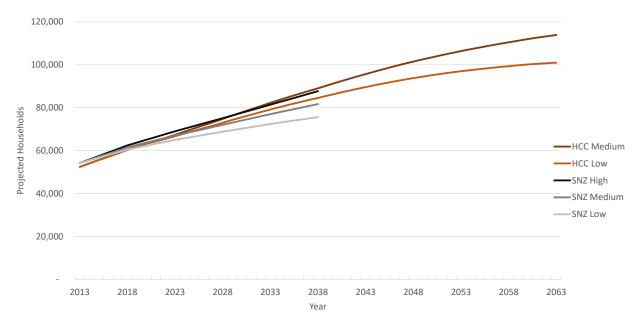
#### 2.1 Projected Household Growth

Figure 2-1 shows the projected future households in Hamilton City under different projection series. These include high, medium and low series produced by Statistics New Zealand, and medium and low series provided by Hamilton City Council. As requested by Hamilton City Council, the demand assessment uses the Council's low series projection.

The HCC low series projection generally sits between the Statistics New Zealand medium and high series projections. Under this series, household numbers are projected to increase at 1.8% per annum in the short and medium term, with net increases of around 3,500 households over the short-term (2020-2023) and 12,300 over the medium-term (2020-2030). Over the long-term, growth is projected to slow, decreasing the annual average growth rate to 1.4%. By 2050, Hamilton is projected to have an additional 32,000 households, bringing the total to 95,200 households by 2050.

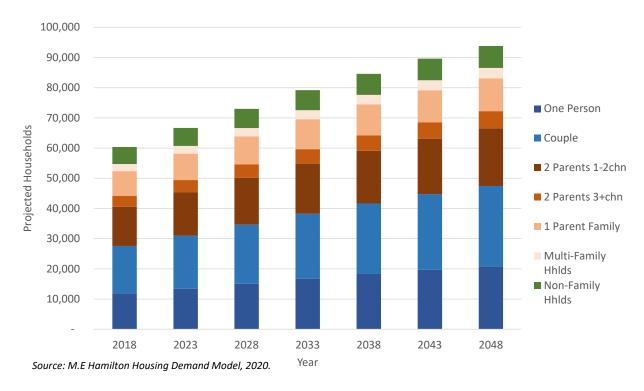
The structure of household growth is shown in Figure 2-2. Household composition is an important driver of the types, sizes and value of dwellings demanded. Over half (59%) of Hamilton's long-term household growth is projected to occur in 1-2 person households, which is likely to affect the size and types of dwellings demanded. Smaller household sizes are likely to generate greater demand for smaller dwellings, with 1-2 person households projected to account for around half (51%) of Hamilton's total household base in the long-term (2050). Family households are projected to account for over one-third (36%) of the projected long-term growth in households, with the remaining 5% in non-family households.

Figure 2-1: Hamilton City Projected Households by Projection Series



Source: Hamilton City Council and Statistics New Zealand.

Figure 2-2: Structure of Hamilton City Projected Household Growth





#### 2.2 Demand for Dwellings

The M.E Hamilton Housing Demand Model translates the projected household growth in Hamilton to demand for dwellings. The model calculates the relationship between household type (from the previous section<sup>1</sup>) and dwelling type. It uses these structural relationships, within each group, as a basis for projecting forward the demand profiled based on the growth of each household type.

Dwelling demand is categorised by type into detached and attached dwellings. Within each group, it is also categorised by dwelling size as 1-2 bedroom and 3+ bedroom dwellings. As such, dwelling demand is divided into the following four groups:

- i. Detached 1-2 bedroom dwellings.
- ii. Detached 3+ bedroom dwellings.
- iii. Attached 1-2 bedroom dwellings.
- iv. Attached 3+ bedroom dwellings.

The housing demand modelling has produced three scenarios for future dwelling demand. The first is outlined above where any changes to the structure of demand by dwelling type are a function of the growth patterns in the household type and their relation to dwelling types. The two further scenarios, in addition, incorporate a medium and high level of preference shift by dwelling type, within each household type group. These reflect the gradual shift in preference toward higher density dwelling types that typically occur gradually through time in growing urban economies.

A shift to higher density dwellings reflects the tradeoffs that households make between location, space and price. Higher density dwellings are often located in areas of higher amenity, with higher land costs (on a per m2 basis) associated with the location. These gradual shifts in dwelling typologies are reflected in Hamilton building consent data patterns through time, as well as the development patterns across other growing urban economies.

The three demand scenarios are:

- i. Nil preference shift.
- ii. Medium preference shift.
- iii. High preference shift.

The projected dwelling demand by type and size in the short, medium and long-term in Hamilton is shown in Figure 2-3 and Table 2-1. The structure of the demand profile (by dwelling size and type) differs under each preference shift scenario, while the total demand for dwellings remains the same across scenarios. The total projected increase in dwellings across all scenarios equates to 3,300 in the short-term (2020-2023), 12,300 in the medium-term (2020-2030) and 31,900 in the long-term (2020-2050).

<sup>&</sup>lt;sup>1</sup> M.E's Housing Demand Model is driven by 210 detailed household types that are formed from combinations of household income, age and composition. Customised data has been obtained that has been used to develop a detailed concordance to dwelling type and size.

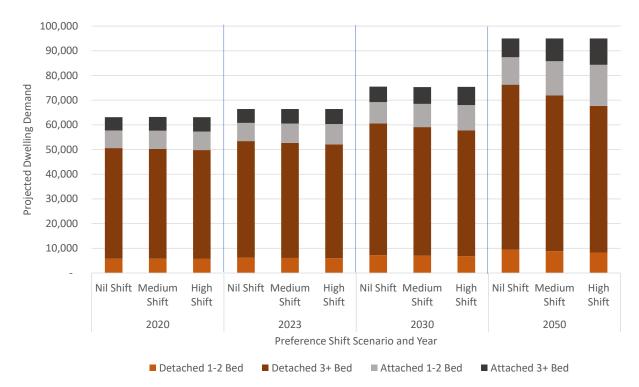


Figure 2-3: Projected Dwelling Demand by Type and Size in Hamilton, 2020-2050

Source: M.E Hamilton Housing Demand Model, 2020.

#### Nil Preference Shift Scenario

Under the nil preference shift scenario, dwelling demand is concentrated into detached dwellings. Detached dwellings are estimated to currently account for around 80% of demand. Shares of future demand for detached dwellings are similar to their current share of demand, at around 80% of additional dwellings. There is a slight decrease in the share of demand (from 82% across the short-term, to 80% across the long-term) due to changes in household composition through time. However, under this scenario, a strong preference for detached dwellings continues due to the existing patterns of dwelling demand relative to the household structure.

There is a slight corresponding increase in the share of demand through time for attached dwellings under this scenario. In the short-term, 18% of additional demand is for attached dwellings, increasing to 20% over the long-term. This increase in demand is projected to occur through the 1-2 bedroom attached dwellings, with a projected increase in demand for 4,100 additional dwellings across the long-term.

#### Medium Preference Shift Scenario

Under the medium preference shift scenario, demand becomes less concentrated into detached dwellings through time. In the short-term, 75% of additional demand is for detached dwellings (+2,500 dwellings), most of which are 3+ bedrooms. Through time, this share decreases to just over two-thirds (68%) in the long-term (+21,700 detached dwellings). The modelling projects that the decrease in the share of demand for detached dwellings occurs through 3+ bedroom dwellings, with the share of demand in 1-2 bedroom

detached dwellings remaining constant. This results in an overall gradual decrease in the share of total demand (existing + additional) for detached dwellings decreasing from 80% currently, to 76% by 2050.

Table 2-1: Projected Dwelling Demand by Type and Size in Hamilton

		Detached			Attached	
YEAR	1-2 Bed	3+ Bed	Detached Total	1-2 Bed	3+ Bed	Attached Total
			Nil Prefer	ence Shift		
2020	5,800	44,800	50,700	7,100	5,400	12,400
2023	6,200	47,200	53,400	7,400	5,600	13,000
2030	7,200	53,400	60,500	8,600	6,300	14,800
2050	9,400	66,900	76,300	11,100	7,600	18,700
2020-2023	400	2,300	2,700	400	200	600
2020-2030	1,300	8,600	9,900	1,500	900	2,400
2020-2050	3,600	22,100	25,600	4,100	2,200	6,200
		ſ	Medium Pref	ference Shift		
2020	5,800	44,500	50,200	7,300	5,600	12,900
2023	6,100	46,600	52,700	7,800	5,900	13,700
2030	7,000	52,100	59,100	9,400	6,800	16,300
2050	8,800	63,100	72,000	13,900	9,200	23,000
2020-2023	300	2,100	2,500	500	300	800
2020-2030	1,200	7,700	8,900	2,100	1,300	3,400
2020-2050	3,100	18,700	21,700	6,600	3,600	10,200
			High Prefe	rence Shift		
2020	5,700	44,100	49,800	7,500	5,800	13,300
2023	6,000	46,100	52,100	8,200	6,100	14,300
2030	6,800	50,900	57,700	10,300	7,400	17,700
2050	8,300	59,400	67,700	16,600	10,700	27,300
2020-2023	300	1,900	2,200	700	400	1,100
2020-2030	1,100	6,800	7,800	2,800	1,700	4,400
2020-2050	2,600	15,300	17,900	9,100	4,900	14,000

Source: M.E Hamilton Housing Demand Model, 2020.

The share of demand for attached dwellings correspondingly increases from 20% of total dwellings currently, to 24% of total dwellings in 2050. This equates to nearly one-third of demand for additional dwellings across the long-term for attached dwellings. Under this scenario, there is a projected demand for an additional 10,200 attached dwellings by 2050, with two-thirds (6,600 dwellings) as 1-2 bedroom dwellings. Within attached dwellings, the increase in the share of additional demand is projected to primarily occur in 1-2 bedroom dwellings, with some increase in the share of demand also in 3+ bedroom dwellings.

#### High Preference Shift Scenario

The high preference shift scenario sees a greater increase in the share of demand for attached dwellings. Over the long-term, 44% of the additional dwellings demanded are attached dwellings, equating to an additional 14,000 dwellings. This results in a projected increase in the share of attached dwelling demand from the current 21% to 29% in the long-term. Smaller 1-2 bedroom dwellings account for the largest share of this additional demand, accounting for an additional 9,100 dwellings over the long-term.

Despite the preference shift toward attached dwellings, the largest net increase in additional demand remains as detached dwellings. Over the long-term, there is demand for an additional 17,900 detached dwellings. Most, 15,300 of these, are for 3+ bedroom dwellings.

#### 2.3 Demand by Dwelling Value Band

M.E's Hamilton Housing Demand Model also estimates the dwelling value band profile for demand for dwellings. The model assumes a real increase in the value band demand from households of 0.5% per annum. Put simply, it assumes that the dwelling value demanded by each household increases in real terms by 0.5% per year as a function of real growth in household incomes. This represents a conservative increase, below the rate of household income growth. In the short-term (3 years), this equates to a real value increase of 1.5%; in the medium-term (10 years), 5.1%; and in the long-term (30 years), 16.1%.

The current (2020) demand profile for Hamilton City dwellings by value band is shown in Figure 2-4. It shows the total number of dwellings demanded within each value band by dwelling type and size. Nearly two-thirds (62%) of the demand is for dwellings within the mid value bands of \$400,000 to \$800,000; and nearly one-third (29%) of demand is within the lower value bands (up to \$400,000). The remainder (9%) is in the higher dwelling value bands of over \$800,000.

Demand for attached dwellings is skewed toward the lower dwelling value bands. Nearly all (91%) of the demand for smaller (1-2 bedroom) attached dwellings occurs within the lowest value bands of up to \$400,000. The demand for detached dwellings is concentrated into the mid to upper dwellings value bands, with the value profile for larger dwellings (3+ bedrooms) higher than that for smaller dwellings.

The current and long-term demand profiles for dwellings by value band are shown in Figure 2-5. It shows the share of total dwelling demand within each value band. The red bars show the distribution of demand for dwellings in 2020. This reflects the distribution of demand based on household incomes in 2020. The green bars show the dwelling value band distribution of demand for 2050 under each of the nil, medium and high preference shift scenarios. They correspond to household incomes that have an assumed real annual growth rate of 0.5%. As such, the dwelling value profile correspondingly increases by the approximately the same rate.

Figure 2-4: Current (2020) Dwelling Demand by Value Band: Hamilton City

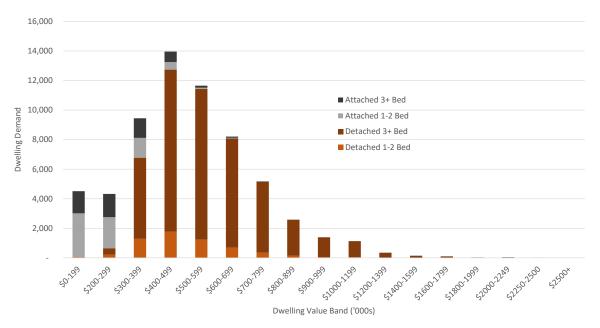
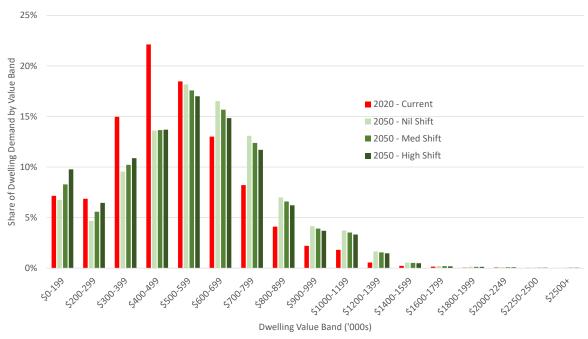


Figure 2-5: Current (2020) and Long-Term (2050) Dwelling Demand Value Band Profiles: Hamitlon City – 0.5% p.a. Real Household Income Growth



The current and long-term demand profiles for dwellings by value band are shown in Figure 2-5. It shows the share of total dwelling demand within each value band. The red bars show the distribution of demand for dwellings in 2020. This reflects the distribution of demand based on household incomes in 2020. The green bars show the dwelling value band distribution of demand for 2050 under each of the nil, medium and high preference shift scenarios. They correspond to household incomes that have an assumed real annual growth rate of 0.5%. As such, the dwelling value profile correspondingly increases by the

Applying a real increase in to housing value demand as a function of income growth increases the value profile of dwelling demand. However, it does not decrease housing affordability as the resulting increase in dwelling values occurs directly proportional to household income growth.

Demand for dwellings in the mid-high and higher dwelling value bands increases through time. In 2020, nearly one-third (29%) of demand is for dwellings in the lower value bands (up to \$400,000). Nearly two-thirds (62%) of demand is for dwellings in the mid value bands (\$400,000 to \$800,000), with the remainder (9%) in the mid-high and high value bands of \$800,000 or greater. In total, 70% of demand is for dwellings under \$600,000.

By 2050, the share of dwellings in the lower value bands (up to \$400,000) is projected to decrease to around 14% to 20%; and the share in the mid value bands (\$400,000 to \$800,000), to 53%-55%. Within the mid bands, the distribution becomes more evenly spread across the band, while it is more weighted toward the lower half (\$400,000-\$600,000) of the band in 2020. The share of demand in the mid-high and higher value bands (\$800,000+) is projected to increase to 27% to 31%.

Overall, this shows an increase in the dwelling value band profile through time as a function of household income growth. Under the nil preference shift scenario the value profile increases by approximately 16%, which is directly proportional to the underlying household income growth. This means there is no decrease in housing affordability from this component of the shift in the dwelling demand curve.

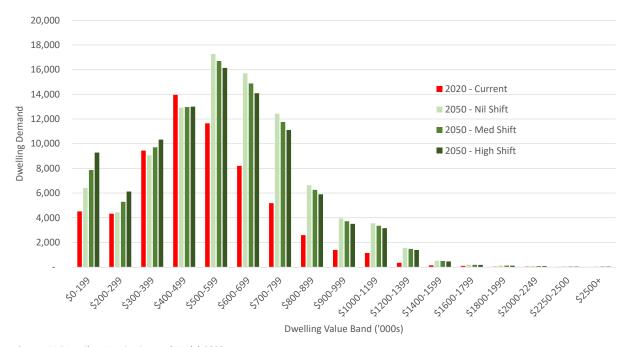
The value profile increases in the medium and high preference shift scenarios are smaller than under the nil preference shift scenario. This is because of the shift in demand toward attached dwellings, which have a lower dwelling value profile than detached dwellings. Under the medium preference shift scenario, the dwelling value band profile increases by approximately 13%; and under the high preference shift scenario, it increases by approximately 9%. The underlying household income is still assumed to increase by 16% under these scenarios, meaning there would be an increase in affordability with this component of the shift in the dwelling demand profile.

The total dwelling demand by value band in the current (2020) and long-term (2050) is shown in Figure 2-6. The red bars show the demand in 2020, based on current household incomes. The green bars show the demand within each dwelling value band based on 2050 household incomes (which have been assumed to have increased by 0.5% per annum). The 2050 household demand therefore includes the existing 63,000 households and the additional 32,000 households formed over that period. Existing households have moved up in value bands, accounting for some of the increase in dwelling demand across the value profile.

approximately the same rate.

The long-term (2050) value bands also show increases in dwelling demand within the lower value bands, with the largest increases under the high preference shift scenario. This is a function of growth in demand for smaller, attached dwellings under this scenario.

Figure 2-6: Current (2020) and Long-Term (2050) Demand by Dwelling Value Band: Hamilton City - 0.5% p.a. Real Household Income Growth



Source: M.E Hamilton Housing Demand Model, 2020.

The projected net change in demand by value band in the short, medium and long-term is shown for each dwelling type and each preference shift scenario in Table 2-2. The value profile of the net increases in demand is highest for the nil preference shift scenario in comparison to the medium and high preference shift scenarios. This is because demand growth, under this scenario, is greatest in the larger detached dwellings, which have a higher value profile. Demand growth is mainly driven by 3+ bedroom detached dwellings. Over half (60%) of the demand for these dwellings in the long-term is projected to occur in the mid to high value bands (\$600,000+), with 23% occurring in value bands of \$800,000 or greater. There is still a large share of the net increase in demand for detached 3+ bedroom dwellings in the lower value bands, particularly in the short-term. Demand growth for attached and smaller dwellings is mainly concentrated into the lower dwelling value bands.

Net increases in demand in the medium to high preference shift scenarios have a greater share of demand increases in the lower value bands. This is due to the increased shares of demand for attached and smaller dwellings. The share of net increases in demand within the lower and low-mid value bands (up to \$600,000) increases to 66% in under the high preference shift scenario. Yet, demand growth for detached 3+ bedroom dwellings still accounts for the largest share of demand increase under these scenarios.

Table 2-2: Projected Net Change in Demand by Dwelling Value Band and Dwelling Type: Hamilton City, Short, Medium and Long-Term -0.5% p.a. Real Household Income Growth

				Dw	elling Value Ba	and		
Time Period	Dwelling Type	Up to \$400k	\$400k-\$600k	\$600k-\$800k		\$1m-\$1.6m	\$1.6m+	TOTAL
	2		<del>The state of the </del>		ference Shift S		<del></del>	
	Detached 1-2 Bed	80	200	80	20	-	-	400
Short-Term 2020-2023	Detached 3+ Bed	300	1,100	600	200	90	10	2,300
	Attached 1-2 Bed	300	30	_	-	-	-	400
	Attached 3+ Bed	200	30	_	_	_	_	200
	TOTAL	900	1,300	700	200	90	10	3,300
	Detached 1-2 Bed	300	700	300	80	20	-	1,300
Medium-	Detached 3+ Bed	1,000	3,700	2,500	900	400	50	8,600
Term 2020-	Attached 1-2 Bed	1,300	200	20	-	-	-	1,500
2030	Attached 3+ Bed	700	200	20	_	_	_	900
2000	TOTAL	3,300	4,700	2,800	1,000	400	50	12,300
	Detached 1-2 Bed	500	1,500	1,200	300	100		3,600
	Detached 3+ Bed	1,500	7,400	8,100	3,200	1,700	200	22,100
Long-Term	Attached 1-2 Bed	3,300	7,400	70	10	-	-	4,100
2020-2050	Attached 3+ Bed	1,400	600	90	10	10	_	2,200
	TOTAL	6,700	10,100	9,400	3,500	1,900	200	31,900
	TOTAL	0,700	10,100		Preference Shift		200	31,300
	Detached 1-2 Bed	70	200	70	10	-	_	300
	Detached 3+ Bed	300	1,000	600	200	80	10	2,100
Short-Term	Attached 1-2 Bed	500	40	-	-	-	-	500
2020-2023	Attached 3+ Bed	300	50	10		_	_	300
	TOTAL	1,100	1,200	700	200	90	10	3,300
	Detached 1-2 Bed	200	600	300	70	20		1,200
Medium-	Detached 3+ Bed	900	3,300	2,200	800	400	40	7,700
Term 2020-	Attached 1-2 Bed	1,900	200	2,200	-	-	40	2,100
2030	Attached 3+ Bed	1,000	200	30	10	_	_	1,300
2030	TOTAL	4,000	4,400	2,600	900	400	40	12,300
	Detached 1-2 Bed	400	1,300	1,000	300	100	40	3,100
	Detached 3+ Bed	1,300	6,200	6,800	2,700	1,500	100	18,600
Long-Term	Attached 1-2 Bed	5,300	1,100	100	10	1,300	-	6,600
2020-2050	Attached 3+ Bed	2,400	1,000	100	20	20	_	3,600
	TOTAL	9,400	9,600	8,100	3,000	1.600	100	31,900
	TOTAL	9,400	9,000		eference Shift S	,	100	31,300
	Detached 1-2 Bed	70	200	70	10	-	_	300
	Detached 3+ Bed	300	900	500	200	70	10	1,900
Short-Term	Attached 1-2 Bed	600	60	10		-	-	700
2020-2023	Attached 3+ Bed	300	60	10	-	_	_	400
	TOTAL	1,300	1,200	600	200	80	10	3,300
	Detached 1-2 Bed	200	500	200		20	10	1,100
Medium-	Detached 3+ Bed	800	2,900	2,000	700	300	40	6,800
Term 2020-	Attached 1-2 Bed	2,400	300	30		-	- 40	
2030	Attached 3+ Bed	1,300	300	40	10	10	-	2,800
2030	TOTAL	4,700	4,100		800		40	1,700 12,300
				<b>2,300</b>		300	40	
	Detached 1-2 Bed Detached 3+ Bed	300 1,100	1,100	800 5 600		90	100	2,600
Long-Term	Attached 1-2 Bed		5,100	5,600 200	2,200 20	1,200	100	15,300
2020-2050	Attached 1-2 Bed Attached 3+ Bed	7,300	1,500			10	-	9,100
		3,300	1,400	200		30	100	4,900
	TOTAL	12,000	9,100	6,800	2,500	1,300	100	31,900

It is also important to understand the total market size for dwelling demand in Hamilton. This is because there is typically a large amount of churn in any housing market where households move from one dwelling to another. Demand for new dwellings is a function of both the formation of additional households together the movement of existing households into new dwellings. It is likely that the demand for new dwellings within greenfield areas occurs from existing households currently occupying dwellings within other parts of the market.

The total projected market demand for dwellings by value band within the short, medium and long-term in Hamilton is shown in Table 2-3 for each of the scenarios. This shows the demand as a function of household incomes. It assumes a real increase of 0.5% per annum in household income growth, but does not assume any increase in dwelling value demand as a result in changes in existing dwelling equity. These reflect the total long-term profiles shown in Figure 2-6, but provide additional breakdowns by time period and dwelling type.

Over the long-term, the share of dwelling demand within the mid-upper to upper (\$600,000+) dwelling value bands increases from 31% to 42%-47%. The share of detached 3+ bedroom dwellings within these value bands in the long-term, is highest at 60%. The value profiles under the medium and high preference shift scenarios show smaller value increases due to gradually increasing proportions of demand within the attached dwellings, which have a lower value profile.

The analysis estimates the dwelling demand in Hamilton through time as a function of real increases in household income. It does not take into account the movement of existing households within the market that occurs due to increases in existing dwelling equity through time. Inflation in dwelling prices through time means that existing dwelling owners are able to move into higher value dwellings through building up equity<sup>2</sup> in their existing dwellings through time. This is an important component of the demand for new dwellings within greenfield areas. These dwellings are typically higher in value than the existing market average, with a high proportion of their demand arising through existing households moving up the dwelling value profile through a combination of real income and equity growth.

A further scenario of dwelling demand growth has been generated to reflect these components of demand. An increase of 1% per annum has been applied to the dwelling demand profile through time to produce a conservative estimate of the size of demand within the higher dwelling value bands. This is below the likely rate of dwelling price inflation, however, it has been applied to reflect the smaller prortion of the timeframe across which a number of dwellings would have experienced price growth (where a number of dwellings would be constructed within the period). As such, it provides a conservative scenario of the dwelling demand by value band taking into account some demand growth from increases in equity through time.

Table 2-4 shows the net change in demand by value band, while Table 2-5 shows the total market picture through the total demand within each value band from new and existing households. The same approach has been applied as Table 2-2 and Table 2-3, albeit with a 1% annual growth in the dwelling value band profile.

Under this scenario, the net changes in dwelling demand and total market sizes increase under the midhigh and high dwelling value bands. The share of long-term dwelling demand growth above \$600,000 increases from 34%-47% (under the 0.5% growth scenario), to 45%-61%, equating to 14,000 to 19,000

<sup>&</sup>lt;sup>2</sup> Equity in existing dwellings also occurs through paying off mortgages through time.

additional dwellings. Under this scenario, around 40% of long-term detached 3+ bedroom dwelling demand growth occurs in value bands of \$800,000 or greater (6,000 to 9,000 dwellings).

The shares of total dwelling demand within the total market (Table 2-5) also correspondingly increase in the higher dwelling value bands under this scenario. In the long-term, there is a projected total demand for 26,000 to 29,000 dwellings in the higher value bands (\$800,000+). Most (23,000-26,000) of these are in the detached 3+ bedroom dwellings.

Table 2-3: Total Market Demand for Dwellings by Dwelling Value Band and Dwelling Type: Hamilton City, Short, Medium and Long-Term – 0.5% p.a. Real Household Income Growth

				Dw	elling Value B	and		
Time Period	Dwelling Type	Up to \$400k	\$400k-\$600k	\$600k-\$800k	_	\$1m-\$1.6m	\$1.6m+	TOTAL
	<u> </u>			Nil Pre	erence Shift S	cenario		
	Detached 1-2 Bed	1,400	3,200	1,300	300	80	-	6,200
Short-Term 2020-2023	Detached 3+ Bed	6,500	21,600	13,000	4,000	1,800	200	47,200
	Attached 1-2 Bed	6,700	600	60	10	-	-	7,400
	Attached 3+ Bed	4,600	900	100	20	20	-	5,600
	TOTAL	19,200	26,300	14,500	4,300	1,900	200	66,400
	Detached 1-2 Bed	1,400	3,500	1,700	400	100	10	7,200
Medium-	Detached 3+ Bed	6,300	23,000	15,500	5,800	2,500	300	53,400
Term 2020- 2030	Attached 1-2 Bed	7,500	900	90	10	10	-	8,600
	Attached 3+ Bed	4,800	1,200	200	30	20	-	6,300
	TOTAL	20,000	28,700	17,400	6,300	2,700	300	75,400
	Detached 1-2 Bed	1,200	3,900	3,100	900	300	10	9,400
Long-Term	Detached 3+ Bed	4,600	22,300	24,600	9,600	5,300	500	66,900
2020-2050	Attached 1-2 Bed	9,100	1,900	200	20	10	-	11,100
2020-2030	Attached 3+ Bed	5,000	2,100	300	50	40	-	7,500
	TOTAL	19,900	30,200	28,100	10,600	5,600	500	95,000
				Medium F	reference Shir	ft Scenario		
	Detached 1-2 Bed	1,300	3,100	1,300	300	80	-	6,100
Short-Term	Detached 3+ Bed	6,500	21,400	12,800	4,000	1,700	200	46,600
2020-2023	Attached 1-2 Bed	7,100	700	60	10	-	-	7,800
2020-2023	Attached 3+ Bed	4,800	900	100	20	20	-	5,900
	TOTAL	19,700	26,100	14,300	4,300	1,800	200	66,400
	Detached 1-2 Bed	1,400	3,500	1,600	400	100	10	7,000
Medium-	Detached 3+ Bed	6,100	22,400	15,100	5,700	2,500	300	52,100
Term 2020-	Attached 1-2 Bed	8,300	1,000	90	10	10	-	9,400
2030	Attached 3+ Bed	5,300	1,300	200	30	20	-	6,800
	TOTAL	21,000	28,300	17,000	6,100	2,600	300	75,400
	Detached 1-2 Bed	1,200	3,700	2,900	800	300	10	8,900
Long-Term	Detached 3+ Bed	4,400	21,100	23,100	9,100	5,000	500	63,100
2020-2050	Attached 1-2 Bed	11,300	2,300	200	30	20	-	13,900
2020-2030	Attached 3+ Bed	6,100	2,600	400	60	50	-	9,200
	TOTAL	22,900	29,700	26,600	10,000	5,300	500	95,000
				High Pre	ference Shift	Scenario		
	Detached 1-2 Bed	1,300	3,100	1,300	300	80	-	6,000
Short-Term	Detached 3+ Bed	6,400	21,100	12,700	3,900	1,700	200	46,000
2020-2023	Attached 1-2 Bed	7,400	700	70	10	10	-	8,200
2020 2023	Attached 3+ Bed	5,000	1,000	100	20	20	-	6,100
	TOTAL	20,100	25,900	14,100	4,200	1,800	200	66,400
	Detached 1-2 Bed	1,300	3,400	1,600	400	100	10	6,800
Medium-	Detached 3+ Bed	6,000	21,900	14,800	5,500	2,400	300	50,900
Term 2020-	Attached 1-2 Bed	9,100	1,100	100	20	10	-	10,300
2030	Attached 3+ Bed	5,700	1,500	200	40	30	-	7,400
	TOTAL	22,000	27,900	16,600	6,000	2,600	300	75,400
	Detached 1-2 Bed	1,100	3,500	2,700	800	300	10	8,300
Long-Term	Detached 3+ Bed	4,100	19,900	21,800	8,500	4,700	500	59,400
2020-2050	Attached 1-2 Bed	13,400	2,800	300	40	20	-	16,600
2020-2030	Attached 3+ Bed	7,100	3,000	400	70	60	-	10,700
	TOTAL	25,700	29,200	25,200	9,400	5,000	500	95,000

Table 2-4: Projected Net Change in Demand by Dwelling Value Band and Dwelling Type: Hamilton City, Short, Medium and Long-Term  $-\,1\%$  p.a. Real Household Income Growth

				Dw	elling Value Ban	d		
Time Period	Dwelling Type	Up to \$400k	\$400k-\$600k	\$600k-\$800k	\$800k-\$1m	\$1m-\$1.6m	\$1.6m+	TOTAL
				Nil Pref	erence Shift Sce	nario		
	Detached 1-2 Bed	80	200	80	20	10	-	400
Short-Term	Detached 3+ Bed	300	1,100	600	200	100	10	2,300
2020-2023	Attached 1-2 Bed	300	40	-	-	-	-	400
2020 2025	Attached 3+ Bed	200	40	-	-	-	-	200
	TOTAL	900	1,300	700	200	100	10	3,300
	Detached 1-2 Bed	200	600	400	100	30	-	1,300
Medium-	Detached 3+ Bed	800	3,200	2,700	1,200	500	60	8,600
Term 2020-	Attached 1-2 Bed	1,300	200	20	-	-	-	1,500
2030	Attached 3+ Bed	600	200	30	10	-	-	900
	TOTAL	3,000	4,200	3,100	1,300	600	60	12,300
	Detached 1-2 Bed	100	1,300	1,300	600	300	10	3,600
Long-Term	Detached 3+ Bed	300	5,200	7,900	4,600	3,800	300	22,100
2020-2050	Attached 1-2 Bed	2,900	900	200	20	10	-	4,100
2020 2030	Attached 3+ Bed	1,200	700	200	40	20	-	2,200
	TOTAL	4,500	8,100	9,600	5,300	4,100	300	31,900
				Medium P	reference Shift	Scenario		
	Detached 1-2 Bed	70	200	70	20	10	-	300
Short-Term	Detached 3+ Bed	300	1,000	600	200	90	10	2,100
2020-2023	Attached 1-2 Bed	500	50	-	-	-	-	500
2020 2020	Attached 3+ Bed	300	50	10	-	-	-	300
	TOTAL	1,100	1,200	700	200	100	10	3,300
	Detached 1-2 Bed	200	500	300	100	30	-	1,200
Medium-	Detached 3+ Bed	700	2,900	2,400	1,100	500	50	7,700
Term 2020-	Attached 1-2 Bed	1,800	300	30	-	-	-	2,100
2030	Attached 3+ Bed	900	300	40	10	10	-	1,300
	TOTAL	3,700	4,000	2,800	1,200	500	50	12,300
	Detached 1-2 Bed	90	1,100	1,100	500	300	10	3,100
Long-Term	Detached 3+ Bed	200	4,400	6,600	3,900	3,200	300	18,600
2020-2050	Attached 1-2 Bed	4,700	1,500	300	40	20	-	6,600
	Attached 3+ Bed	2,000	1,200	400	70	40		3,600
	TOTAL	7,000	8,100	8,400	4,500	3,500	300	31,900
					ference Shift Sc			
	Detached 1-2 Bed	60	200	70	20	-	-	300
Short-Term	Detached 3+ Bed	300	900	500	200	80	10	1,900
2020-2023	Attached 1-2 Bed	600	60	10	-	-	-	700
	Attached 3+ Bed	300	70	10	-	-	-	400
	TOTAL	1,200	1,200	600	200	90	10	3,300
	Detached 1-2 Bed	200	500	300	90	30	-	1,100
Medium-	Detached 3+ Bed	700	2,600	2,100	900	400	50	6,800
Term 2020-	Attached 1-2 Bed	2,400	400	40	10	-	-	2,800
2030	Attached 3+ Bed	1,200	400	50	10	10	-	1,700
	TOTAL	4,400	3,800	2,500	1,000	500	50	12,300
	Detached 1-2 Bed	80	900	1,000	400	200	10	2,600
Long-Term	Detached 3+ Bed	200	3,600	5,400	3,200	2,600	200	15,300
2020-2050	Attached 1-2 Bed	6,500	2,000	400	60	20	-	9,100
	Attached 3+ Bed	2,700	1,600	500	90	50	-	4,900
	TOTAL	9,500	8,200	7,300	3,800	2,900	200	31,900

Table 2-5: Total Market Demand for Dwellings by Dwelling Value Band and Dwelling Type: Hamilton City, Short, Medium and Long-Term  $-\,1\%$  p.a. Real Household Income Growth

				Dw	elling Value Ba	nd		
Time Period	Dwelling Type	Up to \$400k	\$400k-\$600k	\$600k-\$800k	\$800k-\$1m	\$1m-\$1.6m	\$1.6m+	TOTAL
	2	- C	<del> </del>	•	ference Shift So	· · · ·	<del></del>	
	Detached 1-2 Bed	1,300	3,200	1,300		90	-	6,200
Short-Term	Detached 3+ Bed	6,200	21,400	12,800		2,000	200	47,200
Short-Term	Attached 1-2 Bed	6,700	700	60	-	-	-	7,400
2020-2023	Attached 3+ Bed	4,500	1,000	100	20	20	_	5,600
	TOTAL	18,700	26,200	14,300	5,000	2,100	200	66,400
	Detached 1-2 Bed	1,200	3,300	1,900	600	200	10	7,200
Medium-	Detached 3+ Bed	5,200	20,200	17,000		3,300	400	53,400
Term 2020-	Attached 1-2 Bed	7,300	1,100	100	-	10	-	8,600
2030	Attached 3+ Bed	4,500	1,400	200	40	30	_	6,300
	TOTAL	18,200	26,100	19,200	8,000	3,500	400	75,400
	Detached 1-2 Bed	300	3,300	3,400	-	800	30	9,400
	Detached 3+ Bed	800	15,800	23,800	-	11,400	1,000	66,900
Long-Term	Attached 1-2 Bed	8,100	2,500	500	-	30	-	11,100
2020-2050	Attached 3+ Bed	4,100	2,400	800	100	70	_	7,500
	TOTAL	13,200	24,000	28,600	15,700	12.400	1,100	95,000
			,ccc	<u> </u>	Preference Shif			25,000
	Detached 1-2 Bed	1,300	3,100	1,300		90	-	6,100
	Detached 3+ Bed	6,100	21,100	12.600	4,500	1,900	200	46,600
Short-Term	Attached 1-2 Bed	7,000	700	70	,	10	-	7,800
2020-2023	Attached 3+ Bed	4,700	1,000	100	30	20	_	5,900
	TOTAL	19,100	26,000	14,100	4,900	2,100	200	66,400
	Detached 1-2 Bed	1,200	3,200	1,900		200	10	7,000
Medium-	Detached 3+ Bed	5,000	19,700	16,600		3,200	300	52,100
Term 2020-	Attached 1-2 Bed	8,000	1,200	100	20	10	-	9,400
2030	Attached 3+ Bed	5,000	1,600	200	40	30	_	6,800
2030	TOTAL	19,200	25,800	18,800	7,800	3,400	400	75,400
	Detached 1-2 Bed	300	3,100	3,200		800	30	8,900
	Detached 3+ Bed	700	14,900	22,500	13,200	10,800	1,000	63,100
Long-Term	Attached 1-2 Bed	10,000	3,100	700	90	30	1,000	13,900
2020-2050	Attached 3+ Bed	5,000	2,900	1,000	200	90	10	9,200
	TOTAL	16,000	24,100	27,300	14,900	11,700	1,000	95,000
	TOTAL	10,000	24,100	•	eference Shift S	•	1,000	93,000
	Detached 1-2 Bed	1,300	3,100	1,300			-	6,000
	Detached 3+ Bed	6,100	20,900	12,400		1,900	200	46,000
Short-Term	Attached 1-2 Bed	7,300	20,900	70	-	1,900	-	8,200
2020-2023	Attached 3+ Bed	4,900	1,000	100	30	20	-	6,100
	TOTAL	19,600	25,800	13,900	4,900	2,000	200	66,400
	Detached 1-2 Bed	1,200	3,100	1,800		200	10	6,800
Medium-	Detached 3+ Bed	4,900	19,300	16,200			300	50,900
Term 2020-	Attached 1-2 Bed	4,900 8,800	1,400	10,200		3,100	-	10,300
2030	Attached 3+ Bed	5,400	1,700	200	50	30	<u>-</u>	7,400
2030	TOTAL	20,200	25,500	18,300			300	7,400
	Detached 1-2 Bed	300	3,000	3,000			30	
	Detached 3+ Bed	700	14,100	21,100			900	59,400
Long-Term	Attached 1-2 Bed	12,000	3,700	21,100 800		10,100	900 -	16,600
2020-2050	Attached 1-2 Bed Attached 3+ Bed	5,800	3,400	1,100		100	10	10,700
		· · · · · · · · · · · · · · · · · · ·					900	
	TOTAL	18,700	24,200	26,100	14,100	11,000	900	95,000

# 3 Commercial Feasibility of Development Options

It is important to understand the commercial feasibility for developers of different development options when establishing planning provisions that affect the density and type of dwellings enabled within the greenfield areas. The feasibility of development is determined by whether a commercial developer is able to make a sufficient profit margin on a dwelling development. This section assesses the commercial feasibility of different development options to guide the development of planning parameters within each greenfield area. Planning parameters to be informed by the analysis relate to the minimum density provisions within greenfield areas and any provisions that specify the required dwelling type mix.

The following sub-sections provide an overview of the approach to commercial feasibility modelling (Section 3.1) and the calculation of dwelling densities (Section 3.1.1). The next sections (Section 3.2 to Section 3.5) then outline the key findings from the modelling. They estimate the current feasibility of development options and densities. They then examine how this may change through time, to provide estimated pictures of feasibility in the short, medium and long-term. Section 3.6 then considers the feasibility of different development densities for each dwelling type/size and how this is projected to change through time. The key findings of the commercial feasibility assessment are then brought together in Section 3.7 to identify the feasible development densities by each dwelling size/type combination in the current, short, medium and long-terms.

### 3.1 Approach to Commercial Feasibility

This assessment models the feasibility of development for a profit-driven commercial developer. It models the commercial feasibility of house and land package options where a developer sells a dwelling on a piece of land to a private buyer.

It is important to note that the private profit-driven commercial developer represents one component of the wider market that is likely to deliver housing capacity. There are other components of the market that may also deliver capacity, that may have different development models. These include central government social housing, other social housing/community-based providers, and any local government supplied housing. In addition, a small share of the dwelling development also occurs through households purchasing a section and then commissioning a builder to construct a house on it.

The modelling approach takes into account the costs<sup>3</sup> of development to bring a house to market. It compares these costs to the estimated sales price of the constructed dwelling to determine the profit margin that may occur.

<sup>&</sup>lt;sup>3</sup> Costs include the land cost, site preparation, construction costs (including landscaping), ancillary costs (resource consents, building consents, development contributions, utilities connections, technical specialist input, project management, sales and

In accordance with the NPS-UDC technical guidance, this assessment has assumed that developments with a margin of 20% or greater<sup>4</sup> are commercially feasible to construct for a commercial developer. Dwelling typology/sie and density combinations are deemed to be commercially feasible if they achive at least this margin in the assessment.

This assessment also identifies development options within an estimated profit margin of 15-20%. It is important to recognise that costs, prices and developer accepted margins are likely to vary across different developers as a function of the unique set of conditions to each development. The modelling approach triangulates multiple data sources to estimate average and generate the best estimates of costs and prices, however, it is not possible to reflect every possibility that may be available to individual developers.

Given the unique individualised circumstances of different developers, it is likely that developments will still occur that are outside of the ranges predicted by the modelling. It is therefore important to also consider development options that result in a margin outside of the 20% margin threshold. On this basis, we consider that developers within the 15-20% margin range are those that are next most likely to be delivered by the market. The results tables within this section therefore identify the density ranges within each dwelling typology/size combination that are estimated to fall within this additional range.

The feasibility modelling tests the commercial feasibility of different densities of each dwelling typology and size combination. Dwelling typologies are set as either attached or detached dwellings. Dwellings are then further divided by size into 1-2 bedroom dwellings and 3+ bedroom dwellings, with these combinations corresponding to the dwelling demand assessment. These typology/size combinations have not been specified beyond this level in order to not unnecessarily constrain the assessment for the development of planning provisions.

Importantly, in testing the feasibility of different densities, the modelling takes account of the relationships between the number of dwellings per hectare (density), site size, and the nature and size of dwellings constructed on each site<sup>5</sup>. There are corresponding changes in the structure of costs and prices, that align with dwellings at different densities, that drive the feasibility modelling. The modelling does not include any zoning minimum site size constraints as the intent is to inform the development of these parameters.

The model projects the feasibility of development options and densities through time. It provides a picture of the feasible development ranges in the current market, as well as in the short, medium and long-term. Understanding the feasibility through time is important as feasibility changes through time as demand and the scarcity of location increase. A greater range of development options and increased densities typically gradually increase in feasibility through time in growing urban economies.

marketing, and legal costs). Finance costs are applied to all of the costs in line with their project timing. GST and corporate taxes are also removed from the developer margin.

<sup>&</sup>lt;sup>4</sup> The margin refers to the profit margin made by a commercial developer through selling a house and land package. It is the margin, after tax, between the sales price and the total costs of development.

<sup>&</sup>lt;sup>5</sup> The modelled combinations are generated by assessment of the relationships between dwelling and site size for each typology, expressed as floor area ratios (FARs) – i.e. the dwelling floorspace / land parcel area. The FARs have been developed through assessment of other urban economies that contain a greater range of dwelling typologies and densities, and then calibrated to the Tauranga and Hamilton markets based on M.E's localised floorspace and land area parcel assessment models. The modelling also applies the ratios of parcelled land area to total subdivision developable area by dwelling typologies and densities, generated through the same assessment process in other urban economies.

#### 3.1.1 Calculation of Dwelling Densities

Dwelling densities within the modelling are expressed in terms of the number of dwellings per hectare. Specifically, they are the number of dwellings per hectare of developable area within a subdivision. The developable area includes roads and reserves, but excludes undevelopable areas (e.g. wetlands or geotechnically/topographically constrained areas) or major infrastructure corridors.

For modelling purposes, it is important that the densities are calculated based on the *total developable area* (as outlined above) rather than the area net of roads and reserves (i.e. the final saleable land parcel area). This is because of the share of land that is removed for roads and reserves is not constant and instead differs by the development density. Broadly, areas of higher density have a greater share of land removed for roads and reserves, with correspondingly lower shares removed within lower density developments.

As an example, a modelled density of 17 dwellings per hectare for 3+ bedroom detached dwellings would equate to a site size of around 400m2 per dwelling. At this density, 33% of the developable land would be removed for roads and reserves for this dwelling type. This leaves around 6,750m2 of land per hectare upon which to divide into saleable lots. At 17 dwellings per hectare, this equates to 400m2 per site (i.e. 6,750m2 / 17 =397m2).

The modelled dwelling density ranges for each dwelling type/size combination and their resulting per dwelling site sizes are displayed in Table 3-1.

Table 3-1: Modelled Average Land Parcel Site Size per Dwelling by Dwelling

Density (Dwellings	Average Site Size per Dwelling (m2)								
per Hectare)	Detached 1-2	Detached 3+	Attached 1-2	Attached 3+					
per riectare)	Bed	Bed	Bed	Bed					
10		730							
11		650							
12		590							
13		540		530					
14		490		490					
15		460		450					
16	420	420		420					
17	400	400		390					
18	370	370		370					
19	350	350	340	340					
20	330	330	320	330					
21	310	310	300	310					
22	300	300	290	290					
23	280	280	270	280					
24	270	270	260	260					
25	250	250	250	250					
26	240		230	240					
27	230		230	230					
28			220	220					
29			210	210					
30			200	210					
31			200	200					
32			190	190					
33			180	190					
34			180	180					
35			170	180					
36			170	170					
37			160	170					
38			160	160					
39			160	160					
40			150	160					

Source: M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.



#### 3.2 Current (2020) Situation

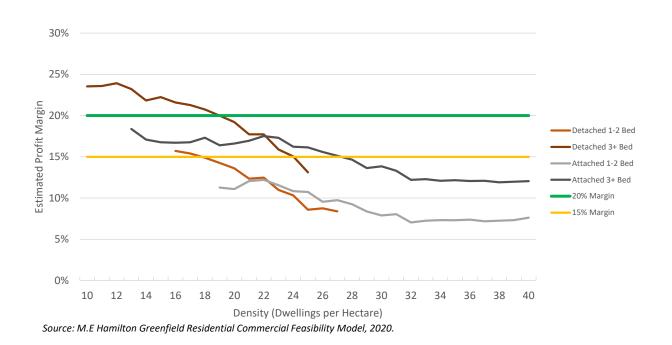
This section describes the current (2020) market situation within Hamilton's greenfield areas. It estimates the dwelling densities that are commercially feasible to construct within each dwelling typology/size combination, as well as the range of densities that have an estimated 15-20% margin.

Figure 3-1 displays the estimated feasibility within the current commercial development market. Each line on the graph represents and dwelling typology/size combination. The value at each point of the line shows the estimated profit margin of the dwelling typology/size combination at each dwelling density. Dwelling densities are expressed in terms of the number of dwellings per hectare<sup>6</sup>, with density increasing with the number of dwellings.

The graph also contains lines to show the 15% and 20% profit margins, which correspond to the assumed categories of feasibility within the model. Overall, it can be seen in the graph that feasibility generally decreases with density for each dwelling typology. The points at which the dwelling typology/size lines intersect the feasibility margin lines show the extent of the density range which is estimated to be currently commercially feasibily, or have marginal feasibility (15-20% margin).

Figure 3-1 shows that, in Peacocke, that detached 3+ bedroom dwellings have the highest levels of feasibility, with the market delivering the greatest margins in the lower density ranges.





<sup>&</sup>lt;sup>6</sup> The number of dwellings per hectare also includes provision for roads, reserves, etc, where the non-parcelled (roads/reserves) area differs by dwelling typology and density. For example, at a yield of 20 detached 3+ bedroom dwellings per hectare, the model allocates 34% of the developable land area to roads, reserves, etc. The remaining area (6,600m2 per ha) is divided by 20 dwellings to equate to an average section size of 330m2 per dwelling.

In Peacocke, the model estimates that it is currently commercially feasible to develop detached 3+ bedroom dwellings at densities up to 18 dwellings per ha. At the highest density, this equates to a 372m2 section size. It estimates that densities of up to 24 dwellings per hectare (270-350m2 sections) fall within a 15-20% margin.

The model does not show any other dwelling typology/size combinations that are currently commercially feasible (with a margin of at least 20%) within Peacocke. However, it shows that attached 3+ bedroom dwellings of 13 to 25 dwellings per hectare (250-530m2 sections per dwelling unit) have an estimated margin of 15-20%. The modelling parameters assume that 3+ bedroom detached dwellings require a minimum site size of at least 250m2<sup>7</sup>. The graph also shows that 1-2 bedroom detached dwellings at site sizes around the General Residential Zone 400m2 minimum (16 to 17 dwellings per hectare) also fall within this marginal range.

The estimated margins for smaller 1-2 bedroom dwellings are currently significantly lower than for larger dwellings. This reflects the current prices and demand for these types of dwellings within the market.

These modelled outputs reflect the current development patterns within Peacocke in Hamilton where the predominant patterns are for larger, detached houses. Previous development patterns within the last decade across Hamilton's greenfield areas have typically occurred on larger section sizes (600-800m2), particularly in the northern part of the city. Development patterns of standalone houses on smaller sites are starting to emerge, although the density of these are somewhat limited by the 400m2 per dwelling minimum site size requirement of single dwellings within the General Residential Zone that applies across most of Hamilton's residential area. A small share of development of attached dwellings on smaller sites is currently being constructed, including within the northern part of Peacocke.

The modelling suggests that attached 3+ bedroom dwellings have a higher estimated margin than detached 3+ bedroom dwellings at higher densities. This is because it becomes easier to construct attached dwellings, than detached dwellings, on smaller site sizes. The potential size of detached dwellings on smaller sites decreases at a greater rate than for attached dwellings due to the reduced constraint of bulk and location parameters for attached dwellings (due to attached walls across site boundaries). The feasibility of smaller dwellings is also reduced by the combination of lower sales prices and increased construction cost per m2 of smaller dwellings.

#### 3.3 Short-Term (2020-2023) Projection

The estimated picture of feasibility in the short-term is shown in Figure 3-2. The short-term refers to the next three years (2020-2023) and somewhat aligns with the development planning pipelines.

The projected ranges of feasible and marginal development densities within each dwelling typology/size have increased slightly from the current feasibility estimates. The model estimates that it will be feasible to construct detached dwellings up to 20 dwellings per hectare in the short-term. This equates to an average section size of around 330m2 per dwelling, which is similar to the smaller site sizes currently being

<sup>&</sup>lt;sup>7</sup> Hamilton City Council planners advise that a minimum site size of 250m2 per standalone dwelling should be applied as an assumption in the model for Peacocke. We have applied this assumption for 3+ bedroom detached dwellings, and used an assumption of a 230m2 minimum site size for smaller 1-2 bedroom detached dwellings to reflect the smaller size of these dwellings.

delivered for standalone dwellings in other similar urban economies in New Zealand. It also shows that larger attached dwellings at lower densities also become feasible within the short-term.

Figure 3-2 also shows that the density ranges of dwellings within the marginal (15-20%) range also increase in the short-term. The marginal feasibility density of detached 3+ bedroom dwellings remains at 24 dwellings per hectare, and the attached 3+ bedroom dwellings, increases up to 31 dwellings per hectare. This reaches site sizes of down to nearly 200m2 per dwelling, which is similar to the current duplex dwelling per unit size site requirement of the General Residential Zone, which is experiencing duplex development at these higher densities across many parts of Hamilton. The range of smaller (1-2 bedroom) detached dwellings within the marginal range increases up to 20 dwellings per hectare.

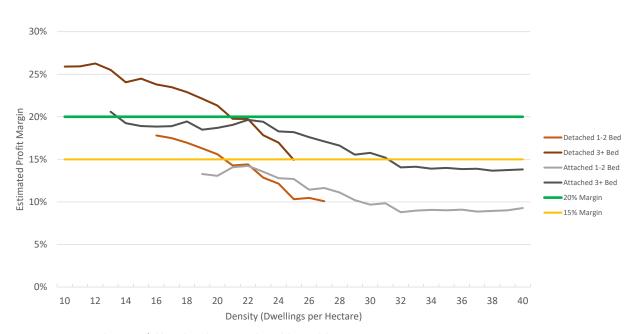


Figure 3-2: Short-Term (2020-2023) Development Feasibility by Dwelling Type and Size: Peacocke

Source: M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

#### 3.4 Medium-Term (2020-2030) Projection

The estimated picture of feasibility in the medium-term is shown in Figure 3-3. The short-term refers to the next ten years (2020-2030) with the development planning pipelines extending into this period.

The projected ranges of feasible and marginal development densities within each dwelling typology/size have increased again from the short-term feasibility estimates. The model estimates that it will become feasible to construct 3+ bedroom detached dwellings at up to 24 dwellings per hectare. At the highest density end of this range, this equates to an average site size of around 270m2 per dwelling, close to the highest density modelled.

The model projects that, in the medium-term, a greater range of attached 3+ bedroom dwellings will become commercially feasible to construct. It estimates that it will be feasible to construct these dwellings at densities up to 30 dwellings per hectare, which equates to site sizes of around 200m2 per dwelling unit.

This exceeds the estimated feasible range of detached 3+ bedroom dwellings due to ability to construct larger attached dwellings on smaller sites together with the constrained ability to construct detached dwellings on smaller sites.

In the medium-term, the model projects that it will become feasible to construct 1-2 bedroom detached dwellings. These are projected to become feasible at a dwelling density of up to 20 dwellings per hectare. The feasibility of smaller dwellings is likely to increase into the future, reflecting growth in the relative proportion of smaller households. Growth in demand for smaller dwellings is also seen in the range of 1-2 bedroom attached dwellings that are projected to occur in the marginal feasibility (15-20%) range in the medium-term. At the higher densities, these also have site sizes of around 200m2 per dwelling unit.

35% 30% 25% **Estimated Profit Margin** Detached 1-2 Bed 20% Detached 3+ Bed Attached 1-2 Bed 15% Attached 3+ Bed 20% Margin 15% Margin 10% 5% 0% 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 Density (Dwellings per Hectare)

Figure 3-3: Medium-Term (2020-2030) Development Feasibility by Dwelling Type and Size: Peacocke

### 3.5 Long-Term (2020-2050) Projection

Source: M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

In the long-term (2020-2050), all of the modelled development options and densities are projected to become feasible in Peacocke (see Figure 3-4). Three or more bedroom dwellings have higher modelled margins than smaller dwellings, reflecting historic patterns of higher demand for dwellings with a greater number of bedrooms.

As sites become smaller, the modelling suggests that it becomes relatively more feasible to construct attached dwellings than detached dwellings. Within each dwelling size group (1-2 bedrooms vs. 3+ bedrooms), the modelled margins of attached dwellings begin to exceed those of detached dwellings at densities of 22 dwellings per hectare or greater. This equates to a site size of around 300m2 or smaller.

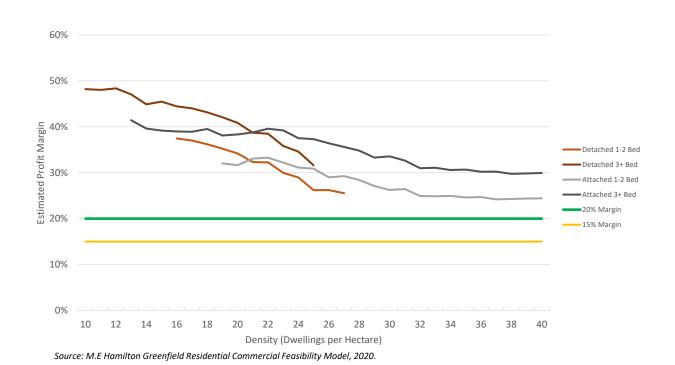


Figure 3-4: Long-Term (2020-2050) Development Feasibility by Dwelling Type and Size: Peacocke

#### 3.6 Feasibility by Dwelling Typology and Size

The following sub-sections provide greater detail on the timing of feasibility of different densities within each dwelling typology/size combination. The chart in each sub-section shows the full crosstabulation between the modelled density range (dwellings per hectare) and the years within the modelling time period (2020-2050).

The green sections on each graph show the range of dwelling densities that are feasible within each year with a margin of 20% of greater. The vertical height of the green section, at each yearly interval, corresponds with the maximum density that is modelled to be feasible at the point in time. The range of feasible density generally increases through time. The yellow sections of the graph show the range of densities that are modelled to have a margin of 15-20%; and the grey areas, the range of densities that are deemed to be infeasible with a margin of less than 15%.

#### 3.6.1 Detached 1-2 Bedroom Dwellings

Figure 3-5 shows the modelled feasibility for 1-2 bedroom detached dwellings in Peacocke. The modelling suggests that this development option is projected to become feasible with a 20% or greater margin midway through the medium-term. In the short and medium-terms, a range of density is projected to be within the 15-20% margin for this development option. These equate a range of smaller site sizes (around 270-400m2).

The feasible density of this development option increases through time. The maximum modelled densities are projected to become feasible with a 20% or greater margin midway through the long-term. These are modelled at 27 dwellings per hectare, which equates to a small standalone dwelling (around 100-110m2).

floorspace) on a small site area (around 230m2). While this density may be projected to become feasible, the market may deliver dwellings at a different density within the feasible range, depending upon the scale of demand and market preferences that emerge in the long-term.

27 26 25 Density (Dwellings per Hectare) 24 23 22 Long-Term Medium-Term Short-Term 21 20 18 17 16 2026 2029 2032 2033 2031 2034 2035 2043 2043 2044 2045 2046 Year ■<15% MARGIN ■ 15-20% MARGIN ■ 20%+ MARGIN

Figure 3-5: Feasibility by Density and Time for Detached 1-2 Bedroom Dwellings: Peacocke

Source: M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

#### 3.6.2 Detached 3+ Bedroom Dwellings

Figure 3-6 shows the modelled feasibility for for 3+ bedroom detached dwellings in Peacocke. It estimates that much of the modelled range is currently feasible to construct with a 20% or greater margin. It is estimated that it is currently feasible to construct dwellings on minimum site sizes similar to those in the General Residential Zone (400m2) that is applied across much of Hamilton's residential area.

In the short-term the feasible density is projected to increase to around 20 dwellings per hectare, equating to site sizes of around 330m2 per dwelling. These site sizes are not currently seen in the Hamilton market within the outer areas of greenfield growth. However, this is likely to be influenced by the existing General Residential Zone 400m2 minimum site size requirement for single dwellings. We note that 3+ bedroom detached dwellings are currently being delivered at these smaller site sizes in the greenfield growth areas of other similar urban economies.

The full modelled range of densities for this development option is projected to become feasible (at a 20% or greater margin) shortly into the long-term (around 2031-2032). This equates to a density of 25 dwellings per hectare, with a site size of around 250m2 per dwelling.

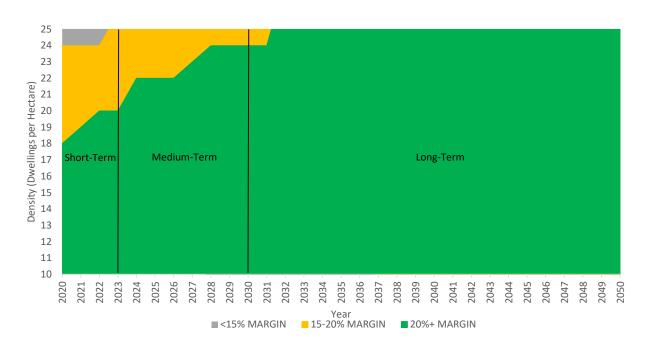


Figure 3-6: Feasibility by Density and Time for Detached 3+ Bedroom Dwellings: Peacocke

Source: M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

#### 3.6.3 Attached 1-2 Bedroom Dwellings

The modelled feasibility through time of attached 1-2 bedroom dwellings is shown in Figure 3-7. The modelled range of density is from 19 dwellings per hectare up to 40 dwellings per hectare, equating to a site size range of around 150m2 to 350m2.

The modelling projects that this type of development is more likely to become feasible at a margin of 20% or greater in Peacocke during the long-term. It is not projected to achieve a 15-20% margin till the medium-term. Long-term demand for these types of smaller dwellings are likely to correspond to patterns of greater growth in smaller household types seen in the demand assessment.

Current market analysis suggests that these types of smaller, attached dwellings are currently being delivered within Hamilton. Although, these are typically occurring within more central areas of higher amenity, while outer greenfield areas have a greater propensity to develop as larger detached dwellings on larger sites. However, the establishment of a centralised node of higher amenity within the Peacocke area may increase the viability of these types of smaller higher density dwellings. While there are currently some attached dwellings being developed within Peacocke, these are generally 3+ bedroom dwellings, which are reflected in the following section.

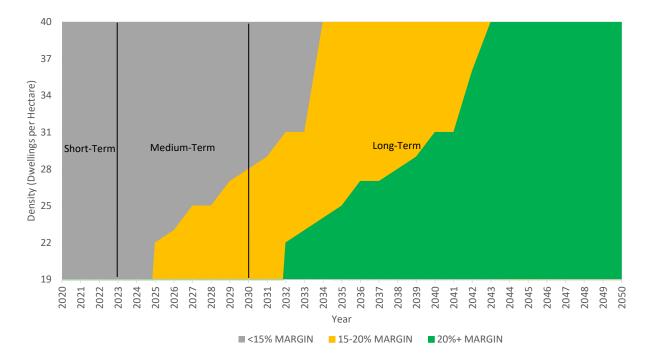


Figure 3-7: Feasibility by Density and Time for Attached 1-2 Bedroom Dwellings: Peacocke

Source: M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

#### 3.6.4 Attached 3+ Bedroom Dwellings

The modelled feasibility by density for attached 3+ bedroom dwellings is shown in Figure 3-8. This development option is projected to become feasible at a 20% or greater margin in the medium-term, with the full range of modelled densities becoming feasible at this margin part way through the long-term.

In the current market and short-term, a range of this development option is estimated to have a margin of 15-20%. It is estimated that the density range at this margin currently equates to 13 to 27 dwellings per hectare, increasing up to 31 dwellings per hectare in the short-term. At the highest density, this corresponds to a site size of 230m2 currently, decreasing to 200m2 in the short-term. This development option at this higher density (230m2 site size) reflects a small share of the development that is currently occurring within Peacocke.

While the modelling estimates that this development option is likely to be feasible at lower densities in the medium-term, it is less likely that attached dwellings will be delivered by the market at this density range. The reason is twofold. Firstly, at these larger site sizes (13 to 15 dwellings per hectare – 450m2 to 530m2 site sizes), the market is easily able to deliver standalone dwellings, which typically have a higher level of demand as their size is not generally constrained at this site size. Secondly, if attached dwellings are constructed, then they are more likely to be constructed at a higher density to increase the total dwelling yield, and therefore, net profit, of the subdivision.

The full range of modelled densities is projected to become feasible, at a margin of 20% or greater, for this development option in the long-term.

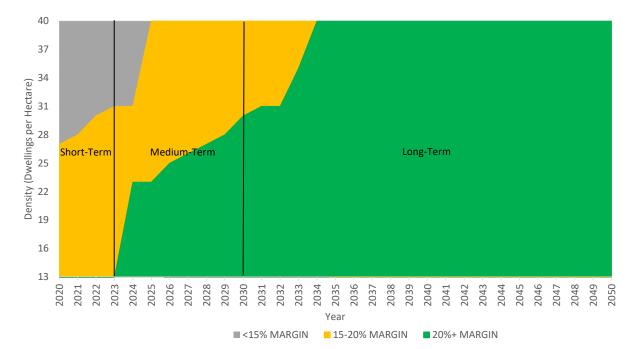


Figure 3-8: Feasibility by Density and Time for Attached 3+ Bedroom Dwellings: Peacocke

Source: M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

# 3.7 Summary to Inform the Development of Planning Density Parameters

The estimated and projected feasibility of density ranges for each development option is summarised in Table 3-2 for the current situation and the short, medium and long-term. The first column in the table shows the range of dwelling densities, for each development option, that are projected to be feasible at a margin of 20% of greater within each time period. The final column also shows the corresponding range of densities that are projected to have a margin of 15-20%, which provides an indication of density ranges that may be feasible for individual developer circumstances.

These density ranges reflect those discussed in the previous sections for each development option and time period. They are collated here to assist planners in establishing appropriate density and dwelling typology/size requirements for the Peacocke greenfield area.

In addition, Table 3-2 also estimates the feasibility of apartment dwellings. These reflect apartments that are constructed in buildings that are three storeys or greater. These are not projected to be feasible currently or in the short-term, but are projected to begin to become feasible within the medium and long-term.

The middle column of Table 3-2 also contains an estimated projected dwelling price range associated with each of the density ranges projected for the 20% or greater margin. The prices are the estimated sales prices within the model associated with these feasible density ranges. The prices modelled are expressed

in 2020 values. However, they assume a real increase in dwelling prices (within each dwelling typology/size combination) of 2% per annum through time.

Table 3-2: Estimated Commercially Feasible Development Densities and Dwelling Value Bands in Peacocke by Time Period and Dwelling Size/Type

	Feasible Density Range	Feasible Dwelling Price	Marginal Density Range						
TIME PERIOD	(>= 20% margin)	Range	(15% - 20% margin)						
	DETACHED 1-2 Bedroom Dwellings								
Current: 2020	Not Feasible	Not Feasible	16 to 17 dwellings per ha						
Short-Term: 2020-2023	Not Feasible	Not Feasible	16 to 20 dwellings per ha						
Medium-Term: 2020-2030	16 to 20 dwellings per ha	\$930k to \$1.08m	21 to 24 dwellings per ha						
Long-Term: 2020-2050	16 to 27 dwellings per ha	\$870k to \$1.60m							
	Di	ETACHED 3+ Bedroom Dwell	ings						
Current: 2020	10 to 18 dwellings per ha	\$870k to \$1.23m	19 to 24 dwellings per ha						
Short-Term: 2020-2023	10 to 20 dwellings per ha	\$840k to \$1.31m	21 to 25 dwellings per ha						
Medium-Term: 2020-2030	10 to 24 dwellings per ha	\$790k to \$1.50m	25 dwellings per ha						
Long-Term: 2020-2050	10 to 25 dwellings per ha	\$800k to \$2.22m							
	ATTACHED 1-2 Bedroom Dwellings								
Current: 2020	Not Feasible	Not Feasible	Not Marginal						
Short-Term: 2020-2023	Not Feasible	Not Feasible	Not Marginal						
Medium-Term: 2020-2030	Not Feasible	Not Feasible	19 to 28 dwellings per ha						
Long-Term: 2020-2050	19 to 40 dwellings per ha	\$850k to \$1.43m							
	A1	TTACHED 3+ Bedroom Dwell	ings						
Current: 2020	Not Feasible	Not Feasible	13 to 27 dwellings per ha						
Short-Term: 2020-2023	13 dwellings per ha	\$1.05m to \$1.1m	14 to 31 dwellings per ha						
Medium-Term: 2020-2030	13 to 30 dwellings per ha	\$820k to \$1.26m	31 to 40 dwellings per ha						
Long-Term: 2020-2050	13 to 40 dwellings per ha	\$770k to \$1.87m							
	ATTACHE	D 1-2 Bedroom Dwellings (A	partments)						
Current: 2020	Not Feasible	Not Feasible	Not Marginal						
Short-Term: 2020-2023	Not Feasible	Not Feasible	Not Marginal						
Medium-Term: 2020-2030	Feasible	\$530k to \$540k	Marginal						
Long-Term: 2020-2050	Feasible	\$540k to \$780k							

Source: M.E Hamilton City Greenfield Commercial Feasibility Model, 2020.

Generally, the lower prices correspond to the higher end of the density range as they reflect the provision of smaller dwellings and land areas. In addition, the price ranges can occur at a particular point in the time period, with the price of their corresponding development option changing through time. For instance, the modelling projects that the price range for feasible 3+ bedroom dwellings is modelled at \$800,000 to \$1.53 million in the long-term. The lower end (\$800,000) of this price bracket corresponds to a dwelling constructed at a density of 25 dwellings per hectare toward the start of the long-term (when this higher density becomes feasible). Using the growth assumptions within the model, this dwelling is projected to increase in price to \$1.14m by the end of the modelling period (2050). Conversely, the maximum price of \$2.22m in this range corresponds to the construction of a large dwelling (250m2) on a large site (around 730m2) in 2050.

It is important to note that the highest prices in these ranges are likely to reflect the construction of the largest dwellings and site size combinations within each development option. Part of this increase would

reflect the price premium paid due to the scarcity of space at these lower densities where the overall average densities of urban economies typically gradually increase through time due to the scarcity of location. Development patterns through time suggest that the market is instead more likely to gradually develop to greater densities, which therefore has the effect of slowing the real increase in dwelling prices (on an average per dwelling basis) through time.

The differences in prices between different dwelling typology/size development options are also a function of the timining of the feasibility of the density range. This is particularly the case within the long-term, where prices for similar sized dwellings may be higher for one development option relative to another as a function of the time at which the density becomes feasible within the time period. For example, at the upper end of the feasible density for 3+ bedroom detached dwellings (25 dwellings per hectare), the typology is projected to become feasible in 2032 at a price of \$800,000. However, the 1-2 bedroom detached dwelling, at the same density, has a higher price of \$890,000 because it is projected to become feasible significantly later (in 2040) than the 3+ bedroom dwelling.



# 4 Development Options & Demand

The final assessment draws together the projected dwelling demand for Hamilton and the dwelling density ranges estimated to be feasible in the Peacocke greenfield area in the short, medium and long-term. These demand and feasibility outputs are presented by dwelling type/size combination and dwelling value band.

The value band information relates to the value band of demand within each category (on the demand side) and then the estimated price at which capacity is modelled to be feasible. This comparison identifies the broad areas of market overlap between overall Hamilton housing demand and what is estimated to be feasible to potentially supply in Peacocke. Importantly, the analysis also identifies the number of additional and total dwellings demanded to show the estimates projected scale of the market within each area of overlap.

The following tables (Table 4-1 to Table 4-5) provide the comparison between the demand and feasibility assessments for each dwelling type/size combinatiojn. The upper parts of the table contains the total and additional market demand within each dwelling value band. The top section contains the demand outputs for the scenario where the dwelling value profile is increased by 0.5% per annum to reflect real increases in household income; and the next section, where the value profile is increased by 1% per annum to allow for a level of demand growth through increases in equity within existing dwellings. It is important to consider both the additional and total demand aspects of the market as much for the greenfield supply is taken up by existing households. The total market shows the total potential size of the market that could purchase from the supplied greenfield dwellings.

The lower section of each table contains the dwelling density ranges that are projected to be feasible within the Peacocke greenfield area within the short, medium and long-term. These are correlated with dwelling value bands based on the estimated price at which they are projected to be feasible. The table contains both the ranges which are feasible with a margin of 20% or greater, as well as the density ranges that are projected to have a margin of between 15% and 20%.

Finally, the shading within the upper sections of the tables shows the broad areas of potential overlap between the dwelling demand and feasible development options in Peacocke. The areas of darker shading show value bands within each timeframe that contain development options that are projected to be feasible in Peacocke at a 20% or greater margin. The lighter shaded parts of the table correspond to areas that are estimated to contain potential development options with an estimated 15%-20% margin. As such. The table can be read by observing the scale of the demand in the upper sections, and the extent of demand which falls within a feasible range. The lower part of the table then shows the corresponding densities for each dwelling value band/timeframe combination.

The demand and potential feasible capacity should be compared at a broad level. The dwelling value band profile of new dwellings does not necessarily need to closely align with the value profile of demand for a couple of reasons. Firstly, part of the demand within a value band may be met through supply within other adjacent dwelling value bands. While part of this effect is already captured within the 1% scenario through the accumulation of equity, potential still exists for households to move up within the value profile, albeit with a lower level of affordability.

Secondly, the demand analysis reflects the underlying patterns of household dwelling demand by value band and dwelling type. Some of the demand for dwellings within a value band can be met with similar value bands across other dwelling types. As such, part of the demand for a given dwelling type and price point may also occur in the segments of market demand for other types of dwellings. This often occurs where households make tradeoffs between location, space and price of dwellings.

#### Detached 1-2 Bedroom Dwellings

The assessment for 1-2 bedroom detached dwellings is contained in Table 4-1. This development option is projected to become feasible in Peacocke during the medium-term. The total estimated market for this dwelling type is relatively small, with a total market size of 500-800 dwellings (including around 100 additional dwellings) in the medium-term and 600-1,200 dwellings (including around 300 to 900 additional dwellings) in the long-term estimated to overlap with development options with a projected market of 20% of greater.

Table 4-1: Comparison of Projected Hamilton Dwelling Demand and Projected Feasibility of Development Density Options in Peacocke: Detached 1-2 Bedroom Dwellings

	TOTAL MARKE				ARKET DEMAND (0.5% p.a. demand profile growth)					
	N	Nil Preference Shi	ift	Med	dium Preference	Shift	High Preference Shift			
Dwelling Value Band	Short-Term	Medium-Term I	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	
Up to \$400k	1,400	1,400	1,200	1,300	1,400	1,200	1,300	1,300	1,100	
\$400k to \$600k	3,200	3,500	3,900	3,100	3,500	3,700	3,100	3,400	3,500	
\$600k to \$800k	1,300	1,700	3,100	1,300	1,600	2,900	1,300	1,600	2,700	
\$800k-\$1m	300	400	900	300	400	800	300	400	800	
\$1m-\$1.6m	80	100	300	80	100	300	80	100	300	
\$1.6m+	-	10	10	-	10	10	-	10	10	
TOTAL	6,200	7,200	9,400	6,100	7,000	8,900	6,000	6,800	8,300	
			ADDITIONAL	L DWELLING	DEMAND (0.5% p	a. demand pr	ofile growth)			
	N	Nil Preference Shi	ift	Med	dium Preference	Shift	Hi	gh Preference Sh	ift	
Dwelling Value Band	Short-Term	Medium-Term I	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	
Up to \$400k	80	300	500	70	200	400	70	200	300	
\$400k to \$600k	200	700	1,500	200	600	1,300	200	500	1,100	
\$600k to \$800k	80	300	1,200	70	300	1,000	70	200	800	
\$800k-\$1m	20	80	300	10	70	300	10	60	200	
\$1m-\$1.6m	-	20	100	-	20	100	-	20	90	
\$1.6m+	-	-	-	-	-	-	-	-	-	
TOTAL	400	1,300	3,600	300	1,200	3,100	300	1,100	2,600	
			TOTAL	MARKET DEN	IAND (1% p.a. de	mand profile	growth)			
	N	Nil Preference Shi	ift	Med	dium Preference	Shift	Hi	gh Preference Sh	ift	
Dwelling Value Band	Short-Term	Medium-Term I	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	
Up to \$400k	1,300	1,200	300	1,300	1,200	300	1,300	1,200	300	
\$400k to \$600k	3,200	3,300	3,300	3,100	3,200	3,100	3,100	3,100	3,000	
\$600k to \$800k	1,300	1,900	3,400	1,300	1,900	3,200	1,300	1,800	3,000	
\$800k-\$1m	300	600	1,500	300	600	1,400	300	600	1,300	
\$1m-\$1.6m	90	200	800	90	200	800	90	200	700	
\$1.6m+	-	10	30	-	10	30	-	10	30	
TOTAL	6,200	7,200	9,400	6,100	7,000	8,900	6,000	6,800	8,300	
			ADDITIONA	L DWELLING	DEMAND (1% p.a	a. demand pro	file growth)			
	N	Nil Preference Shi	ift	Me	dium Preference	Shift	Hi	gh Preference Sh	ift	
Dwelling Value Band	Short-Term	Medium-Term I	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	
Up to \$400k	80	200	100	70	200	90	60	200	80	
\$400k to \$600k	200	600	1,300	200	500	1,100	200	500	900	
\$600k to \$800k	80	400	1,300	70	300	1,100	70	300	1,000	
\$800k-\$1m	20	100	600	20	100	500	20	90	400	
\$1m-\$1.6m	10	30	300	10	30	300	-	30	200	
\$1.6m+	-	-	10	-	-	10	-	-	10	
TOTAL	400	1,300	3,600	300	1,200	3,100	300	1,100	2,600	
		DEVELOPMENT	DENSITY OPT	IONS (Dwelli	ngs per Hectare)					
	Mai	rgin of 20% or Gre	eater	Margin of 15%-20%			1			
Dwelling Value Band	Short-Term	Medium-Term I	Long-Term	Short-Term	Medium-Term	Long-Term				
Up to \$400k							l			
\$400k to \$600k										
\$600k to \$800k					21 to 24	25 to 27				
\$800k-\$1m		17 to 20	19 to 27	16 to 20	16 to 23	21 to 27				
	1	40. 40		I			ı			
\$1m-\$1.6m		16 to 18	16 to 27							

Source: M.E Hamilton Housing Demand Model, 2020 and M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

The market size becomes significantly larger when considering demand within the lower adjacent value band (\$600,000-\$800,000), where development options are estimated to have a 15%-20% margin in the medium and long-term. There are is a projected further 1,600 to 1,900 dwelling demand (including 200 to 400 additional dwellings) within this value band in the medium-term, and a further 2,700 to 3,400 dwelling demand (including 800 to 1,300 additional dwellings) in the long-term.

#### Detached 3+ Bedroom Dwellings

The assessment for 3+ bedroom detached dwellings is contained in Table 4-2. This development option is estimated to be currently feasible in Peacocke with a margin of 20% or greater, with an increasing range of development densities projected to become feasible in Peacocke through time.

Table 4-2: Comparison of Projected Hamilton Dwelling Demand and Projected Feasibility of Development Density Options in Peacocke: Detached 3+ Bedroom Dwellings

			TOTAL	MARKET DEM	AND (0.5% p.a. d	emand profile	growth)		
	P	Nil Preference Sh	nift	Med	dium Preference	Shift	Hi	gh Preference Sh	ift
Dwelling Value Band	Short-Term	Medium-Term	Long-Term		Medium-Term		Short-Term		
Up to \$400k	6,500	6,300	4,600	6,500	6,100	4,400	6,400	6,000	4,100
\$400k to \$600k	21,600	23,000	22,300	21,400	22,400	21,100	21,100	21,900	19,900
\$600k to \$800k	13,000	15,500	24,600	12,800	15,100	23,100	12,700	14,800	21,80
\$800k-\$1m	4,000	5,800	9,600	4,000	5,700	9,100	3,900	5,500	8,50
\$1m-\$1.6m	1,800	2,500	5,300	1,700	2,500	5,000	1,700	2,400	4,70
\$1.6m+	200	300	500	200	300	500	200	300	50
TOTAL	47,200	53,400	66,900	46,600	52,100	63,100	46,000	50,900	59,40
			-		DEMAND (0.5% p.	-			
	r	Nil Preference Sh			dium Preference			gh Preference Sh	ift
Dwelling Value Band		Medium-Term			Medium-Term			Medium-Term I	
Up to \$400k	300	1,000	1,500	300	900	1,300	300	800	1,10
\$400k to \$600k	1,100	3,700	7,400	1,000	3,300	6,200	900	2,900	5,10
\$600k to \$800k	600		8,100	600	2,200	6,800	500	2,000	5,600
\$800k-\$1m	200	900	3,200	200	800	2,700	200	700	2,20
\$1m-\$1.6m	90		1,700	80	400	1,500	70	300	1,20
\$1.6m+	10	50	200	10	400	1,300	10	40	1,20
TOTAL	2,300	8,600	22,100	2,100	7,700	18,600	1,900	6,800	15,30
TOTAL	2,300	8,600			1AND (1% p.a. de			0,800	13,30
	<b>—</b>	Nil Preference Sh			dium Preference			gh Preference Sh	:64
Devalling Value Band									
Dwelling Value Band Up to \$400k		Medium-Term			Medium-Term			Medium-Term I	tong-Term 70
	6,200	5,200	800 15 800	6,100	5,000	700	6,100	4,900	
\$400k to \$600k	21,400	20,200	15,800	21,100	19,700	14,900	20,900	19,300	14,10
\$600k to \$800k	12,800		23,800	12,600	16,600	22,500	12,400	16,200	21,10
\$800k-\$1m	4,600	7,400	14,000	4,500	7,200	13,200	4,500	7,000	12,40
\$1m-\$1.6m	2,000	3,300	11,400	1,900	3,200	10,800	1,900	3,100	10,100
\$1.6m+	200	400	1,000	200	300	1,000	200	300	900
TOTAL	47,200	53,400	66,900	46,600	52,100	63,100	46,000	50,900	59,400
				L DWELLING DEMAND (1% p.a. demand pro Medium Preference Shift					
		Nil Preference Sh						gh Preference Sh	
Dwelling Value Band		Medium-Term			Medium-Term		Short-Term	Medium-Term I	
Up to \$400k	300	800	300	300	700	200	300	700	200
\$400k to \$600k	1,100	3,200	5,200	1,000	2,900	4,400	900	2,600	3,600
\$600k to \$800k	600		7,900	600	2,400	6,600	500	2,100	5,400
\$800k-\$1m	200	1,200	4,600	200	1,100	3,900	200	900	3,200
\$1m-\$1.6m	100	500	3,800	90	500	3,200	80	400	2,600
\$1.6m+	10		300	10	50	300	10	50	200
TOTAL	2,300	8,600	22,100	2,100	7,700	18,600	1,900	6,800	15,300
					ings per Hectare)				
		rgin of 20% or Gr			Margin of 15%-20				
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term			
Up to \$400k									
\$400k to \$600k									
	1	24		21 to 24	23 to 25	25	I		
\$600k to \$800k		2-7		21 10 24	25 (0 25	23			
\$600k to \$800k \$800k-\$1m	14 to 20	17 to 24	20 to 25	19 to 21	25 (0 25	25			
	14 to 20 10 to 15		20 to 25 10 to 25		25 (0 25	23			

Source: M.E Hamilton Housing Demand Model, 2020 and M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

Larger (3+ bedroom) detached dwellings are currently the predominant development type within Hamilton's greenfield areas, and correspondingly have the largest total market size across Hamilton overall. The analysis suggests there is also significant overlap of the feasible development options in Peacocke with total Hamilton market demand for this dwelling type. It is estimated that around 40% of the short-term total market is either feasible at 20% or greater, or has an estimated margin between 15% and 20%. The existing strong market preferences for larger detached dwellings means that it is more likely that the market will also deliver dwellings within the estimated 15%-20% margin densities. In the long-term it is projected to become feasible to construct this dwelling type at densities with associated price points that correspond to up to 75% of the total market value band profile.

In total, it is projected that the feasible development options, with a 20% or greater margin, correspond to a short-term total dwelling demand for 5,600 to 6,600 dwellings (including around 300 additional dwellings). In the medium-term, the estimated feasible development options correspond to a total dwelling demand of 23,000 to 28,000 dwellings (including 3,000 to 4,400 additional dwellings). In the long-term, the total demand overlap is estimated to be 14,000 to 26,000 dwellings (including 3,500 to 9,000 additional dwellings). The total market size becomes substantially larger when considering demand within the 15%-20% estimated range.

Most of the estimated feasible (at a 20% or greater margin) development ranges for 3+ bedroom detached dwellings correspond to dwellings in value bands of \$800,000 or more. Dwellings in the \$600,000 to \$800,000 value bands are projected to have a 15% to 20% margin.

#### Attached 1-2 Bedroom Dwellings

The assessment for 1-2 bedroom attached dwellings is contained in Table 4-3. This development option is projected to only become feasible in Peacocke in the long-term, with no development options estimated to occur within the 15%-20% margin range either within the short-term.

The total market size for this dwelling option within the projected feasible range is very small, with around 100 dwellings demanded within the upper price bands within the long-term, and projected demand for less than 1,000 dwellings within the 15%-20% margin range. Total market demand for the smaller attached dwellings is instead concentrated into the lower dwelling value bands within the market.

It is important to note that dwelling demand within this category is very low within the mid to upper price brackets (those that are feasible in the long-term with a 20% or greater margin), which is partly due to the very small share of the existing dwelling stock within these parts of the market. The analysis here relates to smaller dwellings that are on land areas of around 150m2 to 340m2 per dwelling (at 19 to 40 dwellings per hectare). In contrast, many of the smaller (1-2 bedroom) attached dwellings within the existing dwelling stock are likely to be either older dwellings in lower value locations, or have smaller land areas per dwelling, placing them into the lower dwelling value bands. At the densities modelled here (150m2 to 340m2 site sizes), it is likely to be a more feasible option, due to higher demand, to construct either a detached or larger (3+ bedroom) dwelling.

The following section further examines the smaller attached dwellings at higher densities that instead reflect apartment developments.

Table 4-3: Comparison of Projected Additional Hamilton Dwelling Demand and Projected Feasibility of Development Density Options in Peacocke: Attached 1-2 Bedroom Dwellings

	TOTAL MARKET DEMAND (0.5% p.a. demand pro					emand profile	growth)		
	Nil Preference Shift			Medium Preference Shift			High Preference Shift		
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term
Up to \$400k	6,700	7,500	9,100	7,100	8,300	11,300	7,400	9,100	13,400
\$400k to \$600k	600	900	1,900	700	1,000	2,300	700	1,100	2,800
\$600k to \$800k	60	90	200	60	90	200	70	100	300
\$800k-\$1m	10	10	20	10	10	30	10	20	40
\$1m-\$1.6m	-	10	10	-	10	20	10	10	20
\$1.6m+	-	-	-	-	-	-	-	-	-
TOTAL	7,400	8,600	11,100	7,800	9,400	13,900	8,200	10,300	16,600
			ADDITIONAL	L DWELLING I	DEMAND (0.5% p	.a. demand pr	ofile growth)		
	N	lil Preference Sl	nift	Med	dium Preference	Shift	Hi	gh Preference Sl	nift
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term
Up to \$400k	300	1,300	3,300	500	1,900	5,300	600	2,400	7,300
\$400k to \$600k	30	200	700	40	200	1,100	60	300	1,500
\$600k to \$800k	-	20	70	-	20	100	10	30	200
\$800k-\$1m	-	-	10	-	-	10	-	-	20
\$1m-\$1.6m	-	-	-	-	-	10	-	-	10
\$1.6m+	-	-	-	-	-	-	-	-	-
TOTAL	400	1,500	4,100	500	2,100	6,600	700	2,800	9,100
			TOTAL	MARKET DEM	1AND (1% p.a. de	mand profile	growth)		
	N	Iil Preference Sl	nift	Med	dium Preference	Shift	High Preference Shift		
<b>Dwelling Value Band</b>	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term
Up to \$400k	6,700	7,300	8,100	7,000	8,000	10,000	7,300	8,800	12,000
\$400k to \$600k	700	1,100	2,500	700	1,200	3,100	800	1,400	3,700
\$600k to \$800k	60	100	500	70	100	700	70	100	800
\$800k-\$1m	10	20	70	10	20	90	10	20	100
\$1m-\$1.6m	-	10	30	10	10	30	10	10	40
\$1.6m+	-	-	-	-	-	-	-	-	-
TOTAL	7,400	8,600	11,100	7,800	9,400	13,900	8,200	10,300	16,600
			ADDITIONA	AL DWELLING DEMAND (1% p.a. demand pro			file growth)		
	N	lil Preference SI	nift	Medium Preference Shift			Hi	gh Preference Si	nift
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term
Up to \$400k	300	1,300	2,900	500	1,800	4,700	600	2,400	6,500
\$400k to \$600k	40	200	900	50	300	1,500	60	400	2,000
\$600k to \$800k	-	20	200	-	30	300	10	40	400
\$800k-\$1m	-	-	20	-	-	40	-	10	60
\$1m-\$1.6m	-	-	10	-	-	20	-	-	20
\$1.6m+	-	-	-	-	-	-	-	-	-
TOTAL	400	1,500	4,100	500	2,100	6,600	700	2,800	9,100
		DEVELOPMEN	T DENSITY OPT	TIONS (Dwelli	ngs per Hectare)				
	Margin of 20% or Greater			Margin of 15%-20%					
Dwelling Value Band		Medium-Term		Short-Term	Medium-Term	Long-Term			
Up to \$400k									
\$400k to \$600k									
\$600k to \$800k						29 to 40			
\$800k-\$1m			21 to 40		19 to 28	19 to 40			
\$1m-\$1.6m			19 to 36						
\$1.6m+									
<u> </u>	1			1					

Source: M.E Hamilton Housing Demand Model, 2020 and M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

#### Attached 1-2 Bedroom Dwellings – Higher Density

The assessment for higher density 1-2 bedroom detached dwellings is contained in Table 4-4. These relate to higher density apartment dwellings at around 80 to 120 dwellings per hectare. They have a 50m2 floorspace with an average land area of around 50m2 to 80m2 per dwelling, and differ to the lower density 1-2 bedroom attached dwellings examined in the previous section. This development option is projected to become feasible within Peacocke at the end of the medium-term.

Table 4-4: Comparison of Projected Additional Hamilton Dwelling Demand and Projected Feasibility of Development Density Options in Peacocke: Attached 1-2 Bedroom Dwellings – Higher Density

	TOTAL MARKET DEMAND (O					6 p.a. demand profile growth)				
	Nil Preference Shift				dium Preference			gh Preference Sh	:64	
Dwelling Value Band		Medium-Term			Medium-Term		Short-Term	=1		
Up to \$400k	6,700	7,500	9,100	7,100	8,300	11,300	7,400	9,100	13,400	
\$400k to \$600k	600	900	1,900	7,100	1,000	2,300	7,400	1,100	2,800	
\$600k to \$800k	60	90	200	60	90	2,300	700	100	300	
\$800k-\$1m	10	10	20	10	10	30	10	20	40	
\$1m-\$1.6m	- 10	10	10		10	20	10	10	20	
\$1.6m+	_	-	-	_	-	-	-	-	-	
TOTAL	7,400	8,600	11,100	7,800	9,400	13,900	8,200	10,300	16,600	
	7,100	2,222			DEMAND (0.5% p.			10,000		
	N	il Preference Sh			dium Preference			gh Preference Sh	nift	
Dwelling Value Band		Medium-Term		Short-Term	Medium-Term		Short-Term	Medium-Term		
Up to \$400k	300	1,300	3,300	500	1,900	5,300	600	2,400	7,300	
\$400k to \$600k	30	200	700	40	200	1,100	60	300	1,500	
\$600k to \$800k	-	20	70	-	20	100	10	30	200	
\$800k-\$1m	_	-	10	_	-	10	-	-	20	
\$1m-\$1.6m	_	_	-	_	_	10	_	_	10	
\$1.6m+	_	_	_	_	_	-	_	_		
TOTAL	400	1,500	4.100	500	2.100	6,600	700	2,800	9,100	
					IAND (1% p.a. de	-,			-,	
	N	il Preference Sh		Medium Preference Shift			High Preference Shift			
Dwelling Value Band		Medium-Term		Short-Term	Medium-Term		Short-Term	Medium-Term		
Up to \$400k	6.700	7,300	8,100	7,000	8,000	10,000	7,300	8,800	12,000	
\$400k to \$600k	700	1,100	2,500	700	1,200	3,100	800	1,400	3,700	
\$600k to \$800k	60	100	500	70	100	700	70	100	800	
\$800k-\$1m	10	20	70	10	20	90	10	20	100	
\$1m-\$1.6m	-	10	30	10	10	30	10	10	40	
\$1.6m+	-	-	-	-	-	-	-	-	-	
TOTAL	7,400	8,600	11,100	7,800	9,400	13,900	8,200	10,300	16,600	
		ADDITIONAL DWELLING DEMAND (1% p.a. demand profile growth)						<u> </u>		
	N	il Preference Sh	ift	Medium Preference Shift			Hi	gh Preference Sh	nift	
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term	
Up to \$400k	300	1,300	2,900	500	1,800	4,700	600	2,400	6,500	
\$400k to \$600k	40	200	900	50	300	1,500	60	400	2,000	
\$600k to \$800k	-	20	200	-	30	300	10	40	400	
\$800k-\$1m	-	-	20	-	-	40	-	10	60	
\$1m-\$1.6m	-	-	10	-	-	20	-	-	20	
\$1.6m+	-	-	-	-	-	-	-	-	-	
TOTAL	400	1,500	4,100	500	2,100	6,600	700	2,800	9,100	
		DEVELOPMENT	DENSITY OPT	IONS (Dwelli	ngs per Hectare)					
	Mar	gin of 20% or Gr	eater	1	Margin of 15%-20	1%				
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term				
Up to \$400k										
\$400k to \$600k		yes	yes		yes	yes				
\$600k to \$800k			yes			yes				
\$800k-\$1m										
\$1m-\$1.6m										
\$1.6m+	I									

Source: M.E Hamilton Housing Demand Model, 2020 and M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.

These higher density apartment dwellings are smaller in both floorspace and pwer dwelling land area, placing them into the mid dwelling value bands. They have a greater overlap with the projected smaller attached dwelling demand as the market is more concentrated into the lower to low-mid value bands. There is a projected total market size of around 2,000 to 4,500 dwellings (including 800 to 2,500 additional dwellings) in the long-term within the value bands at which these are projected to have a 20% or greater margin.

It is important to note that these higher density apartment dwellings are typically only feasible in higher amenity locations. They are currently concentrated into Hamilton's city centre, with some development as cheaper student accommodation around the university. The feasibility modelling for Peacocke is contingent on the establishment of a high amenity node within a quality urban environment within the Peacocke greenfield area. This development option is only likely to be feasible within a higher density node and is unlikely to be feasible across all parts of the Peacocke greenfield area.

#### Attached 3+ Bedroom Dwellings

The assessment for 3+ bedroom attached dwellings is contained in Table 4-5. This development option is estimated to be feasible, with a margin of 20% or greater, across a narrow density range in Peacocke in the short-term, with an increasing range of development densities projected to become feasible in Peacocke through time.

The feasible (20%+ margin) development densities for this dwelling type correspond to only a small total market size (400 to 1,400 total dwellings) in the long-term. However, these dwellings are projected to be feasible in Peacocke in the lower-mid value bands in the long-term. In comparison, detached 3+ bedroom dwellings are projected to be feasible at the \$800,000+ value bands in the long-term, reflecting their price premium over attached dwellings. However, this may create a potential area of market overlap with the 3+ bedroom detached dwellings, where attached dwellings may meet some of the detached dwelling demand where households make trade-offs between price and dwelling type.

Table 4-5: Comparison of Projected Additional Hamilton Dwelling Demand and Projected Feasibility of Development Density Options in Peacocke: Attached 3+ Bedroom Dwellings

	TOTAL MARKET DEMAND (0.5% p.a. demand profile growth)								
	N	lil Preference SI		Medium Preference Shift			High Preference Shift		
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term		Medium-Term	
Up to \$400k	4,600	4,800	5,000	4,800	5,300	6,100	5,000	5,700	7,100
\$400k to \$600k	900	1,200	2,100	900	1,300	2,600	1,000	1,500	3,000
\$600k to \$800k	100	200	300	100	200	400	100	200	400
\$800k-\$1m	20	30	50	20	30	60	20	40	70
\$1m-\$1.6m	20	20	40	20	20	50	20	30	60
\$1.6m+	-	-		-	_		-	-	_
TOTAL	5,600	6,300	7,500	5,900	6,800	9,200	6,100	7,400	10,700
					DEMAND (0.5% p.	<u> </u>		,	.,
		Iil Preference Sh			dium Preference			gh Preference Sh	ift
Dwelling Value Band		Medium-Term		Short-Term	Medium-Term		Short-Term	Medium-Term	
Up to \$400k	200	700	1,400	300	1,000	2,400	300	1,300	3,300
\$400k to \$600k	30	200	600	50	200	1,000	60	300	1,400
\$600k to \$800k	-	20	90	10	30	100	10	40	200
\$800k-\$1m	_	-	10	-	10	20	-	10	30
\$1m-\$1.6m	_		10		-	20		10	30
\$1.6m+	_	_	-	_	_	-	_	-	-
TOTAL	200	900	2,200	300	1,300	3,600	400	1,700	4,900
TOTAL		300	<u> </u>		1AND (1% p.a. de			2,700	4,500
		lil Preference SI			dium Preference		· ·	gh Preference Sh	if+
Dwelling Value Band		Medium-Term		Short-Term				Medium-Term	
Up to \$400k	4,500	4,500	4,100	4,700	5,000	5,000	4,900	5,400	5,800
\$400k to \$600k	1,000	1,400	2,400	1,000	1,600	2,900	1,000	1,700	3,400
\$600k to \$800k	100	200	800	100	200	1,000	1,000	200	1,100
\$800k-\$1m	20	40	100	30		200	30	50	200
\$1m-\$1.6m	20	30	70	20		90	20	30	100
\$1.6m+	-	-	70	-	-	10	-	- -	100
TOTAL	5,600	6,300	7,500	5,900	6,800	9,200	6,100	7,400	10,700
TOTAL	3,000	0,300	-		DEMAND (1% p.a	-		7,400	10,700
		Iil Preference Si			dium Preference			gh Preference Sh	if+
Dwelling Value Band		Medium-Term		Short-Term	Medium-Term		Short-Term	Medium-Term	
Up to \$400k	200	600		300	900	2,000	300	1,200	2,700
\$400k to \$600k	40	200	1,200 700	500	300	,	70	400	,
\$600k to \$800k	40	30	200	10	40	1,200 400	10	50	1,600
l'	-			10					500
\$800k-\$1m	-	10	40	-	10	70	-	10	90
\$1m-\$1.6m	-	-	20	-	10	40	-	10	50
\$1.6m+		-	-	-	- 4 200	-	-	- 4 ====	-
TOTAL	200	900	2,200	300	1,300	3,600	400	1,700	4,900
					ings per Hectare)				
	Margin of 20% or Greater		Margin of 15%-20% Short-Term Medium-Term Long-Term						
Dwelling Value Band	Short-Term	Medium-Term	Long-Term	Short-Term	Medium-Term	Long-Term			
Up to \$400k									
\$400k to \$600k			24	22. 21	26: 15	22			
\$600k to \$800k			34 to 40	23 to 31	26 to 40	32 to 40			
\$800k-\$1m		17 to 30	23 to 40	14 to 24	16 to 28				
\$1m-\$1.6m	13	13 to 19	13 to 40	13 to 15	14 to 15				
\$1.6m+			13 to 17	1					

\$1.6m+ 13 to 17

Source: M.E Hamilton Housing Demand Model, 2020 and M.E Hamilton Greenfield Residential Commercial Feasibility Model, 2020.



# 5 Concluding Remarks

The economic analysis undertaken in this report has covered the key components necessary to guide an understanding of the appropriateness of potential planning parameters to apply within the Peacocke greenfield area. It is examined patterns of residential dwelling demand across the Hamilton market, and estimated the commercially feasible development options within the Peacocke greenfield area.

The patterns of development that are currently feasible within the Peacocke greenfield area reflect the past patterns of development across Hamilton's greenfield areas. These are dominated by detached, three or more bedroom dwellings on individual sites. This type of development pattern is projected to become feasible at higher densities through time, with development becoming feasible on increasingly smaller sites.

This pattern of development has the largest area of market overlap, with continued growth in demand for detached dwellings. A large share of the demand for these dwellings within Peacocke is likely to come from existing households as they move up the dwelling value bands into newly constructed dwelling stock within the greenfield area.

Higher density dwelling typologies are projected to become feasible to construct in Peacocke through time. Larger attached dwellings are projected to become feasible within the short-term, with an increasing range of dwelling densities and options becoming feasible during the medium-term. These higher density developments are estimated to have a 15%-20% margin in the short-term (slightly below the modelled threshold of 20% for feasibility), which reflects the small share of higher density dwellings currently being delivered in Peacocke by the market. The full range of modelled dwelling typologies and densities are projected to become feasible in Peacocke in the long-term.

Higher density apartment dwellings are also projected to become feasible within Peacocke at the end of the medium-term. These have a greater area of market overlap as demand for smaller attached dwellings is concentrated into the lower dwelling value bands. The feasibility of this higher density development option is likely to be contingent upon the establishment of a high amenity node within Peacocke, with feasibility constrained to location within and around the higher density node rather than spread across the greenfield area.

There are smaller areas of projected market overlap for higher density dwelling typologies. However, the size of these segments are projected to increase through time as a function of structural changes in demand and gradual shifts in demand preferences through time as households make tradeoffs between price, location and dwelling type/size. Larger attached dwellings are projected to be feasible at lower prices in the medium to long-term than larger detached dwellings. This provides a potential area where the demand in the predominant larger detached dwelling market segment may be able to be met with households making a trade-off between price and dwelling type.

A greater range of dwelling densities, within each dwelling size/typology, is projected to become feasible through time within Peacocke. The density of feasible development options is projected to increase through time. At higher densities, attached dwellings are projected to have a greater feasibility due to the greater flexibility of attached dwelling construction on smaller sites (relative to detached dwellings), although these dwellings have a lower overall demand.

# Part 2: 4Sight's Assessment



# 6 Introduction

Greenfield areas in Hamilton City have been earmarked to accommodate a significant share of growth over the next 30 years. The Peacocke area to the south of the city has been identified within the urban boundary of Hamilton City as an area that has the ability to absorb a substantial amount of that residential growth. To that purpose, a structure plan was prepared to inform future patterns of land use and densities for this area. Initially, growth within the Peacocke area was constrained by lack of infrastructure. With the recent allocation of Housing Infrastructure Funding (HIF) to enable major infrastructure projects for Peacocke, large scale greenfield development is likely to occur over the short and medium terms.

The Review of Peacocke Structure Plan Scoping Report<sup>8</sup> indicates that the business case for the HIF funding was predicated on achieving housing yields of 3,750 homes over the first 10 years and a total of 8,400 homes for the entire growth cell. Further work at an urban design workshop estimated a total yield of 5,200-6,300 homes could be achieved over a 30-year period. There is an indication that if patterns of previous greenfield development across Hamilton City are repeated across Peacocke, the housing yield targets will not be met. Responding to this shortfall necessitates an integrated response to ensure that greenfield development creates an attractive and sustainable community, while also delivering future housing supply. This requires an understanding of the methods which are available to promote best practice urban planning to increase housing yields while avoiding an 'urban cramming' response.

The first major subdivision application advanced within the Peacocke Structure Plan, comprising the terrace area adjacent to the Waikato River has provided for a more conventional subdivision response that is largely reflective of the underlying zone. In terms of housing typologies this comprises mainly of detached, house dominant, residential dormitory suburban outcome, with little variety of uses or housing typologies.

The primary purpose of this report is to support a plan change to facilitate a refresh of the underlying Peacocke Structure Plan to better fit the future demographics and best practice in urban form. This assessment will also contribute to Hamilton City Council's obligations for development under the National Policy Statement on Urban Development 2020 (NPS-UD). Hamilton is classified as a Tier 1 urban environment which places stricter timeframes and monitoring requirements than lower tier environments. The NPS-UD requires local authorities to provide sufficient development capacity to meet the expected demand for housing in urban areas for both standalone dwellings and attached dwellings. Sufficient capacity means: plan enabled, infrastructure ready, feasible, and provide a competitiveness capacity margin. Timelines for these capacity assessments are established for the short term (the next three years), medium term (the next three to ten years), and long term (the next 10 to 30 years).

4Sight have been commissioned alongside M.E to provide policy recommendations that can enable greater density and housing diversity while:

- 1. Promoting an attractive and sustainable urban form;
- 2. Meeting the required housing yield whilst providing for a more diverse housing stock;
- 3. Enabling commercially feasible development options; and

<sup>&</sup>lt;sup>8</sup> Review of the Peacocke Structure Plan – Scoping Report, Hamilton City Council, November 2019

4. Delivering well designed, safe and inclusive neighbourhoods through good urban design outcomes.

This section of the report draws together the core findings from the economic assessment prepared by M.E to frame the objectives for evaluating the strategic planning options for encouraging increased density and housing typologies within the Peacocke area.

### 6.1 Summary of Market Economics Report

The M.E assessment, Part 1 of the report, informs the 4Sight assessment. The key findings inform the Part 2 work relating to planning and urban design assessment, include:

- 1. A majority of the commercially feasible housing demand will comprise detached 3+ bedroom dwellings from the short to the long term.
- 2. The demand and commercial feasibility for attached 3+ bedroom dwellings increase in the medium term.
- 3. There is overlap in the feasible development density options for attached 3+ bedroom dwellings (17-30 dw/ha) and detached 3+ bedroom dwellings (17-24 dw/ha) over the medium term.
- 4. Higher density attached 1-2 bedroom dwellings only become commercially feasible in the long term.
- 5. The identified commercial feasibility of higher density attached dwellings is dependent on high amenity nodes being established and development being situated around nodes rather than distributed across the greenfield area.
- 6. Higher density attached dwellings are feasible in lower dwelling value bands than detached dwellings.

The projected timeline for when the commercial feasibility of higher density development extends over the medium (2030) to long term (2050). This requires a strategic planning approach to ensure that the development objectives of a refreshed Peacocke Structure Plan are met. Demand and commercial feasibility for greenfield growth in a similar pattern to what is currently occurring over the short to medium term will need to be provided for without compromising the ability of Peacocke, or other green field development to deliver an attractive and sustainable urban form. This consideration has formed the basis of 4Sight's assessment and is outlined further below.

### 6.2 Assessment Objectives

The key objective for 4Sight's assessment is to provide recommendations on strategic policy responses to enable increased housing density, diversity, sustainable urban form and urban design excellence in the Peacocke greenfield area. This assessment has been informed by the Market Economics' assessment of the commercial feasibility of development options.

Following the key findings of the Market Economics analysis, the assessment objectives outlined below provide the structure of the 4Sight assessment. These objectives build off those findings and establish a

framework through which policy recommendations can be made to improve housing density and typology diversity in greenfield development. These objectives are assessed through an urban design and planning lens to provide options for an integrated response to greenfield development patterns.

- 1. How can short term demand for existing patterns of greenfield development be provided for in a way that will not undermine the future supply of higher density housing development options?
- 2. How can HCC deliver diverse housing typologies over the medium to long term when they become commercially feasible?
- 3. What tools and options are available to help deliver a diverse range of typologies?
- 4. How can a strategic planning framework enable increased density while maintaining a high-quality built environment?
- 5. What needs to be considered for establishing high amenity nodes to support higher density typologies?

#### 6.3 Structure

The 4Sight section of this report is structured as follows (the numbering aligns with the section numbers):

- 8. Urban design background research and providing the key considerations of greenfield development:
  - a) What does higher density residential development look like?
  - b) Case studies of greenfield developments.
- 9. Review of planning options for greenfield development and existing Peacocke Provisions:
  - c) What planning toolboxes are available for greenfield development implementation?
    - d) Review of Operative Hamilton City Plan and Peacocke frameworks
- 10. Analysis of Peacocke structure plan and provisions:
  - a) What is currently being delivered, what could have been delivered, and what should be delivered.
    - b) Strength, weaknesses, and opportunities evaluation of the current approach.
- 11. Recommendations and implementation:
  - a) Key considerations/assumptions for recommendations;
    - b) Key recommendations from an urban design and planning perspective; and
- 12. Recommended Approach and Where to Next



# 7 Urban Design Considerations

A growing demand for medium density housing within the Hamilton market is identified by M.E over the Medium to Long Term. This section outlines why medium density in greenfield areas is important, the benefits that can be captured by meeting this demand in greenfield areas and why demand for medium density attached dwellings has traditionally been lower and less attractive to builders and buyers. The final portion of this section will establish what the commercially feasible development options look like. This is important for this exercise, as any strategic planning option that is progressed should reflect and enable those feasible development options.

### 7.1 Delivering Medium Density Housing in New Zealand

To understand the factors influencing the supply and demand for medium residential development in New Zealand, some understanding as to what has occurred in the past provides a useful starting point.

Throughout New Zealand, cities developed before the dominance of the car the inner-city suburbs and many small towns exhibited a built form that was compact, higher density, with a mixture of typologies and site sizes.

The advent of the car and sprawl pushed suburbia beyond walking distance of schools, shops, work and public transport. Sections have progressively got smaller and houses got larger. With sprawl came dislocation of community, followed by congestion of a road system that can never keep up with increasing commuting. The urban form made local shops uneconomic and public transport expensive and inefficient. Changing societal constructs (including escalating house prices and cost of running two or more cars) created dormitory suburbs empty during the day as all adult house members worked. There was less social cohesion and new development was advanced delivering one housing typology (the family home) usually at a single price point creating mono/socio-cultural environments.

Given this evolution of suburbia, there is a need to rediscover the carefully defined neighbourhood that provides the qualities of a traditional inner-city suburb, with a mix of housing typologies providing for a wider range of people that reflects the diversity of our people today.

Based on research and examples of medium density residential development throughout New Zealand and overseas, the following section provides an analysis and discussion on the key urban design factors influencing the prospect of medium density residential development within the Peacocke Structure Plan area.

## 7.2 Benefits of Medium Density Residential Development

The following provides an analysis and discussion in relation to the benefits of, and the factors influencing the supply and demand for medium density residential development that directly influences the possibilities of its delivery in greenfield areas. New Zealand's housing industry (from land developer, housing builders, funders and real estate industry) is focused on delivering single story houses on single

lots providing for two car garage, two off-street car parking spaces, a 3+ bedroom single storey house all on less than  $450\text{m}^2$ .

From a spatial planning perspective, a key question that needs to be asked is whether we can afford to let current approached determine built environment outcomes. To do this, conventional wisdom of the house building industry must be confronted to reimagine how New Zealand environments are perceived, and how we change perceptions from what is currently acceptable.

As outlined in Part 1 of the report (the M.E assessment of feasible development options for Peacocke) found that densities of up to a maximum of 40 dwellings per hectare across range of dwelling typologies were feasible over the short, medium, and long-term. While higher and lower densities than this figure may be realised across Peacocke, delivering housing within the ranges identified below can be classified as Medium density housing. It is important when we are discussing density and terms such as medium density that we start with a common definition. Table 7-1 pulls together what is generally considered in Australasia as low, medium and higher density

Table 7-1: Definitions for housing typologies and the corresponding densities.

Housing Definition	Description	Density
Conventional housing	Single detached dwellings on lots generally ranging between 500 and 1,000 square metres (sqm). The development of an area for conventional housing.	Generally, results in a gross residential density of 7 – 12 dwellings per hectare.
Medium	The provision of detached townhouses,	The development of an area for
density	two or more attached dwellings, or	medium density housing generally
housing	apartments on a site below four stories.	results in a gross residential density of
		18 – 40 dwellings per hectare
Higher Density	Attached dwellings(terrace) or	The development of an area for high
housing	apartments and mixed-use apartments	density housing generally results in a
	usually more than 3 storeys in height.	gross residential density of more than 40 dwellings per hectare

#### Why push for medium Density when market preference is for Detached larger Lot subdivision?

In relation to the sustainable management of land resource, economic delivery of infrastructure and affordability the benefits of medium density mixed typology residential development<sup>9</sup> are well documented. These benefits include:

- More efficient use of a finite supply of land (requiring less land per household and per capita);
- Retaining the ability to use rural land productive purposes by delaying or halting sprawl;
- Greater cost effectiveness in relation to the provision of infrastructure and services;
- Reduced generalised travel costs by density supporting more efficient public transport and amenity and services within walking/cycling distance of services;

<sup>&</sup>lt;sup>9</sup> Ccompared to post 1970's patterns of mono-cultural residential development in New Zealand characterised by a lesser density of development.

- More concentrated demand for public transport making it more cost-effect and providing a better quality of service;
- Density that supports local retail, social activities, schools and commercial development (local work) in walking distance to the family home;
- A greater degree of social connectedness, diversity and vitality;
- Greater vibrancy and safer environment (including lower levels of crime) due to a greater density of people working, living and playing in the neighbourhood;
- Greater levels of physical activity, with consequent health benefits through encouraging walking and cycling;
- Reduced run-off from vehicles to water, and overall emissions to air/atmosphere (although air emissions may be more locally concentrated on transit corridors);
- Providing a range of house typologies at a range of price points within the one neighbourhood allowing for a more diverse socio/cultural mix;
- Softening the barriers between "rich" areas and "poor" areas; and
- Increased density with less emphasis on space for cars frees up land for external amenity to supplement reduced private amenity;

The ME study shows there is commercial feasibility and demand for detached 3+ bedrooms dwelling typologies. However, the feasibility and demand for a mix of housing typologies will increase from the medium term and even more so over the long term. What the study does not show is the latent demand for diversity and affordability if the design and amenity of the area increases the desirability of the area. We have a housing industry (from land developer, housing builders, funders, and real estate industry) that is focused on delivering single story houses on single lots providing for two car garage, two off street car parking spaces, a 3+ bedroom single storey house all on less than 450m<sup>2</sup>.

# 7.3 Key urban design considerations for Delivering Medium Density within Greenfield Locations

Numerous examples of high-quality medium density residential development can be identified in overseas jurisdictions. However, it is not a simple case of replicating overseas examples and expecting them to work in New Zealand. However, there is extensive literature covering the success factors of medium density residential greenfield development. The key insights from international examples are summarised below, and include:

- Consultative and collaborative planning processes,
- Provide for mixed use,
- Walkability,
- Consideration of Planning Provisions.



#### 7.3.1 Consultative and Collaborative Planning Processes

Vancouver is often held as a standard bearer for achieving an international model for how to deliver good density. The key to this has been attributed to collaborative processes that effect cultural shift in the development community and potential buyers:

"It's about rethinking all our roles and re-educating all inputs into the city building process. It isn't just about citizens, it's about city hall, developers and many different stakeholders."

Processes tend to be based on mistrust and that can lead to the wrong kind of debates about density. Density is a tough discussion; many politicians don't like to touch it, but the truth is no city can have a serious discussion about being a greener, more economically resilient, sustainable city without talking about the D-word. It's about how to change the narrative into a more collaborative, constructive discussion; not about whether you do density but how you do it better."<sup>10</sup>

Communities may be engaged in different ways during the development of the concept plans for a large greenfield area. How they are involved will depend on what issues are being addressed and who is involved in the land ownership.

Where a good consultative process has resulted in a developed masterplan / outline development plan / structure plan to a reasonable level of detail and the parameters of any proposed development are well defined, are of a high standard, and have broad community acceptance, planning instruments can reflect and provide for those developments (in a fairly permissive manner).

Without a strong and enforceable planning framework the existing development industry is selective in what they deliver, with a tendency to deliver what they delivered in the past rather than push the boundaries to reflect community and environmental needs. The risks associated with a permissive generic approach providing for medium density residential development and a lack of adequate controls are obvious in most of our greenfield development areas.

The Outline Development Plan preparation processes provides the vehicle for community input. With more targeted and specific provisions introduced through subsequent variations or plan changes, the burden of regulatory processes, notification requirements and compliance costs can be progressively reduced.

#### 7.3.2 Provide for a range of land uses: Mixed Use

Suburban residential medium density zones reflect a very typical approach throughout most district plans in New Zealand whereby zones are identified for specific purposes e.g. commercial, industrial, or residential.

Based on experience, to be successful, medium density residential development needs to be comprehensively planned as part of mixed use neighbourhood approach where a variety of different living, working, retail and recreational activities are in close proximity within a walkable neighbourhood and accessible to public transport.

<sup>10</sup> http://www.theaustralian.com.au/business/property/urban-density-in-a-green-world/story-fn9656lz-1226623797390

Quality Urban Design that supports mixed use neighbourhoods (in conjunction with other factors including connectivity and a relatively high intensity of different uses) can:

- offer people convenience, choices and opportunities, which lead to a sense of personal wellbeing;
- allow parking and transport infrastructure to be used more efficiently;
- lower household spending on transport;
- increase the viability of local shops and facilities;
- Increase the viability of public transport;
- encourage active transport modes, like walking and cycling bringing health benefits, reducing the need to own a car and thus reducing emissions;
- increase personal safety; and
- enhance social equity.<sup>11</sup>

The proximity of complementary activities was an important factor in most of the case studies, which is discussed below in relation to the concept of 'walkability', below.

#### 7.3.3 Walkability

Closely related to the land use approach is walkability. It has been identified as a key success factor underpinning medium density residential development. This refers to medium density residential being located within an 800m catchment from other activities, including:

- Supermarkets, cafes, restaurants, and other shops;
- Quality public transport (PT) routes;
- Open space, recreation and leisure opportunities;
- Educational facilities (particularly primary/ secondary schools); and
- Regular public transport on a direct route to City or other Key Activity Centre.

According to Guy Perry<sup>12</sup>, an expert on the design of healthy cities, cities with poor 'walkability scores' (usually due to large distances between residential activities and other activities) have the highest rates of obesity and the highest carbon footprint. Therefore, they have a greater effect on human health and climate change (Atlanta, USA cited as an example). In other words, walkability delivers health benefits, reduced obesity, lower health costs, and less adverse effects on the environment.

Marchetti's research found that cities have an average time budget of 1 hour per day journey to work. This research was biologically based. His research pointed to:

- Walking City was based on people walking an average of 5/8 km/h giving a return journey city distance of 5-8km. Before transit there was no alternative.
- This was followed by the Transit City (rail and tram travelling at 30km/h)) which extended city to 30km wide however people had to be easy walking distance to the transit stations.

<sup>&</sup>lt;sup>11</sup> McIndoe, G., Chapman, R., McDonald, C., Holden, G., Howden-Chapman, P., Bray Sharpin, A. (2005): *The Value of Urban Design* Ministry for the Environment. ISBN # 0–478–25919–0

<sup>12</sup> http://in-vi.com/about-in-vi/management/guy-c-perry

- The Autocity changed to form of cities and ended up with dispersed patterns not based on walking and transit. A scattered approach to land uses and speeds of 50Km/h pushing cities out 50km with people doing separate journeys for work, education, retail and leisure.
- Autocity hits the wall with congestion leading to huge and costly interventions. (Auckland)
- A return to Transit Cities can grow density along corridors and be a more sustainable form of urban growth.

The approach to time budget and land use has been reinforced by work undertaken by urbanists like Newman and Kenworthy (1995), who looked at various cities and travel/land-use patterns and found a greater decline of private car travel happened at densities around 60-100 persons per hectare (somewhere between 20 to 40 houses per hectare for Australasian cities).

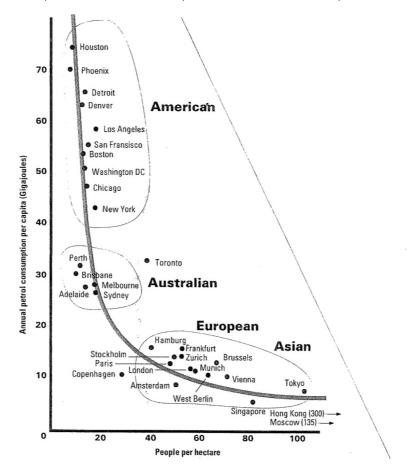


Figure 7-1: Petrol Consumption and Urban Density in 32 Cities of the Developed World

(Source: Newman and Kenworth, 1989)

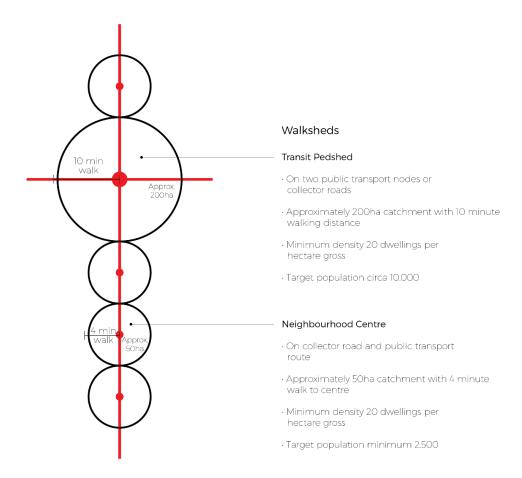
#### Walkability to Public Transport and Neighbourhood/and Key Centres:

Kenworthy and Newman, along with other researchers, have defined walkability to transit as being 800m (10-minute walk to a transit station) for high capacity transit and 400m (4-minute walk to bus stop) for lower capacity regular bus route. It is this level of accessibility that encourages people to use transit and local facilities by walking or cycling rather than car. An 800m walkshed gives a centre that includes a transit

interchange or mode change, and larger commercial/ retail component. This translates into a total area of 200 hectares within that walkshed. A 400m walkshed for smaller centre around a bus route provides an area of 50ha.

If these walksheds are applied around high-quality public transit routes, a significant share of residential development can be located around activity centres. This is illustrated within Figure 7-2 which demonstrates that at a density of 20 dwellings per hectare gross, approximately 10,000 (approximately 5,000 dwellings) people could reside within 800m walkshed of a public transport route or commercial centre and thus support a centre and PT system. While for a neighbourhood centre and bus stop, 2,500 people (1250 dwellings approximately) could reside within a 400m walkshed. While these densities may not be achievable or desirable for most of Peacocke area, they demonstrate that a strong focus on housing density within the walksheds of centres and transit routes can accommodate a significant share of required housing yield whilst providing a lower level of housing in the more remote or sensitive parts of the area. .

Figure 7-2: Walksheds and Density Analysis.



Looking at Kenworthy and Newman research the density required to achieve a transit neighbourhood is between 25-50 dwellings per hectare with commercial areas providing 123 persons per hectare in employment. As will be discussed in detail below, if this density was lowered to 25 dwellings per hectare net this translates into an average site size of 250m<sup>2</sup>. Within a 400m (50 hectare) walkshed this is delivering between 1,250 and 2,500 houses. This creates a situation where terraces, townhouses and villas can be used to create diversity but only if there are rules that ensure a mix of typologies. The higher the density the more apartments come into play.

It is recommended that around and within the local or town centre zone (walkshed), a suitable density range for Peacocke would be between 25 and 50 dwellings per hectare gross. The higher per hectare gross values within this range reflects high levels of employment opportunities within the centre. Therefore, within an 800m walkshed there could potentially be a walkshed catchment containing 6,000 dwellings, however as identified above, higher densities are dependent upon a high level of commercial opportunity, amenity and public transport. Again, this needs to be accompanied with rules that ensure diversity of site size and housing typology.

#### Transit Walksheds: Implications for the 20-minute neighbourhood

There is a need to improve the planning for neighbourhood and town centre design in new growth suburbs as well as the implementation of those plans so that active transport modes are better integrated. Central to this, is the ability for residents to walk to local amenities within their neighbourhood.

From an urban design perspective, the concept of a 20-minute neighbourhood is about "giving people the ability to meet most of their daily needs within a 20-minute walk from home, with access to safe cycling and local transport options" (DELWP, Victoria, 2019). Another aspect, which is at the core of the 20-minute neighbourhood is the insight that people are only willing to walk for a certain distance. Generally, it is assumed that 800/1000 metres is a good walking distance, which translates into about a 10-minute walk (and a 20-minute return journey). In lower density environments which have limited services, the willingness to walk reduces to 4 minutes or 400/500m giving a return journey time of 8 to 10 minutes.

Overall, as part of any urban design considerations for the future development of the Peacocke area, walkable neighbourhoods should be a key underpinning. Based on the above, the following key considerations should be provided for any regulatory zoning response over the Peacocke area:

- Where there is a KAC (Suburban centre)/transit Centre, the density within 800m/1000m should be above 40 dwellings per hectare (excluding work population)
- Where there is a direct public transport route and small neighbourhood centre density within 400/500m of centre should be up to between 25/40 dwellings per hectare.
- Beyond walkable distance from centres and PT can be between 10 and 25 dwellings per hectare.
- Effort should be made to mix typologies within densities to provide a diversity of housing in all areas.

There will be a need for any future planning response over the Peacocke area to carefully integrate walkable neighbourhoods as a means of driving demand for affordable sustainable density. This matter is explored in more details in the recommendations section of the report.

### 7.4 Peacocke Area Urban Design Assessment

The ME report investigates the commercial feasibility of various typologies and densities over time. What it does not do is look at the built form outcomes and whether that is desirable or achievable if normal subdivision rules are applied.

#### 2020 Hamilton Green Field Situation (ME Report)

- Densities are calculated on the net development land (after excluding roads etc. which they have taken as 34% of the site). Therefore, around 6,000m<sup>2</sup> in each 10,000m<sup>2</sup> is developable for housing.
- Detached 3+ bedroom dwellings have higher levels of feasibility (financially) with greatest returns in lower density (Sub 20 houses per hectare net).
- It is feasible to deliver detached 3+ bedroom houses on smaller lots at densities of 18 dwellings per hectare net (372m<sup>2</sup> section). However, at 24 dwellings/ hectare (270-350m<sup>2</sup>) the profit falls to 15/20% margin.
- Modelling assumes you need a site of at least 250m<sup>2</sup>
- Smaller dwellings do not give same return as larger dwellings.

#### 2020-2023

- It is economically feasible for developers to construct detached 3 +bedroom houses at around 18 dwellings/hectare with an average section size of 330m<sup>2</sup>.
- However, there is marginal feasibility of detached 3+ bedroom at 24 dw/ha and attached at 31 Dw/ha.

#### 2020-2030

- Economically Feasible to have detached 3+ bedrooms at 24 dw/ha (270m² average).
- Economically Feasible to have Attached 3+ bedroom at 30 dw/ha (200m<sup>2</sup> average).
- Detached and attached 1 and 2 bedroom also become economically feasible at 30 dw/ha (200m² average).

#### 2020-2050

• Market shifts and it becomes marginally more feasible to construct attached dwellings (1-3+ bedrooms).

The real drivers behind this appear to be:

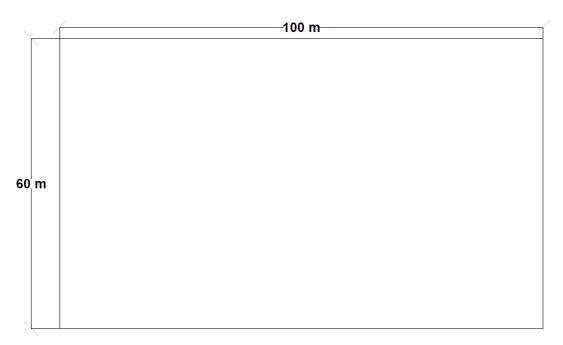
- The development industry is geared up to build and sell detached single story dwellings
- There is a cultural preference for a detached dwelling with a garden (the ¼ acre pavlova paradise).
- The market shifts with affordability.

Based on the ME findings, the commercial feasibility assessment provides an understanding of the development options (in net dwellings per hectare) and housing diversity (in the broad detached/attached categories) that is achievable in Peacocke area over the short to long term. However, if the strategic planning options are to be assessed, an understanding of how these development options translate into greenfield development patterns and what does that mean in terms of built form outcomes needs to be explored.

#### 7.4.1 Density and Built Form Outcome

The M.E modelling approach utilises net development density and provides the example that, for a yield of 20 detached 3+ bedroom dwelling per hectare, the model allocates 34% of developable land to roads and reserves etc. However, for simplicity and for the purposes of exploring these densities, an assumption that 40% of land area is undevelopable due to the requirement for roads and reserves has been made. It is acknowledged that the M.E model assumes that this loss varies with density, however for consistency across typologies, we have adopted this figure. Therefore, in one hectare of land (10,0000 m²) only 6,000m² is available for housing as net developable land. This is explored by looking at a basic 6,000m² developable block in the figures below. The block size is dictated by maximum Urban Block layout that creates a permeable urban form (100m long x 60m in width). **Error! Reference source not found.** illustrates the base 6,000m² block from the ME report representing developable area for dwellings per hectare.

Figure 7-3: Diagram A representing net 6,000m<sup>2</sup> developable lot out of overall total of 1ha



**Diagram A:** The diagram presents a net 6,000m2 developable lot out of overall total of 10,000m2 (one hectare) gross area. This represents an optimum block formation to achieve permeability and flexibility for intensification. Net 6,000m² developable lot out of overall total of 10,000m² (1 hectare) gross area

The shape of the block assumes a shape based on good urban form outcomes. The shape factor is not arbitrary but a block of 60 x 100m surrounded by access roads creates an acceptable level of permeability whilst minimising amount of road to build area. The 60m depth allows for a buildable lot with sufficient room for setbacks and back yards. The block can be reduced below 60m but that increases the amount of road required and above 60m encourages back lot development with right of way access. This results in a high number of vehicle crossings that can compromise safe pedestrian movement along the footpath and reduce on street parking. The blocks can be in an orthogonal grid form which facilitates pedestrian movement and wayfinding, and regular lots or irregular grid (non-orthogonal) which still facilitates pedestrian movement, needs wayfinding built in and creates interesting lot shapes.

Figure 7-4 illustrates a more conventional development approach translated against the base case, where 10 lots of 600m² could be achieved. This would give the lot a shape factor of 20m wide by 30m deep. This can accommodate a standard single-storey house with attached double garage of 260m² and a yard and a decent back yard. A two-storey house increases that backyard and/or front yard. However, at a density of 10 dwellings per hectare this falls short of the density targets and would have to be supplemented by higher density and diversity. However, this is acceptable lower density suburbia. This density would provide for low density size lots and fits ME commerciality calculations in the short term

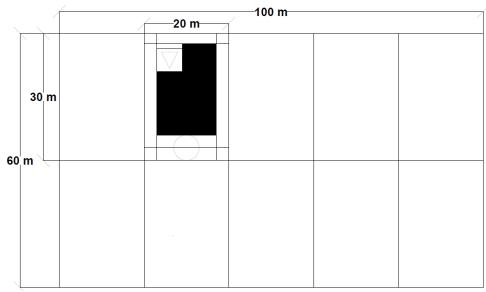


Figure 7-4: Diagram A1 showing 10 dwellings achieved in the 6,000m<sup>2</sup> block.

**Diagram A:** 10 dwellings per hectare; 16 dwellings per hectare net using ME model of density. This achieves a Lot size of  $20 \times 30 \text{m}$  ( $600 \text{m}^2$ ). Detached dwelling footprint of up to  $160 \text{m}^2$ ; garage of  $36 \text{m}^2$ . Total building footprint of  $196 \text{m}^2$ . Net  $6,000 \text{m}^2$  developable lot out of overall total of  $10,000 \text{m}^2$  (1 hectare) gross area.

Figure 7-5 illustrates the application of the District Plan rules that are applicable to the Peacocke Structure Plan which enables subdivision down to  $400\text{m}^2$  and results in around 14 - 15 lots depending on lot shape factor. Therefore, this equates to an average site size of  $714\text{m}^2$  per hectare (gross). This density falls within the low-density definition and ME commercially viable 2020-2023 analysis.

Figure 7-5 also illustrates that a house footprint of around 220m² fits within the lot, which means a standard single storey 3-bedroom house, can be accommodated on the site. This allows for a minimum front garden and a courtyard garden. In this configuration the garage is equal to the street both presenting 6 m to the street front. This creates a low- level quality streetscape with car driveways compromising the pedestrian environment. There is only provision for one off-street car park in front of the house for visitors. With a site coverage of over 50%, there is not enough garden for larger trees to supply the tree canopy that defines more traditional large lot suburbs in Hamilton.



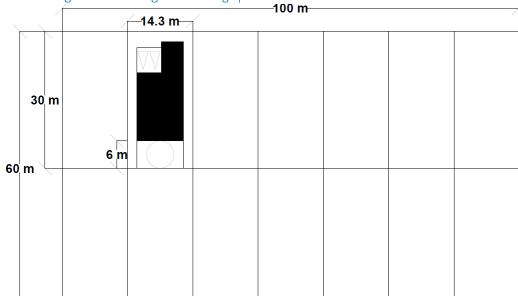


Figure 7-5: Diagram B showing 23 dwellings per hectare net

**Diagram B:** This diagram shows 23 dwellings per hectare. This achieves 14 lots in the block of  $14.3 \times 30 \text{m}$  ( $429\text{m}^2$ ); detached dwelling footprint of  $213\text{m}^2$ ; garage footprint of  $36\text{m}^2$ ; total building footprint of  $250\text{m}^2$ .

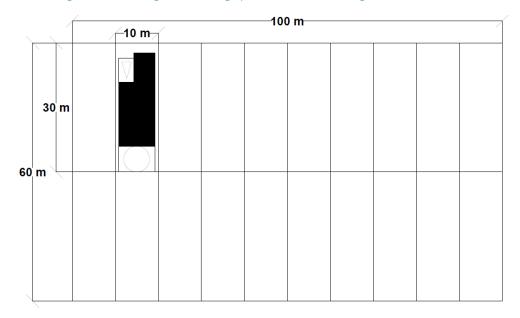
A two-storey house would supply a larger back courtyard and reduce the presence of the garage. This configuration (14 dw/ha) does not reach the maximum density identified as commercially viable in the ME report and does not meet the definition of medium density. This provides a relatively poor urban design outcome. It really is a sub optimal suburban environment outcome for detached housing.

Figure 7-6 illustrates the density that is identified as commercially viable between 2020 and 2023 for detached dwellings. This creates 20 lots of  $300m^2$  or  $10m \times 30m$ . To increase lot size to fit 18 dw/ha the width would increase to 11m. There would be no substantive improvement in the built form outcome. This is only marginally acceptable in best urban design practice.

Figure 7-7 illustrates ME's next level of commercially viable density of 40 dwellings per hectare net detached and identifies that up to 22 lots at an average of 234m² (with shared lane taking it up to 260m²) with rear access lane, can be achieved in a 6,000m² block. A rear lane achieves a 234m² site which allows a 2-storey house and double garage at rear. The lot also shares a right of way in form of a rear lane. This drops the number of dwellings in the block and average lot size. However, the streetscape improves as does the shape factor for the house and yard. If a small proportion of semi-detached or terrace houses are incorporated into the block, this can increase density.

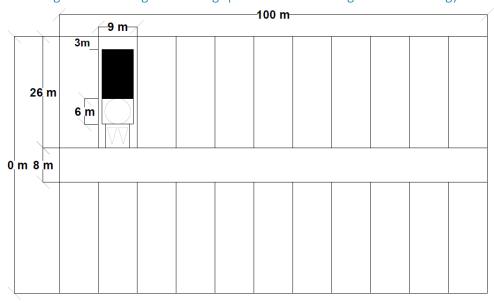


Figure 7-6: Diagram C showing 33 dwellings per hectare net using ME method.



**Diagram C:** This diagram shows 33 dwellings per hectare net. This achieves 18 lots per block of 10 x 30m (300 $m^2$ ); detached dwelling footprint of 142 $m^2$ ; single garage footprint of 18 $m^2$ ; total building footprint of 160 $m^2$ .

Figure 7-7: Diagram D showing 40 dwellings per hectare net using ME methodology.



**Diagram D: Reflects** 40 dwellings per hectare net. This achieves 22 lots per block with parking accessed off a rear lane  $(8 \times 100m; 80m^2)$ ; lots  $9m \times 26m (234m^2)$  plus share of lane  $(36m^2)$ ; detached dwelling footprint of  $100m^2$ ; garage footprint of  $36m^2$ ; total building footprint of  $136m^2$ .

When good Urban Design Outcome is applied to delivering detached houses at this density to reduce the impact of a street of garages, we have moved to delivering car parking at the rear of the site accessed off a lane. The density remains at 22 dwellings per hectare.

This creates a building platform of about 80m<sup>2</sup> which could have a small 2-bedroom cottage or a two-bedroom family 4-bedroom house of 160m<sup>2</sup>, both excluding garages. By adopting a rear lane, they all have capacity to have double garages and of course a secondary studio unit above.

Figure 7-8 illustrates a density of 50 dwellings per hectare net which the ME report advances can provide marginally commercially viable detached (250m² lot) and attached (200m² site) family dwellings in the short term (2020-2023), detached (250m² lot) and attached (200m² lot) in the medium term (2020-2030), and detached (200m²) 1 and 2 bedroom houses (200m² lot) in the long term (2020-2050). To achieve the recommended ME lot size of 200m² for detached dwellings, the lot size would have to move to a bigger block width of 68m x 100m, however for the sake of consistency, the 6,000m² block is retained, and as a consequence this will reduce the size of the lots. In this iteration to accommodate a detached housing, a 7m wide lot has been adopted. This means 28 dwellings and not 30 are achieved in the block. If the lot width is reduced to 6.6m, 30 dwellings per hectare is achieved, however this would only have a 4m wide detached townhouse.

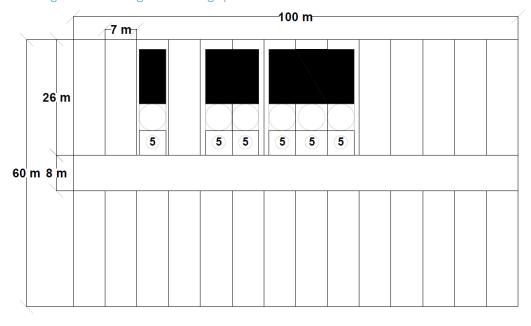


Figure 7-8: Diagram E showing 50 dwellings per hectare net.

**Diagram E:** The diagram show 50 dwellings per hectare net. This achieves 28 lots per block with parking accessed off a rear lane (8 x 100m;  $80m^2$ ); lots  $7m \times 26m$  ( $182m^2$ ) plus share of lane ( $36m^2$ ); detached dwelling footprint of  $36m^2$ . Building footprint dependent on typology.

What this analysis shows is that while it may be economically feasible to deliver detached dwellings at the density identified in Diagram D, when a combination of planning provisions such as front yard, side yard, site coverage and good design practice are applied it may not be practicable. The theoretical subdivision illustrated does not necessarily deliver diversity and while the existing rules allow larger lots there is a strong reason why the market would not deliver higher density.

Two-bedroom houses are best facilitated through apartments or narrow terrace lots (4.2 m wide) and single garage to the rear off a courtyard or lane. Anything above this density would need rear access lanes to have garages off street, smaller front yard setbacks, zero lot boundaries to allow terrace attached houses or a mix of terrace, apartments and townhouses. In effect, if a minimum terrace lot of 4.2 x 26 m with an 8m rear lane is applied, 46 houses per hectare (2+ bedroom) net would be achieved. Beyond 46 house/hectare net the density drives apartment style typologies. A best-case outcome is to create a suite of rules that a variety of lot sizes using a variety of house typologies.

This pattern gives a lot configuration of 7x26m and a lot area of 182m<sup>2</sup>. This is effectively the 200m<sup>2</sup> site size raised in the ME report when factoring in the redundancy of driveway access from the road and garage setback which is replaced by a common lane. The diagram illustrates a standalone townhouse with a 55.2m footprint which could deliver a generous 110m<sup>2</sup> two bedroom detached house (as outlined in the ME report) which if it went to 3 storeys or attic, could be a family house. The semi-detached typology increases the footprint of the house to deliver a footprint of 70m<sup>2</sup> which gives a 140m<sup>2</sup> family home with detached double garage; a row of 3 attached houses with end terrace with footprint of 70m<sup>2</sup> and a mid-terrace of 84m<sup>2</sup>. This could supply single storey one and two bedroom houses or two-storey family houses.

#### Conclusion regard ME's densities when applied to a development scenario

When analysing the ME report and applying it to a built form outcome the density and the block pattern and garage access become important to create houses that have better frontage to the street and more usable outdoor space. Above 33 dwellings per hectare net and a lot width of less than 10m there is a need to move to a rear lane or courtyard for car parking and access if a good Urban Design outcome is sought.

Anything above 33 dwellings per hectare net would need to provide rear access lanes and garages to the rear, smaller front yard setbacks, minimum or zero lot side boundaries to allow a mix of detached townhouses, semi-detached, terraced, and apartments.

To ensure one and two-bedroom houses at an affordable price and profitability, there would be an opportunity to have a minimum terrace lot of  $4.2 \times 26 \text{m}$  ( $109 \text{m}^2$  lot), with an 8m rear lane, which would deliver a two-storey home of  $80/90 \text{m}^2$  and a density of over 80 dwellings per hectare net would be achieved. Beyond 80 house per hectare net the density drives apartment style typologies.

A best-case outcome is to create a suite of rules that a variety of lot sizes using a variety of house typologies.

## 7.5 What do these typologies look like?

The following section breaks down several housing typologies that could be established at the feasible development option densities as indicated in the M.E report (i.e. dwellings per hectare). The examples provide the indicative site size and site coverage needed to achieve these developments, taking into account the work undertaken by ME. This has been presented as useful inform to the development of specific planning policies and rules that could be considered to either enable, or prevent specific typologies being established and create a better built form outcome in medium density areas. These are important as it has been shown in the analysis above that site size and density alone cannot be relied upon to deliver housing diversity.

#### Detached dwelling at 30 dwellings per hectare net (greater than 330m<sup>2</sup>) site size

The ME report indicates that there it will be commercially feasible in the short term to develop 3+ bedroom detached dwellings at a density of 20 dwellings per hectare (dw/ha) which translates to a minimum 330m<sup>2</sup> site size. An example of a detached dwelling that could be constructed within these parameters is shown below in Figure 7-9. This form of dwelling would requires a minimum lot size of 350m<sup>2</sup>, a minimum lot width of 16m in order to accommodate the double garage at street front, and a maximum site coverage of 40%.

Figure 7-9: Detached dwelling typology with double garage on street (greater than 400m2).

This is the minimum lot size in the Peacocke structure plan for single lot development.



Detached 3+ bedroom dwellings on  $400\text{m}^2$  sites give a density of approximately 25 dwellings per hectare net and is commercially feasible throughout the short, medium, and long term as assessed in the ME report. This is defined as low density housing. At this density it is possible to present a double garage to the street front. The typology example shows an acceptable design with parking in front of set-back garage and garage integrated into the house. This provides a total building platform of  $12 \times 21 \text{m}$  ( $240 \text{m}^2$ ) and back courtyard of  $87 \text{m}^2$  and a front yard setback for landscape.

Figure 7-10 illustrates a two-storey, four-bedroom dwelling which can be constructed on a footprint of 12  $\times$  10m (giving a 240m<sup>2</sup> home including garage and a 230m<sup>2</sup> backyard).

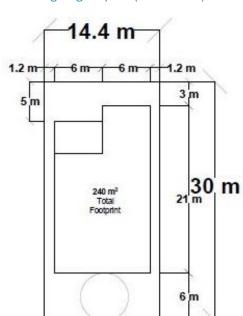


Figure 7-10: Detached house with double garage layout (400m<sup>2</sup> site) at 25 dwellings per hectare net.

In order to achieve the 30 dwellings per hectare net as cited in the ME report and achieve a good urban design outcome with medium density townhouses the lot configuration changes to  $10m \times 30m$  ( $300m^2$  as shown in Figure 7-11). There are two options:

- The car access is from the street the site can only accommodate a single garage leaving 4.6m. This is only marginally acceptable from a streetscape and street amenity lens. This creates a maximum building footprint of 138m<sup>2</sup> ample for 3-bedroom single storey dwellings but more suited to a smaller footprint two storey dwelling.
- From an urban design view at medium density it is better to move to car access from a lane or court. This increases the density to 37 dwellings per hectare which effectively reduces lot length by 4m as a share of access lane. This makes the lot 9m x 26m (234m²) and therefore within commercially viable range for detached dwellings. This unlocks the street from garages and car access. It also allows for a single or double garage at the rear of the property as illustrated. A building footprint of around 130m² (6.6m x 20m is possible on this lot) However, to achieve a double garage and decent back yard a two storey house is preferable with a footprint of 6.6m x 10m or 66m (house of 130m²) not including the garage. This gives a full 3+ bedroom house with excellent solar access and useful yard. In the rear lane configuration, the garage is perfect to absorb a mews house unit.

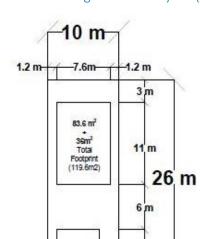


Figure 7-11: Detached Townhouse with Garage off Lane Layout (300m<sup>2</sup> site) at 20 Dwellings Per Hectare.

Medium density attached and detached dwelling typologies: 33 dwellings per hectare net (greater than 270m<sup>2</sup> site sizes)

6 m

LANE

Attached 3+ bedroom dwellings will become feasible in the medium term at a range between 25-35 dw/ha net. These are likely to appear in the form of townhouse, semi-detached and broad terrace (illustrated in Figure 7-12) A broad terrace is terrace developments. To accommodate detached townhouse, semidetached and terrace with a double garage at rear with separate pedestrian access we achieve a density of 33 houses per hectare net, 7m x 26m lot configuration. In removing the pedestrian access from the lane and by including a double garage of 6m or single garage and lot configuration of 6 x 26m we get a density of over 50 dwellings per hectare net.



Figure 7-12: Townhouse Typology (Minimum Lot Size 250m<sup>2</sup>).

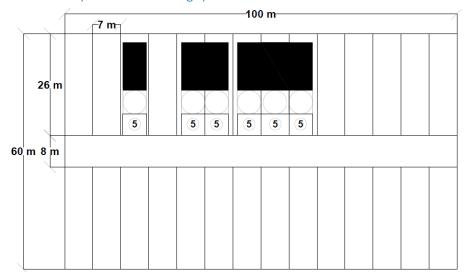
Figure 7-13 shows a larger family terrace 3+ bedroom typology with a rear access double garage. To encourage 2-bedroom terrace house the lot width should reduce to between 4.2m and 5m wide allowing for 2 upstairs bedrooms rooms front and back and a single garage of court or lane. If this configuration is used exclusively you achieve around 40 dwellings per hectare which pushes it into high density.

When using lot layout of  $7 \times 26m$  (average lot size of  $182m^2$ , excluding lane access) an attached **townhouse** with a footprint of  $4.6 \times 11m$  ( $50m^2$ ) can be achieved, and a double garage and  $42m^2$  back yard. This would be a  $100m^2$  two-bedroom house and  $36m^2$  garage which can have a studio above. To achieve a larger 3+ bedroom family house, a  $3^{rd}$  storey attic room could be included. Figure 7-14 below shows this typology layout in further detail.





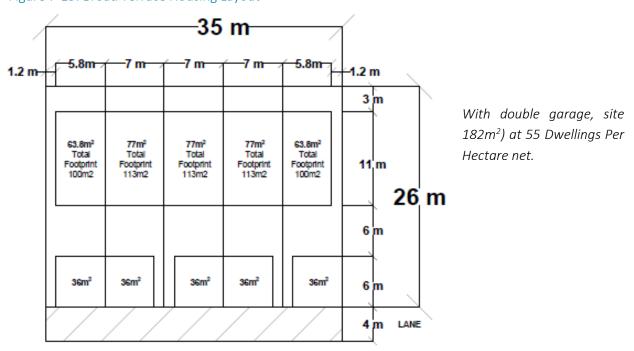
Figure 7-14: Townhouse layout at 55 Dwellings per hectare net.



**Diagram E:** 55 dwellings per hectare net using ME model. This achieves 28 lots per block with parking accessed off a rear lane (8 x 100m;  $80m^2$ ); lots  $7m \times 26m (182m^2)$  plus share of lane ( $36m^2$ ).

Another typology is a **Semi-Detached House** which saves on one side-yard and has a footprint of  $5.8 \times 11$ m whilst providing a more spacious layout for the house. This typology has a footprint of  $64m^2$  which at two-storey gives a full 3+ bedroom family home with a double garage. An example of this site layout is shown below in Figure 7-15.

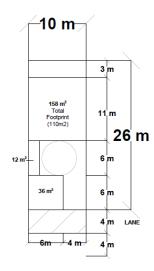
Figure 7-15: Broad Terrace Housing Layout



Furthermore, when considering a **Broad-Terraced** dwelling typology, end-terraced houses with the same 64m<sup>2</sup> footprint as semi-detached and mid terrace with footprint of 77m<sup>2</sup> can be established. Figure 7-16 below shows the site layout of this typology.

Figure 7-16: Attached Broad Terrace Layout

with double garage, site 300m², @ 33d/h



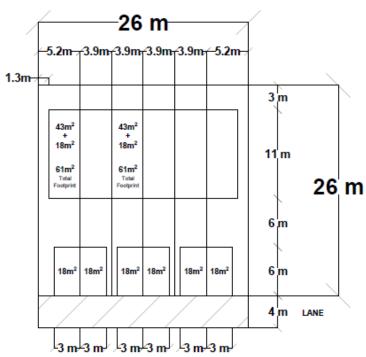
Narrow-terrace Houses (Higher Density) can be achieved with a lot shape of a between 5m and (5.7m for an end lot if side-yard is applicable) and 26m (resulting in a lot size of 130m<sup>2</sup>) at a density of up to 75 dwellings per hectare net. This will deliver a terrace house footprint of 55m<sup>2</sup> and a house of a minimum of

110m<sup>2</sup>. This lot configuration allows for two bedrooms upstairs, a single garage and possibility of attic room. The layout of this typology is shown below in Figure 7-17.

Figure 7-17: Narrow Terrace House Layout

 $With \textit{ single garage, site size End Terrace:} 140 \text{ m}^2, \textit{ mid terrace:} 110 \text{ m}^2) \textit{ at 83 Dwellings Per Hectare net } \textit{ using the size End Terrace:} 140 \text{ m}^2, \textit{ mid terrace:} 110 \text{ m}^2) \textit{ at 83 Dwellings Per Hectare net } \textit{ using the size End Terrace:} 140 \text{ m}^2, \textit{ mid terrace:} 140 \text{ m}^2) \textit{ at 83 Dwellings Per Hectare net } \textit{ using the size End Terrace:} 140 \text{ m}^2) \textit{ mid terrace:} 140 \text{ m}^2$ 

ME Methodology.



#### Attached Dwellings Typologies - Maisonette Housing: up to 80 dwellings per hectare net.

At up to 80 dwellings per hectare, residential development starts to become considered as higher density development which is appropriate for meeting longer term commercial feasibility.

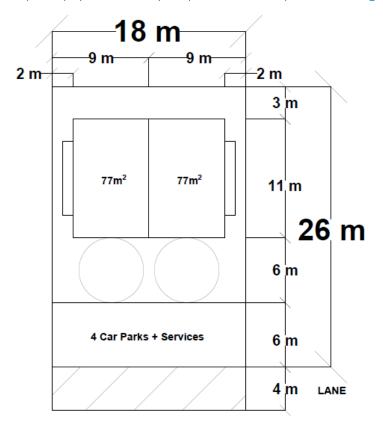
The maisonette typology illustrated below in Figure 7-18, resembles a large house but is comprised of four apartments. This would typically have a lot configuration of  $18-20 \,\mathrm{m} \times 26 \,\mathrm{m} \ (470-520 \,\mathrm{m}^2)$  with space for 4 garages at the rear of the lot serviced by a lane or court. This would have a total building footprint of  $154 \,\mathrm{m}^2$  and internally can be configured as two apartments at ground level and two upper apartments at the upper level. This equates to an average site size of around  $125 \,\mathrm{m}^2$  and a density of 80 dwellings per hectare.

Perhaps the most familiar housing typology that also meets this density is the studio—terrace. This has a lot size of approximately 4m x 26m (110m2) and a building footprint of 46m2. This achieves a density of 40 dwellings per hectare, a single garage and rear yard of 25m2. This is better suited to one or two bedrooms. Extra open space can be created through balconies and roof gardens. The site layout of this typology is shown below in Figure 7-19.





Figure 7-19: Maisonette (4 unit) Apartments Layout (Site size: 468m²) at 80 Dwellings Per Hectare



# Attached Dwellings Typologies: Apartments and Mixed-use apartments (High Density above 80 dwellings per hectare).

Moving beyond 80 dwellings per hectare net the dominant typologies are typically walk-up apartments, mixed-use and potentially mid-rise towers. These are comprehensive developments with a high level of design input and a requirement to have access to a high level of services, open space, amenity, and public transport. Mixed-use apartments at around 80 - 120 dwellings per hectare net may be suitable in key activity and neighbourhood centres with easy access to public transport. Typically, these have rear lane access with basement or semi basement parking, with commercial or community uses on the ground floor. The mixed-use components typically include commercial activities at the ground floor with residential apartments on upper floors. This could be constructed up to 4 stories in height with a density of over 60 dwellings per hectare and with complete site coverage.

Alternatively, density of at least 40 to 70 dwellings per hectare can be achieved further from the transit stop through 2 or 3 storey walk up apartments. These typically have at grade parking off a rear lane and a common garden shared by residents. These are flexible in location and can be used as part of the area within walking distance of neighbourhood centres or areas of very high visual and physical amenity.

An example of mixed-use apartments is shown below in Figure 7-20 and 'Walk up apartments' are shown in Figure 7-21. A subdivision lot layout to support apartments is shown in Figure 7-22 below.



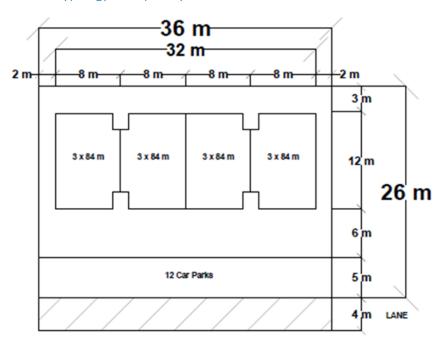
Figure 7-20: Mixed Use Apartments Typology Example



Figure 7-21: Walk Up Apartments Typology Example



Figure 7-22: Apartment Typology Example Layout



Site Size: 936m<sup>2</sup> 3 Storey – 12 apartments – 2 storey 8 Apartments at 125 Dwellings Per Hectare

## 7.5.1 Conclusion of Typologies

The quality of the built and public environment, and the approachableness of the architecture are key success factors for medium density developments. The following case studies will look at some developments that led the market in delivering variety of housing and density. As shown in the analysis, medium density does not need high rise apartment towers, but a mix of detached, terraces, semi-detached, walk up 2 and 3 storey apartments and buildings capable of accommodating non-residential activities. The Market Economics assessment shows what could be expected under different conditions.

The reality for the Peacock area is that it needs to be supported over the medium to long terms with a mix of typologies that achieve an optimum density which supports local services and public transport within a short walking distance. This means achieving a minimum density of 30 dwellings per hectare net within a neighbourhood delivering a variety of densities and typologies within the urban blocks with densities of nearer 60 dwellings per hectare closer to the centres drifting to suburban densities beyond 800m from centres.

The analysis of housing typologies is discussed further in our recommendations section where we discuss strategies for delivering a range of densities and typologies to support housing delivery within the Peacocke Structure Plan area.



# 8 Urban Design Case Studies

The following section builds on the urban design considerations discussed in the previous section and illustrates how, and to what extent, they have been applied in the New Zealand context. We have focussed on these case studies as they display a broad array of design-led planning responses that could be applied to Peacocke area. The examples demonstrate how good urban design and planning can be integrated within a strategic framework for greenfield development. The examples include:

- Halswell (Christchurch);
- Hobsonville Point (Auckland); and
- Kensington Park (Auckland).

# 8.1 Halswell North ODP Area

Halswell North located on the outskirts of Christchurch, is an example of a greenfield development with the aim to deliver a diverse range of medium density residential and commercial development. The development was first initiated as a private plan change by one of the major landowners, which was subsequently adopted by the Council as part of the Land Use Delivery Plan. This development provides a useful comparison to Peacocke in that the land is in private multiple ownerships and governed by an Outline Development Plan (ODP) and a specific zone in the District Plan.

The area is zoned Residential New Neighbourhood Zone by the Christchurch City Plan and has had an ODP prepared by Council in conjunction with the landowners through a full consultative process, which was subsequently integrated within the Plan. The ODP is used to inform subdivision and land use for that area regardless of land ownership. The ODP provides a broad structure and framework for the implementation of development at the ground level. Once the overall ODP has been completed, Councils and developers can create visions for neighbourhoods enabling the identification of main streets for mixed use development and neighbourhood centres to create a sense of place.

The Halswell North ODP area was considered an exemplar and resulted in a new zone within the District Plan - the Residential New Neighbourhood Zone. Proposed developments that do not align with the ODP and relevant subdivision or built form standards results in a more stringent activity status' (i.e. 'restricted discretionary' instead of 'controlled') allowing Council to have a greater level of control and discretion in the type of development delivered.

Key features of the implementation of the ODP at subdivision stage within the Residential New Neighbourhood Zone included:

• Minimum net density<sup>13</sup> requirements of 15 households per hectare (Rule 8.6.11(b)(iA));

<sup>&</sup>lt;sup>13</sup> The definition for net density within the Christchurch City Plan includes all open space, reserves, and local roads but excludes highways and major arterial roads, stormwater retention areas, esplanade reserves, land set aside for community, retail or designated facilities.

- Subdivisions are exempt from achieving this density if a site (future development allotment) is specified for achieving the relevant minimum net density requirement that has a legal instrument that effectively prevents subdivision and land use at that site below the required specified density (Rule 8.6.11(b)(iii);
- Set minimum areas for traditional subdivision at 4 hectares;
- Comprehensive residential development consents for sites larger than 6000m<sup>2</sup>;
- Set minimum site areas for allotments at 300m<sup>2</sup> while allowing 20% of allotments to be between 180-299m<sup>2</sup>; and
- Precludes public and limited notification for restricted discretionary and controlled activities.

Any subdivision is also considered against the principals of the Residential New Neighbourhood Zone and whether the subdivision provides allotments that enable diversity of housing types and distributes allotments for higher densities throughout the subdivision area.

Dwellings that meet the built form standards can then be constructed as a permitted activity. These standards enable semi-detached dwelling typologies to be constructed as permitted activities. Comprehensive development activities can be undertaken as restricted discretionary activities and the Council as such have a limited discretion over urban design matters.

The key point of difference for Halswell has been in the delivery of Meadowlands as an exemplar development and the requirement for all subdivision and land use activities to be applied for concurrently. This area is subject to the Meadowlands Exemplar Overlay (North Halswell). This introduces additional place specific controls, including:

- Requiring the development of a neighbourhood plan covering a minimum area of 8ha;
- Provides for comprehensive development consents as restricted discretionary activities and that they shall be for a developable area of a minimum of 7000m<sup>2</sup>;
- Provides for future development allotments encumbered to achieve the density required for the zone;
- Requiring the comprehensive development consent to contain three or more dwelling typologies with no single typology making up two thirds of the total dwellings; and
- Applying non-complying activity status for subdivision and land use activities that do not form part
  of a comprehensive residential development consent.

In evaluating applications for comprehensive development consents, rather than rely on traditional built form or subdivision standards within the Plan, they are evaluated against a robust framework established within the matters of discretion that is essentially an urban design led evaluation that specifically provides for the building typology, mix, and location as matters of discretion. The successful implementation of comprehensive development consents is the strength and quality of the neighbourhood development plan (NDP). The NDP is a detailed urban design tool that, importantly for this assessment, requires allotment size, allotment arrangement, and allocation of housing typologies to be identified.

Regarding implementation of the ODP and development process, the plan was split into stages in which Stage 1 is currently underway. This staging identifies the areas that are being targeted for development and as well as an overarching layout of the block design, whilst protecting the unstaged areas from

development. The greenways and main roads are identified and provides staging super lots. The implementation of the NPD is shown for Stage 1 of the Development in Figure 8-1, Figure 8-2, and

Figure 8-3. These show how the NPD relates to the wider greenfield area, the indicative lot layouts within the defined blocks, and the typologies that are linked to those allotments. The first stage has a community hub, early education centre (already completed) and is immediately adjacent to the Key Activity Centre.

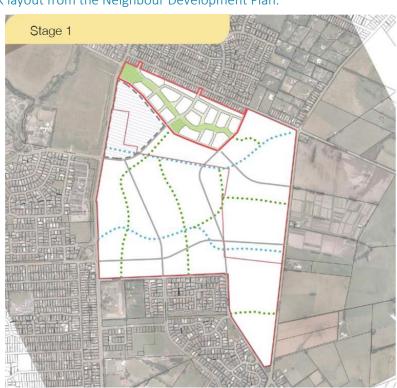


Figure 8-1: Block layout from the Neighbour Development Plan.



Figure 8-2: Allotment layout from the Neighbourhood Development Plan







Figure 8-4 provides an early illustration of the neighbourhood concept with a variety of housing typologies and tenures, a small mixed- use neighbourhood centre and a very green public realm to provide the tree canopy that more compact development cannot provide. In reality, this could only have been developed through a detailed Comprehensive Development plan with the supporting design guidelines.

Figure 8-4: Meadowlands Neighbourhood Concept Plan



## 8.1.1 Outcomes from Implementation

In discussions with the Planner and Urban Designer connected with the development, it was considered that the development is being largely delivered, although the finesse of the original proposal is being lost with time. A site visit confirmed the larger components of the zone response are being delivered, including restoration of a historic house as a community facility set in a heritage garden, the greenways and naturalised watercourses, the stables converted to a pre-school facility, a mix of stand-alone, townhouse and terrace-house typologies at a variety of price points, 10% community/social housing. The following figures illustrate what has been delivered so far.

Figure 8-5: Existing stables have been converted into a Montessori School in a Park setting







Figure 8-7: Attached terraces overlooking the greenways



Figure 8-8: Mixture of attached and detached, single and two storey









Figure 8-10: Housing is developed overlooking the greenways with parking from lane.



### Lessons from Halswell

It is considered that some of the special qualities proposed during the consultative process have not been delivered. While not achieving the original intent, the Hallswell ODP area provides for the following key observations that are of relevance for Peacocke:

- Was developed in a collaborative process (even though this was not mandated under the LURP);
- Allows for mixed use within the neighbourhoods and ODP area and a KAC;
- It is based on walkability with a major KAC transport hub to be developed as well as neighbourhood centres;
- Has more prescription in the District Plan than other medium density suburban zones and is driven by an ODP;
- The Open space and movement network is being delivered in accordance with the ODP;
- The densities are being delivered (at the minimum level), however does not deliver the diversity of typologies originally envisaged;
- The first subdivision has adhered to the superblocks illustrated in the ODP;
- This area was first to be developed because of proximity to the collector road. It is also adjacent to the planned KAC and bus interchange. The ability to do apartments on key corners has been lost;
- It is delivering affordable housing and community housing as prescribed;
- Cars are taking less of a profile than in conventional development; and
- The process would have been better served if the typologies and qualitative design had been captured by Design Guidelines as part of the Plan and ODP.

# 8.2 Hobsonville Point

Hobsonville Point is located to the northwest of the Auckland CBD on a peninsula on the Waitemata Harbour. It is the largest master-planned residential development in Aotearoa. The site has an area of 167 hectares, predominantly consisting of land owned by the New Zealand Defence Force (NZDF). The remainder of the land was previously owned by the Waitakere City Council and some owned privately. Following the closure of the Airbase in 2002, the land was amalgamated and the Hobsonville Land Company (HLC) was formed (under Housing New Zealand) to lead the development. Overall, the aim was to provide 3,000 new dwellings targeted at lower income earners and is seeking to achieve a density of 27 dwellings per hectare by 2024. This was later altered under the National Government Direction, establishing a public-private partnership with HLC. The PPP set a target of 20% of the housing to be affordable. Later, the housing target was increased to 4,500 by 2030.

Hobsonville Point is an example of a greenfield area that has then been delivered through a Master Plan. The Master Plan area is comprised of a variety of precincts which are further designed in detail and achieved through the resource consent process administered by Council. While the Master Plan guides the overall development plan for Hobsonville Point, each resource consent provides design details for residential, commercial, and education areas, as well as open spaces, reserves, and transport networks. The Master Plan provides detailed guidance regarding:



- density and block layout design,
- height and frontage plans,
- and use activity layout,
- road and infrastructure layout, and
- open space design.

A detailed set of regulating plans, technical annexures, and design guidelines accompany the Master Plan in order to specifically shape different typology areas across land uses. Through this, planning practitioners seeks to provide a varying residential density and typologies, connectedness, and key node areas.

Hobsonville Point was implemented through Plan Change 13 to the then operative Waitakere District Plan. While it is of limited relevance to the delivery of Hobsonville now, it is important to consider as it established the lot layout and development patterns. The delivery on the master plan was through the division of the area into precincts and then requiring the development of a comprehensive development plans (CDP) for entire precincts before any development can occur. These CDP were required to outline the indicative block layout, the proposed location of residential and non-residential activities, the method of staging and managing vacant land, and a precinct specific site development and building design guide. In the development of the CDP, the rules were flexible, including precinct boundaries that could move, as long as the underlying rationale gave effect to the principles. Additionally, housing yield targets were specified for each precinct constituent block and importantly, this could be a method for implementing targeted housing outcomes for Peacocke.

One of the approved CPD for Hobsonville was the Buckley Precinct CPD<sup>14</sup> and included. As required by the Plan this broke down the precinct area into indicative blocks and established a minimum and maximum residential unit yield target of 1080 and 1200 units. This was then broken down into the indicative yield for each block defined within the CPD. Built form standards, and indicative land uses were then prescribed for each block. The land uses for residential uses were prescriptive and included specific apartment typologies for areas and enabled all housing typologies in others such as single-detached houses on small lots, duplexes, two and three storey terraces, and apartment buildings up to six storeys high. The delivery of these typologies was then guided through residential building typology matrixes that specified built forms and the lot layouts that are required to achieve those typologies.

As the name suggests, this enabled an extremely comprehensive design process to occur. The consequence of this was that a simple policy and rule framework could be prepared. No Hobsonville specific objective and policy framework was required as the CPD outlined the intended outcome in far greater detail than could be achieved using the traditional zoning approach. The rule framework applied controlled activity status to the development of a new residential buildings with matters of control limited to compliance with the comprehensive development plan standards and CPD conditions and the relevant design guidance. Subdivision within these precincts was either restricted discretionary if it supported the implementation of the CPD or was the site specified within a land use consent application, otherwise, subdivision activities are non-complying. This encourages comprehensive development activities and provides for the exclusion of developments that did not achieve the CPD vision.

<sup>&</sup>lt;sup>14</sup> Approved as LUC-2008-389 by the Waitakere City Council

The way the CPD's were formulated enabled yield and typology to be controlled through the resource consent process. Diversity in housing was encouraged through specifying target yields for blocks. The formula for achieving these yields was left to the block developer using the prescribed typologies. This allows a staged approach where precincts are delivered over different timeframes through the resource consent process.



Figure 8-11: Hobsonville Point Illustrative Concept Plan (Source Hobsonville Point, 2020)

The initial precinct approach has been carried through into the Partially Operative Auckland Unitary Plan (AUP). The AUP utilizes the existing spatial boundaries and target yields of the original precincts, however has applied standardised residential zoning that targets specific development outcomes such as the Mixed Housing and Suburban Zone and the Terrace Housing and Apartment Buildings Zone that generally align with the desired outcomes for Hobsonville. These zones have respective minimum net site areas for vacant proposed sites of  $400 \, \mathrm{m}^2$ ,  $300 \, \mathrm{m}^2$ , and  $1,200 \, \mathrm{m}^2$ . The nature of urban development within Auckland has facilitated this approach as the policy and rule frameworks are well tested to deliver density and housing diversity due to operating in a market with an established demand for these typologies and a development sector with experience in delivering them. Precincts are widely used across the Auckland Unitary Plan for the development of residential areas (E.g. Karaka North Precinct and Wairaka Precinct). These are often backed up by Precinct Plans that promote an integrated approach to the development of these areas.

As the AUP relies on generic zones the Precincts have been overlayed to provide the place specific framework that is required to achieve the intent of the original master plan and CPD's. The overarching Hobsonville Precinct is divided into 6 sub precincts that align with the original master plan and CPD's that were prepared for those areas. For example, The Buckley CPD has been pulled through in the built form standards for the Buckley Sub-Precinct. This can be seen in applying a strong policy emphasis on achieving a mix of housing typologies and intensification that retains amenity in those areas. As a result, existing planning zones have been utilised where they best suit the intended nature of development. We note, for completeness, that Hobsonville is supported with a specific policy framework (refer Table 8.2) that assists with guiding future development outcomes.



Table 8-1: Hobsonville Precinct Objectives and Policies.

Objectives and Policies			
Objective I605.2(1)	Hobsonville Point Precinct is developed in a comprehensive and integrated way to provide for a compatible mix of residential living, commercial and employment in order to increase housing supply		
Policy I605.3(5)	Enable medium and high density housing to make efficient use of the land resource while maintaining the reasonable amenity of adjoining residential sites and providing high-quality on-site amenity.		
Policy I605.3(18)	Require integrated, accessible and usable public open spaces to be provided within walkable distances for all residents.		

#### Lessons from Hobsonville:

To summarise, the implementation of Hobsonville Point was undertaken through the following key processes:

- a. Plan Change and Zoning Framework that designated areas of indicative land use;
- b. Comprehensive Development Plans for each defined precinct were then developed;
- c. Application of specific subdivision and land use consents to authorise development. Had to meet both the CDP requirements (design guidelines and relevant planning rules) and building consent approval;
- d. A departure from the original provisions for Hobsonville has been in applying permitted activity status to the development of up to three dwellings per site. The AUP still supports the linkage between subdivision and land use activities through applying a restricted discretionary activity status for subdivision that is in accordance with an approved land use consent (Policy E38.3.6 and Rule E38.4.2(A14). Otherwise discretionary activity status applies;
- e. In assessing subdivision applications, the primary consideration is on the effect of the design and layout of the sites achieving the purposes of the zones;
- f. Regarding density targets, Hobsonville Point is seeking to achieve a density of 27 dwellings per hectare by 2024;
- g. The masterplan approach combined with the Comprehensive Development Plan has delivered certainty of outcome for the Council, investors and residents;
- h. The CBDs were further reinforced by the release of superblocks for developers /builders to deliver the diversity of typologies;
- i. The area has delivered a mix of typologies, a higher than normal level of architecture by most of the builders;
- j. Has mixed use schools and other community amenity delivered by HLC and other government agencies; and
- **k.** Has achieved a high level of landscape amenity.

# 8.3 Kensington Park

Kensington Park is a 15.76 hectare development located in northern Orewa. Orewa is a coastal suburb located in the northern reaches of Tāmaki-Makaurau. Formally known as the Puriri Park Holiday Resort, Kensington Properties purchased the land in 2006. The area is a predominantly residential development including a range of existing buildings, single-detached houses, townhouses and apartments. A number of Council reserves, community facilities and a water feature were established through the subdivision process.

The area is targeted for the development of 750 homes with a proposed density of 48 dw/ha (gross), not including non-residential development, community reserves, and infrastructure.

The development integrates mixed residential dwellings into the Kensington Special Zone through the master planning approach. These typologies include:

- 'The Kensington House' generally a two-storey standalone dwelling with double garage.
- Hill Top House generally a three-storey stand alone or duplex with semi excavated garage.
- Townhouses two-, to three storeys in terrace formation.
- Walk-up apartments designed to appear as large houses, contain several units.
- Type 'A' Apartments two to six apartments per floor, with three/four levels, plus basement carparking.
- Type 'B' Apartments Larger buildings with six to ten apartments per floor, spread over four or five levels plus carparking.

Regarding implementation of the development, Special 31 Zone (Kensington Park) in the northern section of the Orewa East Structure Plan, was established in 2011 over an existing resort. The transition began in 2006, when Kensington Properties (private company) purchased the land and began amalgamating it through a series of land use and subdivision consents.

The Kensington Park Special Zone comprised of three key policy areas:

- Residential Policy Area
- Mixed use Policy Area
- Communal Activity Policy Area

These then became divided into six specific precinct areas, each with their own development controls. Policy areas dictate the appropriate location of residential and non-residential activities within the area, while the density rules and development controls dictate the appropriate scale, form and intensity of the built from through the varying areas. This was carried over into the development of the AUP(OP), now known as the Orewa 1 Precinct. Examples of the typologies are shown in the below Figures.





Figure 8-13: Kensington Drive mixed typologies (Source: Southpark Corporation, 2020)



#### Lessons from Kensington:

- a. This was driven by one individual landowner/ developer with a vision for a New Urbanist development.
- b. This was a Private Plan change and has its own Rules.
- c. Kensington Park had a strong aesthetic vision for architecture driven by an individual developer.
- d. This broke all the rules around what the market "wanted" in the area and delivered high density housing on a challenging site.
- e. Is walking distance to the Town Centre.

# 8.4 Key Learnings from Case Study Examples:

- 1. Conclusions from case studies is that all of these examples have relied upon a high level of urban design led development that has been formalised into either an outline development plan, masterplan or comprehensive development plans.
- 2. The more restrictive and more committed the development community are to the vision the better the outcome from an urban design and housing diversity perspective.
- 3. The case study examples had a mixture of land ownership. Halswell is in various ownerships, Hobsonville is in one ownership, however, was delivered by various developers; Kensington Park is a design/build delivery model. Obviously, with fewer landowners it is easier to achieve a consensus on a development vision. Given that the Peacocke area is in multiple ownerships, there is likely to be a need to promote more regulation to create certainty for all parties and to ensure that there are no 'winners' and 'losers'.
- 4. A high level of buy in and support is required from the development community and we note that Peacocke landowners' interests have an ongoing relationship with Council through a Development Forum through which developer stakeholders' interests can be heard.
- 5. In a number of cases identified above, successful planning and urban design outcomes have been secured where land use and subdivision have been tied together. Lot size and dimension are inextricably linked to the resultant typologies. We see that introducing housing diversity and typologies rules should be explored further given their successful application, where they have been carried through as a regulatory response (i.e. Hobsonville and wider Unitary Plan Precinct responses).
- 6. Only Kensington Park had a strong aesthetic vision for architecture driven by an individual developer.
- 7. Strong emphasis on location around mixed use nodes and public transport.

# 8.5 Conclusion and considerations (urban design lens)

There is a wide range of economic and sociological factors which influence the supply and demand for particular development patterns and diversity of residential typologies in green field locations. However,

one of the main reasons appears to be an immaturity in the New Zealand land development and house building industries combined with permissive regulations around medium density subdivision.

There is a new prerogative to maximise the use of land and infrastructure, combined with a commitment to creating walkable communities that encourages modal shift away from the private car to walking, cycling, public transport and using local facilities and amenities. This is all dependent on density that supports these activities and quality of the environment.

Large scale change in the housing stock within the Hamilton Residential Medium Density Greenfield development will take time, however as discussed above, there are a number of factors that form part of a suite of economic, social and regulatory conditions that mitigate against major advances in the short term:

**Extent of the Residential Medium Density Zone** - Within greenfield areas, the zone should reflect proximity to specific facilities such as retail centres, public transport and schools and landscape amenity. Outside of that amenity it is better to have good suburbia at lower density.

Where there is a KAC and Transit Centre - The density within 800m/1000 m of a KAC or Transit Centre should be above 40 dwellings per hectare (excluding work population), which is conducive of high density development densities. Beyond this distance density can be from 22 to 40 dwellings per hectare.

Where there is a direct public transport route and small neighbourhood centre, density within 400/500m of the neighbourhood centre should be up to between 30/40 dwellings per hectare; between 500m and 1000m distance between 22 and 40, which is conducive of medium density development.

Beyond walkable distance from centres and public transport can be between 10 and 22 dwellings per hectare, which is more conducive of low density development.

**Mix Housing Typologies** - As discussed in the Case Study examples set out in this report, effort should be made to mix typologies within densities to supply a diversity of housing in all areas.

**Community and developer Resistance** - The lack of understanding and clarity regarding medium density residential development in the Hamilton context will tend to fuel opposition rather than foster consensus and support. For medium density residential development to become an increasing reality in New Zealand generally, there are several key challenges to overcome:

- Negative perceptions associated with medium density residential developments resulting in reduced demand and greater risks for developers;
- Opposition to proposed medium density residential developments from owners of more traditional forms of residential accommodation (exhibiting the classic NIMBY syndrome); and
- Resistance from developers and their consultants.

**Development Options** - If a Plan continues to provide an easier option to make short-term gains landowners and developers will most likely pursue that option in preference to the costs and uncertainty of a more challenging development and associated planning processes.

**Development Standards** - A continuation of conventional approaches of setbacks, separation and protection of an individual's amenity expectations will perpetuate existing building patterns with a gradual reduction in available opportunities for more imaginative comprehensive development.

The review of research material undertaken as part of the preparation of this report, suggests that a prerequisite for instigating a successful change in direction for delivery of medium density development appears to be a shared understanding that there is an issue that requires attention in the particular area and in a particular way. The experience of other cities faced with needing to respond to sprawl and the tyranny of the car show that it takes leadership, resolve and time. The response needs to have a degree of immunity from the risk of regular changes in regulatory regimes, funding programmes and policy direction.

'Enabling' planning provisions alone are unlikely to result in significant change unless there is the capacity and commitment to deliver larger scale comprehensive development providing the full range of activities expected by communities. Most of the successful examples of medium density residential development in overseas jurisdictions have occurred as a result of:

- consultative and collaborative planning processes resulting in well-defined outcomes to be achieved;
- a comprehensive mixed use approach including walkability to goods and services, public transport, and open spaces / recreational opportunities;
- an emphasis on good urban design and quality architecture; and
- A building industry to geared and committed towards comprehensive development or compelled to do it.

A key finding of the UK, Canada and USA is that it is not so much about building; it is more about community and neighbourhood development and sustainable densities.

The broad-brush identification of a generic Residential Medium Density Zone does not provide an appropriate vehicle for embarking on such a debate. Such debate risks being mired in the relative merits of one density target rather than another, whereas more constructive dialogue is likely to be had around land use and building types rather than numbers. What this points to is a need for a regulatory response that promotes a Neighbourhood Zone for Greenfield development that promotes a range of housing densities including medium density housing typologies. This indicates the need for an overarching planning response that includes Structure/ODP Plans, Comprehensive Development Plans and Design Guidelines.



# 9 Planning Background

To inform the strategic planning options assessment, an analysis of the current greenfield development process for Peacocke, and of the strategic planning options for greenfield development that have been used elsewhere in New Zealand are outlined in detail below. The purpose of this section is to establish what approaches have been implementing throughout New Zealand in order to determine best practice approaches for the layout of greenfield development.

# 9.1 Options (Toolboxes)

A review of NZ-wide, greenfield development examples has identified a variety of options/toolboxes that local authorities utilise when it comes to developing new areas. This section outlines several toolboxes/options that are currently being used or have been used recently to deliver new greenfield residential development. The options/toolboxes that have been considered as part of this review are as follows:

- Bespoke Zones and Precincts,
- Outline Development Plans,
- Staged Plan Changes using Existing District Plan Zones,
- Future Urban Zoning and Transition Zoning, and
- Utilising Design Guidelines in Planning Instruments.

## 9.1.1 Bespoke Zones and Precincts

Defining bespoke zones and precincts for a greenfield area can be advanced through the plan change process. This method of planning for greenfield growth enables the spatial identification of areas where additional place-based provisions apply through precincts to achieve outcomes that differ from the underlying zone(s). This can promote specific development outcomes through providing certainty as to what can and what cannot be undertaken within those precincts. This approach can enable targeted urban design outcomes to be achieved through the identification of areas that can accommodate or achieve those outcomes, and the development of robust objective and policies that enable the desired housing densities and typologies. Bespoke zones and precincts provide the opportunity to develop a policy and rule framework that can be used to manage lower density patterns of greenfield growth.

Bespoke zones and precincts have been widely employed by authorities for addressing specific issues within greenfield areas. This approach has been employed by Porirua City Council in Plan Change 18 prepared for the Plimmerton Farm area and has enabled the site context and sensitivities to be incorporated within the approach. This is detailed in Appendix 1.

# 9.1.2 Extending existing zoning

An option for enabling residential greenfield development is to utilise the existing zoning provisions available in district plans and apply these to new areas. Structure Plans can be used to identify areas that should be set aside for residential, within which areas for low density, medium density, and high-density areas (as well as commercial and other zones) are identified. A plan change can then be progressed to

modify the existing zoning in the greenfield area to the existing zone that is most appropriate for structure plan objectives. This could be achieved through multiple, staged plan changes thereby only allowing the release of a part of the overall structure plan area, or the entire structure plan area could be rezoned through one plan change. For larger areas with more comprehensive structure plans, it might be more appropriate to undertake multiple plan changes in stages, whereas in small areas, it might be appropriate to implement the structure plan zoning under one structure plan. The application of this method For Whenuapai is explored in Appendix 1.

### 9.1.3 Outline Development Plans and the Resource Consent Process

Outline Development Plans (ODPs) are place specific plans that can be prepared to establish land use patterns for a specific scale and discrete area. These can promote housing choice and diversity through enabling a range of housing typologies in identified areas and can exclude competing land uses that may threaten the core development objectives. The development of these plans can enable the process to be 'design led' with specific outcomes identified early, and with decisions relating to land use, transport, and infrastructure being integrated to achieve those outcomes.

These plans can be prepared for identified areas within early stages of structure plan implementation. These plans are then typically integrated within the district plan framework to control the land use patterns for these areas. This offers efficiencies of resourcing as only those areas to be developed in the short to medium term require an ODP to be prepared. The process can also allow for a high level of guidance over the development of a new greenfield area. ODPs can be implemented in stages through the resource consent process where development is only undertaken in small sections at any one time. Typically, through the eventual development stage after implementation of the ODP, the district plan will require resource consent to be required for undertaking development in these areas, with the activity status varying depending on compliance with the ODP.

This approach has been used in Christchurch by private developers in the Halswell North area where greenfield areas have been targeted for residential and commercial development.

#### 9.1.4 Future Urban and Transition Zoning

Future Urban and Transition Zoning allows for current land uses to continue whilst ensuring that future urban development can still occur. Future Urban Zones are provided for within the National Planning Standards and have been utilised within operative plans to avoid the fragmentation of land and inappropriate land use activities that could impede the potential capacity of the land in the future.

Transition Zoning provisions seek to achieve the same outcome as Future Urban Zones, however, generally have a more evolved policy framework. The removal of the transition zoning allows for the underlying zone to change to an established residential zoning. The use of transition zoning can enable the release of land in a coordinated way that supports the overarching urban growth strategy and objectives for greenfield areas. There is also the added benefit of removing onerous plan change requirements. For transition zoning to be implemented effectively, specific conditional triggers need to be identified and incorporated within the rule framework of the District Plan to provide certainty to landowners, developers and Councils as to the process and where development can occur. The application of this Method by the Dunedin City Council is explored in Appendix 1.

### 9.1.5 Master Planning

Master Planning can be utilised to deliver greenfield development through a detailed design exercise that can give effect to the overarching Structure Plan or ODP. A Master Plan describes the final expected outcome of a large site and may be used to direct development on smaller sites. It describes the physical block or lot level configuration and phasing of buildings, infrastructure, and/or public spaces. Master Plans can be advanced either by local government or by private developers. Master Plans like ODPs and Structure Plans can be implemented within a district plan to ensure that development is undertaken in accordance with an existing or a proposed master plan.

Master Plans often deliver more integrated and comprehensive, design focussed development strategies to deliver a specific type or variety of developments. For example, a Master Plan can identify individual neighbourhoods and the anticipated land uses, residential typologies, densities, and may include a specific set of design guidelines. It may also help determine the necessary housing yield that may be required within an area to ensure housing supply goals are met.

Hobsonville Point is an example of a Master Planned development which is comprised of multiple precincts which each deliver their own unique typologies, residential densities, and design outcomes. This includes areas specifically for commercial and community activity with high density apartments and offices, as well as areas comprised and targeted for mixed housing typologies, such as townhouses, apartments.

### 9.1.6 Design Guidelines in plans

Based on experience, it is difficult to develop performance standards which will guarantee quality architecture and good urban design outcomes, especially where there is no inherent urban design guidance. There are, however, examples emerging in NZ where second generation planning instruments are integrating urban design guidelines into planning documents. This is giving Councils a greater level of discretion over design outcomes.

District plans often rely on the integration of urban design guidelines to help achieve high quality residential development in new and existing residential environments. These guidelines, though separate to the district plan, are typically referenced in the relevant policy or rules section (i.e. residential development standards in a district plan). These plans generally establish assessment criteria which would apply to certain types of residential development (for example, duplex, townhouse, and apartment typologies).

Examples of design guidelines include Tauranga's proposed urban design assessment criteria which will include a set of criteria for residential development to follow as part of a restricted discretionary activity resource consent process. Tauranga's urban design assessment criteria has been utilised within many previous examples including Kapiti District Council's Medium Density Housing Guide which involves utilising best practice principles developed in the New Zealand Urban Design Protocol (2005) and People+Places+Spaces: An Urban Design Protocol (2002).

Other examples include the Catalina Sub Precinct Design Guidelines, which have been integrated with the Hobsonville Point Master Plan (as outlined above) to ensure that the best quality urban design outcomes can be achieved by following several core principles. For example, these guidelines provide guidance for a range of residential typologies on how best to achieve effective on-site amenity, residential coherence

through building design, landscaping guidelines, layout of lanes and car parking and access and many other core principles.

More recently, Queenstown Lakes District Council (QLDC) has preferred a regulatory approach to enable/support delivery of medium and higher density development. QLDC recently implemented variations to its Proposed District Plan to integrate residential design guidelines to support Medium and High Density Development given that the Council was concerned that the initial phase of the staged District Plan Review that provided for the underlying residential zones, would not be effective in delivering positive design outcomes for these areas without residential design guidelines forming part of the District Plan. QLDC as part of the section 32 evaluation supporting Stage 3 of their District Plan Review considered that there was greater effectiveness having Residential Design Guidelines as part of the matters of discretion to be considered for development over a certain threshold (three or more dwellings). QLDC considered that having design guidelines that sat outside of the Proposed District Plan would be less effective and would not provide Council with the ability to refuse consent for development that is poorly designed.

Design guidelines can be successfully used as part of the assessment and determination of Controlled, Restricted Discretionary, or Discretionary Activity resource consent applications. The most common activity status where Council has confirmed adherence with design guidelines is a Restricted Discretionary Activity status.

The examples above typically provide guidance for residential development on site design, building components, and amenity values and character. Design guidelines can be an effective tool for assisting developers with new residential development and throughout the resource consent process, however from the above analysis it is evident that Design Guidelines are more effective in a regulatory sense when they are incorporated within the plan itself.

# 9.2 Review of ODP and Peacocke Plan Provisions

An assessment of the current regulatory framework for Peacocke is required to establish the baseline for greenfield development in the area. This will consider the Waikato Regional Policy Statement and the Hamilton City District Plan as it relates to Peacocke. While the intent of this assessment is to establish the baseline, it will also contribute to the strength, weakness, and opportunities assessment in Section 10.3.

# 9.2.1 Waikato Regional Policy Statement

The Operative Waikato Regional Policy Statement 2016 ("the RPS") requires consideration for this assessment as under section 75(3) of the Resource Management Act 1991, district plans must give effect to any regional policy statement. The RPS contains a number of a objectives and policies that must be considered in the evaluation and recommendation of any policy responses to increase housing density and diversity for the Peacocke Growth Cell. Minimum housing targets are set for Hamilton City over the Short, Medium, and Long-term (Objective 3.27) and establishes a housing density target of 16 households per hectare gross for the Peacocke area (Policy 6.15). However, the RPS does not contain policy direction as to the desired housing outcomes beyond general direction that development within the built environment should occur in an integrated, sustainable, and planned manner, and minimise energy demand from

transport. The emphasis within the RPS for achieving minimised energy demand from transport is on housing intensification within existing areas of Hamilton (Objective 3.12 and Policies 6.5, 6.15 and 6A).

## 9.2.2 Peacocke – Current Strategic Planning Approach

This section will not review all the objectives and policies that apply to Peacocke. Rather, the current strategic planning approach for greenfield development is outlined and objectives and policies presented as required. This will allow a strength, weakness and opportunities assessment to be undertaken as part of an integrated urban design and planning assessment below. This overview can be broken down into three sections:

- Peacocke spatial organisation,
- Subdivision requirements, and
- Master plan evaluation.

The current activity status following subdivision/master plan approval will not be explored due to the *ultra* vires provisions<sup>15</sup>.

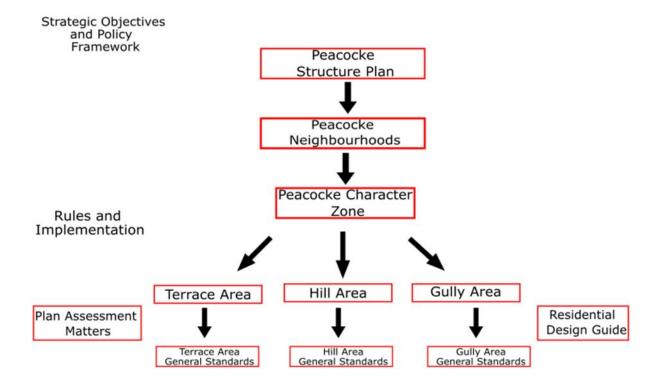
#### Current Approach - Peacocke Structure Plan Area

The Peacocke Structure Plan has been integrated within the Operative District Plan. The Structure Plan chapter provides the overarching strategic framework for Peacocke including specifying an overall target density of 16 dwellings per hectare. Reference is also made at this policy level to development providing for population densities that support passenger transport and mixed modes (Policy 3.3.1(c)), and interim land use and development that does not compromise the integrity and the viability of the land use pattern for the structure plan (Policy 3.3.1(d)). Importantly, the Peacocke Structure Plan does not seek to control subdivision and land use activities directly. Rather, it establishes the framework through the establishment of a comprehensive objective and policies that reflect the overall vision for the area. The majority of all objectives and policies for Peacocke are contained at this strategic level, with the lower levels of the framework focusing on the implementation of these objectives and policies (See Figure 9-1). The framework adopts a strong spatial planning approach through this framework within the Peacocke Structure Plan area with discrete areas being identified and their role in implementing the overarching objectives and policies being defined.

<sup>&</sup>lt;sup>15</sup> Two Environment Court decisions -activity status must be set by the RMA or by the Plan. A resource consent cannot be used to establish activity statuses.



Figure 9-1: Current strategic planning framework for managing greenfield growth in Peacocke.



The first layer of implementation of the Peacocke Structure Plan are the defined Neighbourhoods. These have been defined to support a well-planned and integrated manner. Additional support for the neighbourhood scale development pattern is provided through the identification of a Suburban Centre and Community Focal Point nodes. The suburban centre is earmarked within the Structure Plan for integration with the transport routes and to provide for the majority of commercial activities within Peacocke. The potential is identified for this centre to provide the opportunity for apartment style development within and beside the suburban centre. The Structure Plan contains generic statements surrounding the intent (street-based, mixed use) and location (transport route junction) but with limited translation into the objectives and policies. There is some support for mixed uses, however, this sits independent of the policies for the nodes. As neighbourhoods and nodes are couched within the Structure Plan, they are still focused on the relatively high-level objectives and policies for Peacocke. This is demonstrated within the wording of the objectives and policies which can be described as vision oriented (see Table 9-1).



Table 9-1 Objectives and policies relating to the implementation of neighbourhoods

#### Objective/Policy Objective 3.4.1.5 Ensure that higher density development is linked to social and natural amenity. Policy 3.4.1.5a Increase density around nodes, parks and riverfront areas. Policy 3.4.1.5c Intersect proposed passenger transport routes with nodes for critical mass of population and efficient interchange capabilities. Objective 3.4.1.6 Encourage an overlapping mix of land uses. Policy 3.4.1.6a Provide a wide variety of land use activities within comfortable walking distance of the highest population densities and amenity. Policy 3.4.1.6b Use mixed use planning rules to encourage a diverse and compatible range of activities, both vertically and horizontally. Objective 3.4.1.12 Develop the Neighbourhood as the building block of the area Policy 3.4.1.9a Development should be contained in distinctive neighbourhoods that are walkable and safe and linked by a high-quality open space network Policy 3.4.1.12a Establish an integrated network of neighbourhoods, each distinctive and each with its core and sense of place.

Character Areas have been defined based upon natural landforms and were promoted as a method of ensuring that urban development responds to the characteristics of that area<sup>16</sup>. The structure plan provides for three-character areas that are defined across the structure plan area shown in Table 9-2.

Focus neighbourhoods around parks, schools, centres, and main streets.

Table 9-2: Character areas and the purpose of the areas from the Structure Plan.

Character Area	Area Purpose
Terrace Area	This area is located adjacent to the Waikato River edge and has a high level of amenity. High density residential development would benefit from location in this area. Residential development will be a combination of general residential development, terrace housing and apartments.
Gully Area	The environmentally sensitive area of the Mangakotukutuku Gully network runs through the centre of Peacocke. Because of the natural sensitivity of this area lower urban densities are appropriate; lot sizes of between 800m² and 1,200m² would be more suitable for land immediately adjoining the gully system.
Hill Area	The undulating topography in the southern area of Peacocke is proposed for lower overall density (lot sizes of 1,000m <sup>2</sup> +) with higher intensity arranged along the ridgeline

The objective and policy framework for these Character Areas is contained within the strategic framework of the Structure Plan as shown Table 9-3. The focus has been on preserving the natural/environmental characteristics through development that is sensitive to the site context and the policy framework has been geared towards achieving this. While policy references 'higher density housing' opportunities within the Terrace area, it appears as if this is relative to the specific lot sizes referenced for other areas i.e.  $800m^2$ + sites along the gully network and  $1,000m^2$  sites in areas of undulating topography. **Given the above, we** 

Policy 3.4.1.12b

<sup>&</sup>lt;sup>16</sup> Peacocke Structure Plan 2007, Hamilton City Council.

consider that higher density housing development is unlikely to be achieved when the comparative baseline for density is at such a high level.

Table 9-3: Objectives and policies that relate to the implementation of the character areas.

Objective/Policy Number	Objective/Policy		
Objective 3.4.1.1	Protect and enhance significant natural areas.		
Policy 3.4.1.1c	Encourage lower density development (lot sizes of 800m <sup>2</sup> +) along t gully network.		
Policy 3.4.1.8a	Use natural features to define neighbourhood edges and inform the development of a diverse range of living environments across the growth cell		
Policy 3.4.1.3b	Large-scale earthworks and modifications to landforms should be avoided to ensure development responds positively to the landscape and enables the creation of a distinctive urban form.		
Objective 3.4.1.5	Ensure that higher density development is linked to social and natural amenity.		
Policy 3.4.1.5a	Increase density around nodes, parks and riverfront areas.		
Objective 3.4.1.16	Protect surrounding rural views behind ridgelines, distance views to the City and regional landscape features.		
Policy 3.4.1.16d	Provide for lower density development (lot sizes of 1000m <sup>2</sup> +) in areas of undulating topography.		

The established strategic framework for Peacocke places a clear emphasis on providing for residential development while ensuring that development is sensitive to the natural landscape. Essentially, this creates a bottom line for residential development and limits what can be done. For example, the identified suburban centre is couched within the Terrace Area. While generic references to higher densities and mixed uses made within policy, there is limited translation of this into rules and strong wording of policy using words like 'require' and 'avoid'. These limits extend to which increased densities and true mixed uses can be achieved. The supporting Structure Plan provides a clear summary of the desired outcomes from implementing this approach:

"create neighbourhood cells that are distinct from each other and follow a logical and well-crafted pattern. The purpose of the structure plan is to provide an overall vision and promote certain outcomes, that can then be used by individual developers when designing their subdivisions and through master planning of key areas, so that the components can contribute to the overall urban form. This is about how urban development responds to the natural and historical characteristics of the area in terms of being creative with urban form and avoiding a blanket approach to residential development" 17

#### **Greenfield Development Process**

Subdivision in the Peacocke Character Zone, where lots created are less than 2ha in the Terrace Area and less than 5000m<sup>2</sup>, in the Gully and Hill areas requires an accompanying Master Plan otherwise a non-complying activity status applies. The Master Plan approval process is assessed as a discretionary activity.

<sup>&</sup>lt;sup>17</sup> Peacocke Structure 2007, Hamilton City Council

Master Plans are subject to specific information requirements contained in Appendix 1.2.2.3 of the Operative Plan and must be prepared for the entire structure plan neighbourhood. Importantly, this requires the master plan to identify the location of commercial activities as well as residential densities, the urban from of the neighbourhood for which the master plan is prepared.

Land use consents can be bundled within the Master Plan approval process, otherwise they can be assessed for the individual development of a site within the Master Plan area at a later stage. The activity status for the relevant residential land use activities forming part of the Master Plan are outlined in Table 9-4 below.

Table 9-4: Residential Activity Status in Master Plan approval.

Residential Activity	Activity Status
Single Dwelling: first residential unit per site	Permitted
Single dwelling: second and subsequent residential units per site	Discretionary
Apartments	Discretionary
Duplex dwellings	Discretionary

#### Evaluation of Master Plans and Resource Consents

Currently, the Operative Plan allows for three evaluative tools to be employed within the Master Plan approval process and any subsequent land use consent:

- General Standards for Peacocke Character Zone,
- Residential Design Guide, and
- Assessment Criteria.

Generic guidance is provided within the Residential Design Guide for developments within the Peacocke Character Zone for developments providing apartments, papakaianga, duplexes, three or more single dwellings per site and integrated residential development.

There is policy support for the design guide; new development in the Peacocke Structure Plan area should demonstrate consistency with the urban design guide for the development (Policy 5.2.1f). However, in our opinion, the wording of this policy is not strong and the design guide has not been effectively integrated into the rule framework, which may limit the effectiveness of securing positive urban design outcomes. Assessment criteria are included within the Plan that can be used as guidance for discretionary and noncomplying activities. The assessment criteria include specific reference to the design and layout of development within a structure plan area and enable the consistency of the development to be evaluated against the Structure Plan and whether it could prejudice or foreclose options for future urban development (Appendix 1.3.3 (B17)). There is, however, no guidance as to the translation of the structure plan into subdivision design or urban form. Rather, the approach is to detail the specific information requirements for a masterplan (particularly the detailed development response) and rely on the developer to translate the structure plan into the master plan.

A number of General Standards are established for the Peacocke Character Zone that are used as a guide to assess any Master Plan(s), and as standards after a Master Plan has been approved. Established standards vary between the Character Areas in accordance with the desired outcomes for those areas. The Terrace Area and parts of the Hill Area provide for increased density supported through more permissive bulk and location standards while lower density patterns of greenfield development. No average minimum or average site areas are prescribed, and with the exception of 800m² for Hill Area (slope less than 5 degrees), no maximum allotment sizes are included. These are summarised in Table 9-5 and Table 9-6 below.

Table 9-5: Peacocke Character Zone Minimum site areas

#### Peacocke Character Area

Activity	Terrace Area	Hill Area (Slope Less than 5 Degrees)	Hill Area (Slope greater than 5 Degrees)	Gully Area
Single dwellings	400m <sup>2</sup>	400m <sup>2</sup>	800m <sup>2</sup>	800m <sup>2</sup>
Duplex dwellings	200m² (400m² per Duplex)	200m² (400m² per Duplex)	-	-
Single dwellings with an ancillary residential unit (*total area for both dwelling and ancillary residential unit)	*435m² (net site area)	*600m² per unit	*800m² per unit	*800m² per unit

	Shape Factor
All dwellings	15m diameter circle

Importantly, we note that for the Peacocke Character Zone there are currently no provisions and supporting guidance for integrated residential development activities that have been included for other residential zones. If land use consent for more comprehensive patterns of development are not sought at masterplan stage, there is a gap in the current ability of the Plan to enable or encourage comprehensive development after the master plan. This could potentially impact upon the delivery of master plans that identify super lots or blocks for development at a future stage and reduce the expected yields from those areas.

Table 9-6: Bulk and location standards for the Peacocke Character Zone

Zone	Terrace Area	Hill Area (Slope <5 Degrees)	Hill Area (Slope>5 Degrees)	Gully Area
Site Coverage %	40 Detached Dwelling 50% Apartments	40%	35%	35%
Permeability across entire site	20	35	40	40
Permeability of front setback excluding vehicle and access provisions	100	100	100	100
Building Height	12m (12.5m for rear sites)	10m	10m	10m
Height in relation to boundary	<ul> <li>Measured at point 3m above ground at an angle of:</li> <li>28 degrees between northeast and northwest</li> <li>45 degrees in all other directions</li> </ul>			
Building Setbacks	From Road: 3m Side and rear boundaries: 1.5m			
Interface between public and Private				
Residential Buildings on Same site	3m from nearest part of any other residential building  Not required for shared walls  Where windows are located to avoid views: 1.5m			
Outdoor living space	60m² per unit			

# Medium Density Residential Zone

The application of the Medium Density Residential Zone (MDRZ) with other greenfield areas within Hamilton requires assessment due to the parallels with Peacocke. This zone has been implemented to provide opportunities for comprehensive planning of greenfield areas to facilitate medium density housing. Any strategic options assessment must consider the tools that have already been exercised.

The MDRZ has been applied to greenfield areas that have established structure plans. The main considerations with the MDRZ is in division of the areas subject to this zone into a number of comprehensive development plan areas and specifying target residential unit yields for those areas. The MDRZ requires the preparation and approval of a CPD prior to any development occurring in that zone. The information requirements for CPD's are prescribed within Appendix 1.2.2.8 of the Plan, and includes:

- i. Staging,
- ii. Main block pattern,
- iii. Roads and access ways,
- iv. Stormwater solutions,
- v. Reserves,
- vi. Bulk and location of buildings,

- vii. Demonstrating land use patterns and alignment with structure plan, assessment criteria and urban design guides, and zone standards,
- viii. How the development integrates with infrastructure, and
- ix. Site development patterns that illustrate the activity types, building footprints, number of residential unites proposed, typologies, and how the target yields are to be met.

The implementation of the MDRZ incorporates a number of elements that have been identified in the case study assessments. The first of which is in requiring comprehensive development that links land use and subdivision consents. This enables the resultant housing typologies to be considered as part of the consenting process and generally provides for more intensive forms of development. Subdivision alone is unlikely to achieve duplex, terraces, or apartments as it is difficult to enable these as permitted activities through enabling performance standards. The comprehensive development process also enables the consideration of Identified target housing yields for entire greenfield areas and on a smaller block scale (e.g. Te Awa Lakes) and how these targets are to be met through the development process. This is a significant strength of MDRZ as it establishes a bottom line for the evaluation of the comprehensive development consents. While a focus on yields can come at the cost of urban design outcomes, the yields are supported by:

- Specific policies for individual greenfield areas (e.g. Te Awa Lakes Medium Density Residential Zone) that promotes medium density in conjunction with high amenity and multi modal transport that gives effect to the objectives and policies of the relevant Structure Plan.
- Provides support through rules and policy for establishment of mixed-use node within a specified area (Ruakura Integrated Retail Development)
- Zone specific design guidelines to be used as assessment criteria for comprehensive development plans.

While several strengths can be identified within the implementation of the MDRZ, a number of weaknesses can also be identified when considering achieving density and diversity in greenfield areas. The first weakness is the absence of incorporating desired or possible housing typologies within the planning framework for these areas. While still a strength, the focus on density and target yields comes at the expense of housing diversity. The target density (16 dwellings a hectare) and requirements on yields lends itself to the delivery of standard detached dwellings on smaller sections. This could be compounded by the design guidelines for the MDRZ providing largely bulk and location requirements for the entire zone that do not provide guidance as to achieving housing typology diversity. While this is not necessarily a criticism of the implementation for this zone, it does limit the transferability of the MDRZ to Peacocke without solid retrofitting to achieve the purpose and required outcomes for that area. If land use and subdivision are to be considered together then this does not provide certainty to developers as to what is expected and increases the regulatory discretion required for achieving good quality development.

#### 9.3 Conclusion

The review of the current strategic planning framework for Peacocke has shown that, at the time of formulation, the intent of the zone was on the conservation of the natural landscape values of the area. Higher residential densities are unlikely to be realised when this is the priority within the framework. While the Structure Plan does contain a vision for higher densities around key amenity nodes and a mix of land uses, there is a disconnect between that and the translation into the rule framework for the underlying zone. The current approach to managing greenfield development is a hybrid of options, including the bespoke zoning (Peacocke Character Zone) and the delivery of this zone through a developer led Master Plan. The emphasis of implementation of a detailed design at the developer level is typical for greenfield development that promotes suburbia. Any Master Plan that is prepared within this environment will largely reflect this and deliver a continuation of established patterns of greenfield development that are provided for within the rule standards. There is a 'ready built' option available for Peacocke in the Medium Density Residential Zone, however this is not without shortcomings. Peacocke has a number of unique constraints presented with the gully network and areas of high value, and the landscape approach clearly has been formulated to reflect them. Protection for these areas and intensive residential development are not mutually exclusive and can be achieved through a framework that enables the delivery of high quality urban development.

## 10 Peacocke Analysis

Following the review of current strategic planning approach in the above assessment, this section considers from an urban design perspective what has been delivered, and what are the missed opportunities in terms of what could have been delivered based on the existing structure plan and planning framework. This allows for careful consideration of what should be provided under a revised structure plan and framework. As development has already been realised at Amberfield, there is an evident understanding of how the existing provisions have shaped development already.

## 10.1 Greenfield development in Peacocke to date

The character areas of the Structure Plan are largely based on topography which creates significant constraints in this part of Hamilton. This leads to a different approach to each character area based on its ability to absorb development whilst retaining the character and ecological/environmental conditions. In general, the terraces and hills are the easiest to develop. With the gully area the most sensitive.

The design guidelines within the Structure Plan appear to be too basic to guide development that would significantly enhance the character of these distinct areas. The densities also appear to be inappropriate and open to interpretation by the land developer. This is because, as the planning assessment has shown, the rules concentrate on lot size rather than net density. Therefore, the plan would anticipate lots of 800-1,000m² to preserve an environment rather than increasing open space in sensitive areas and increasing net density on developable areas. A dramatic change in the greenfield development paradigm is unlikely to be achieved where the focus in the planning framework remains on the preservation of the natural characteristics of that area. The rule structure as it currently stands is likely to continue the status quo.

The Structure Plan fails to address or reinforce higher density neighbourhoods based around neighbourhood centres and a public transport route. The character areas, which are landscape based, appear to drive the urban outcome rather than develop the correct urban response to the landscape and road network. There also appears to be a missing component when it comes to locating key activity centres, neighbourhood centres, and specialist centres.

A first tranche of development has been consented within Peacocke. This is significant for the entire Peacocke area in that:

- It occupies a prime riverfront area;
- It is in the terrace character area, which is suitable for higher density development;
- It was allocated a suburban centre;
- It has access to the river and potential ferry stop;
- It has two local arterial roads converging with potential of public transport; and
- Is connected by a good cycling network to the city centre.

The development in its consented form has not delivered upon a suburban neighbourhood centre (yet), ferry wharf, diversity of housing stock or density. It is important to acknowledge that the first tranche will deliver a density (18 dwellings per hectare) that is above the target density (16 dwellings per hectare) that is articulated within the planning framework for the area. However, it is important to consider that the

remainder of Peacocke has large areas have constraints that will prevent higher density greenfield development.

This development has delivered upon the vision for Peacocke as it was articulated within District Plan and the Peacocke Character Zone. While the Structure Plan establishes a broader vision for higher densities in areas that can accommodate them (the Terrace Area), the result has been a mix of large section sizes (60% of sections are larger than 500m²) that will provide for predominantly single storey, detached dwellings. An important implication for the consenting of a master plan over such a large area is that the subdivision design reflects current development option feasibility. While this development will use a staged approach, there is limited variability within the lot sizes that have been consented from the first stages to the latter stages. Without a variation to the consent, large scale changes to the subdivision design in response to changing feasibility will be difficult.

Rather than provide a detailed design of the suburban centre at this stage, a super blocks have been identified around the suburban centre. While this makes commercial sense now as the M.E analysis has shown that these development options are not currently feasible, there is little certainty as to what will be delivered in the future. Under the current District Plan and without encumbrances on the titles of those lots requiring density targets, there is very limited control over whether higher densities will actually be realised from these super blocks. A further consideration is in the hard interface between the dominant 'Suburban design' and these super blocks, particularly on the northern end. Much of this area is still within the pedestrian catchment for the suburban centre and potential public transportation routes.

Additional medium density lots for duplex dwellings (~200m²) have been identified close to the suburban centre, however with the excess of open space through the area these could have been more widely distributed throughout the subdivision area. An important feature of these medium density lots has been the incorporation of rear access to improve the streetscape. This indicates that attempts at implementing good urban design principles were made, however, were largely buried beneath the commercial desire to deliver upon current buyer expectations and market demand. The key implication of this development is that it is underdelivered on housing density and diversity. This may have compromised the ability of Peacocke to cater for further residential growth and increased typologies through the removal of land by way of delivering conventional subdivision i.e. largely 3+ bedroom detached houses which do not reflect the intent of the Structure Plan or the consultation process. It is sprawling suburbia set within an excess of open space making it even more sprawling. This is not urban design led. It is obvious through the subdivision of that the vision and intent to deliver higher densities within Peacocke area cannot be enforced using the mechanisms within the existing District Plan. The densities are too low and based on:

- site size,
- the character areas have only generic design guidelines, and
- the activities expected (Key suburban Centre and diverse housing stock) are not enforceable.

## 10.2 Missed Opportunities

On review of the developments within several of the 'Terrace' neighbourhood areas, the following key lessons are outlined as a result of missed opportunities:

- There needs to be more emphasis on diverse typologies clustering development into higher net development areas within the character landscapes.
- The amenity of the riverfront terraces are other high amenity value natural areas are attributes that can be used to lift density and variety of housing types by tapping into demand considerations.
- Access to the river is paramount, it is the greatest asset for the Peacocke greenfield area. Access along the river by walking and cycling, access to leisure on the river, and to a ferry that could take residents to the city centre or even airport should be capitalised on in these scenarios.
- Furthermore, development intensity should be increased around neighbourhood centre areas by integrating mixed use typologies including apartments overlooking the river.
- The integration of rear lanes can also be utilised across the entire development rather than in small areas to increase density without destroying streetscape with garages.
- The use of rear lanes to deliver high quality streets that encourage walking, cycling and just spending time.
- The existing Structure Plan and District Plan are inadequate in delivering an outcome very different from conventional suburban subdivision.

Furthermore, the transport network has public transport absent from the Structure Plan. One of the drivers of higher density is access to amenity (open space, community, work, retail, and public transport). The new state highway effectively cuts through the Peacocke area, delivering through traffic to the city. There may be reasons why it did not join the existing State Highway earlier and reduce to a local collector. Given that this route is set in place, it is assumed that connections to this route will be limited until it splits at the north towards the city and the north-west of the city. Given that much of the State Highway also follows the gully there would be little point in running a public transport corridor along it. That leaves the local collectors (or minor arterials) as the potential public transport routes.

### 10.3 Strategic Planning Assessment

While both the Structure Plan and the District Plan establish the attractiveness of and desire for higher densities in areas of Peacocke, the evidence shows that this is not sufficient for realising a range of densities and housing typologies. It is clear that what has been delivered has largely been the desired outcome for this area, however there is a requirement for a substantial shift in greenfield development patterns if yield targets are going to be met. The M.E report provides a clear understanding as to what development options and densities are currently feasible and what will be feasible in the future. However, evidence from recent developments in Peacocke, as enabled under the current planning framework, show that the development options that are feasible are unlikely to be achieved, particularly as this relates to medium density development. The evaluation of the strategic planning framework within this report enables strengths and weaknesses of the current strategic planning framework to extracted. While it is acknowledged that HCC are aware of the limitations of this framework, it is important to undertake this exercise to inform the recommendations and options assessment that are presented in the following section. The strength, weakness and opportunities assessment is a method that enables the planning and urban design aspects previously presented in this report to be tied together in a digestible format. This is presented in Table 10-1 below.



Table 10-1: Strengths and weakness - Strategic planning framework for Peacocke.

#### Strengths Weaknesses

- The Vision and Objectives are well expressed and seek to deliver a more sustainable urban form that respects nature, landform and culture.
- The Structure Plan is based on landscape and topographical character and recognises the landscape and ecological sensitivities of the zone area.
- Promotes comprehensive neighbourhood scale approach to Master Planning to prevent ad-hoc development.
- Provides framework for encouraging different densities in different areas.
- Provides for duplex dwellings.

- The District Plan does not reflect increased development densities. The policy framework places a clear emphasis on the preservation of the natural characteristics which has led to the delivery of status quo greenfield development.
- The character design guidelines are not as strong or directive as they could be and could have a stronger emphasis in the rule framework supporting the zone.
- Without showing public transport it is difficult to address density.
- Absence of comprehensive development requirements or opportunities.
- The neighbourhoods promoted through consented development shows that the developer driven master plan approach is not delivering diversity, mixed use centres or good urban outcomes.
- Limited provision for non-residential activities and mixed-use nodes. Lack of walkable neighbourhood centres and the area has now lost the opportunity to deliver a Key Activity Centre.
- Provides easier development option with permitted activity status for single dwelling per lot development in Master Plan process.
- If density is increased there are no rules to reduce impact of car on the streetscape.
- Lack of comprehensive planning relies on neighbourhood scale development to deliver on overarching vision.
- Urban design guidelines not implemented strongly in policy and rules.
- There is limited integration of subdivision to density and urban form.

#### Opportunities

- To address the Vision more directly in the Policy and rules.
- Strengthen the policy framework to provide explicit support for achieving higher densities and housing diversity (targeted towards maximising key activity nodes).
- Revisit the Design Guidelines so that they better articulate landscape character, and topography, dwelling typologies and densities expressed in the Vision and are better articulated within the statutory planning process.
- Create denser neighbourhoods based on walking distance to public transport.
- There is opportunity to tighten up on density and subdivision rules to deliver better urban design outcomes through a new zoning framework and more prescriptive design guidelines.
- Need to revisit the mixed use and retail strategy.
- Need to link subdivision with typologies and design guidelines to get diversity, density and good urban design outcome through a comprehensive process.



# 11 Recommendations & Options

This chapter considers the conclusions made by Market Economics and the planning and urban design analysis undertaken in the above chapters, to formulate a variety of recommendations for Hamilton City Council. Several recommendations have been outlined below that seek to enable the feasible development options over the short, medium, and long-term while considering the strategic assessment objectives outlined in Section 6.2.

These recommendations have been framed as what needs to happen to enable the commercially feasible development options. These recommendations have been categorised into two parts. Firstly, general recommendations that are established from best practice review on how to deliver a range of densities and housing diversity in greenfield areas. The second part includes Peacocke specific recommendations.

## 11.1 Considerations Informing Recommendations

The assessment undertaken thus far has relied upon qualitative assessment of Peacocke and examples from other authorities in New Zealand. To provide further guidance as to the recommendations progressed in the following section, a review of literature was undertaken to ensure that they are informed by an understanding of how a strategic planning response can influence outcomes. The following points from this review have been considered:

Efforts to exert control or to manage greenfield development through planning are required to address market failures which in this case is the delivery of housing that, from an urban design and overall yield standpoint, has occurred in an undesirable manner. Any regulation that seeks to promote an outcome will accrue regulatory costs to the local authority and to the developer. Therefore, it is important to consider how and where these costs accrue prior to promoting a certain strategic planning response. No attempt has been made to quantify the cost of the recommendations below as this is out of scope and our expertise, however, good practice and section 32 of the Resource Management Act 1991 dictates that these must be considered.

Costs on Council's end are relatively easy to quantify in terms of time and resources of a particular policy response. However, it is in estimating the efficiency of these responses in terms of time spent vs the observable outcome that can be difficult, especially as the benefits of well managed development can take years to accrue before there are any observable positive benefits. The recommendations and suggested approach below have not attempted to make a judgement on efficiency, rather they are based on the resourcing required to implement.

Two types of costs from regulatory control can be identified for greenfield development: compliance costs and deadweight costs<sup>18</sup>. Compliance costs are direct costs on individuals seeking to develop a greenfield site through a resource consent process. They are essentially the resource costs required to prepare the information for, and the processing of, resource consents. This also considers delay induced costs through public notification, further information requests, and hearings. Front end costs accrued through consenting

<sup>&</sup>lt;sup>18</sup> Understanding the Costs and Benefits of Planning Regulations: A guide for the Perplexed. Auckland City Council Technical Report 2016/018.

can directly influence a developer's decision to progress with development<sup>19</sup>. Deadweight costs are those that arise from limits on what individuals can do with greenfield sites (e.g. achieving typology mixes and design requirements for balconies or minimum floor areas) and through the uncertainty that arises from applying for resource consent.

Compliance and deadweight costs can be examined through the urban design and the regulatory discretion applied to evaluating resource consents. While (almost) universally acknowledged as a pre-requisite for ensuring public good from higher density developments, good urban design outcomes are difficult to achieve solely through blunt instruments such as built form standards. Planning frameworks that do not provide strong guidelines for progressing a development can lead to increased costs through the uncertainty and requirements for the redesign of development areas following feedback<sup>20</sup>. In theory, deadweight costs can be reduced through a highly prescriptive or codified planning framework that provides clear thresholds for whether a development can be supported from a policy standpoint. However, this can result in a high compliance costs early on for developers and potentially 'lock in' a development that cannot react to changing market conditions. Therefore, if a highly prescriptive approach is adopted it must be forward thinking and reflect feasible development options in the future. This is the value integrating the modelled commercially feasible development options within the strategic planning response for Peacocke.

Several other key considerations/assumptions have been made in the formulation of these recommendations that are important to communicate:

- These recommendations have been made based on the housing yields outlined within the business case for the HIF funding which forecast Peacocke to supply 3,750 dwellings over the next 10 years (through to 2029/30) and the aspirational target yield of 8,200 houses.
- Consented development will deliver approximately 800 dwellings and will absorb most/all of the available servicing infrastructure capacity. This is also an area identified in structure plan as having greatest potential for density and a key suburban centre.
- The supply of infrastructure to service Peacocke will introduce a "natural" staging/sequencing of development.
- Whilst District Plan provisions are important, development will still be shaped by demand and feasibility for residential typologies. However, if left to its own devices the building industry will deliver detached family housing regardless of demand for other typologies.
- The influence of the NPS-UD and the removal of minimum carparking requirements has not been expressly considered. It is assumed that market demand for off street parking and garaging will still be met by developers.
- Existing Medium Density Residential zoned greenfield areas in wider Hamilton have the capacity to meet a share of short-term demand for diversity of typology but there is little evidence that it is delivering different typologies in any quantity.

<sup>&</sup>lt;sup>19</sup> Impacts of Planning Rules, Regulations, Uncertainty and Delay on Residential Property Development. Arthur Grimes and Ian Mitchell. Motu Working Paper 15-02

<sup>&</sup>lt;sup>20</sup> Impacts of Planning Rules, Regulations, Uncertainty and Delay on Residential Property Development. Arthur Grimes and Ian Mitchell. Motu Working Paper 15-02

The recommendations below will allow us to assess the 'best fit' of the options presented in the planning toolbox section and is presented in further detail in following sections.

#### 11.2 Recommendations

A number of general recommendations are made below that have informed specific recommendations below.

#### Overall

- 1. The strategic planning approach for achieving quality greenfield development requires more than a permissive planning rule framework.
  - a. Develop a planning framework that allows for the assessment of greenfield development against the desired outcomes.

Examples of the successful delivery of medium density development has shown that there is a need for an urban design evaluation process that has the ability to assess proposed developments against a range of criteria, in a robust and defendable manner. The absence of good examples of medium density housing using this approach illustrates that it is difficult to develop rules or performance standards for a permissive rule framework that actually translates into quality greenfield development.

Experience has shown (and can be seen in Tauranga) that if loopholes are available within planning instruments, then good policy intentions will not be realised. Proposals must be subject to scrutiny and a policy framework exists that enable Council to maintain a position of strength within the "negotiations" for greenfield development.

b. Avoid a broad-brush zoning approach that seeks a single housing outcome.

A planning framework that enforces a range of housing typologies is critical to ensuring that they are provided in greenfield development. There also needs to be an additional layer of planning tools that Council and the developer can rely on to promote a subdivision pattern and built form outcome that delivers good urban design, architecture, and public realm design.

Tools such as the Structure Plan, Outline Development Plans, Master Plans, and Urban Design Guidelines are critical to guiding the development of mixed typologies. Generous planning provisions on their own may enable development, but without further tools guiding overall development and spatial planning of an area, whether it is big or small, development may otherwise occur lot by lot, resulting in uncoordinated, ad hoc pattern of intensification.

2. Quality medium density development requires mixed uses to be enabled to realise the full range of benefits available.

Overcoming negative perceptions of medium density housing will rely upon the market delivering a product that provides an acceptable level of public amenity. Medium density provides less private amenity for the household and is generally sacrificed for proximity to public amenity such as shops,

hospitality, leisure, open space and public transport. It is therefore paramount that these are offered and enabled within any strategic planning response to increasing housing densities and diversity.

 Consultation that enables a developing understanding between council, landowners, stakeholder interests and developers is important to the successful implementation of higher densities and nodes/mixed uses.

Realising the opportunities for delivering the modelled commercially feasible development options will require a significant paradigm shift in the way current greenfield residential development is delivered. Encouraging developers to supply a product that they have limited experience in, to a market with little exposure to those products, requires buy in from multiple parties. This can only be achieved through a comprehensive consultation/collaborative process that will require education and negotiation on all sides.

4. The availability of 'easier' development options in planning framework needs to be reconsidered to encourage increased density and housing diversity.

Lower density development options are superficially attractive to the existing building industry which is focused on house and land packages. The implications of this are that it can constrain the ability of greenfield areas to provide/deliver comprehensive development opportunities. The impact of this can be seen in the consented development which is located on the easiest developable area (the Terrace Area) and has only delivered a net dwelling density of 18 units per hectare. Higher density housing was weakly promoted within the policy framework, resulting in the delivery of the status quo as the easier outcome and the opportunity for increased densities has been lost. Large scale change is more likely to be achieved where it is less likely to be affected by fragmented patterns of ownership and development. However, this has not stopped the largest landholding in the area delivering a sub-optimum result in pursuit of short-term gain.

Attempts at providing for a comprehensive development option within areas earmarked for medium density in Tauranga (Papamoa Medium Rise Plan Area) were hamstrung by the availability of an easier, and in the short term more profitable, option to deliver independent dwellings at a significantly reduced yield than what was possible within that regulatory environment. If a strategic planning option is progressed that provides for a comprehensive development process to achieve density and diversity, other pathways for greenfield development that deliver on the status quo must be disincentivised or removed completely. These pathways must remain in certain areas over the short term due to commercial feasibility and market demand, however they should not be the default option moving forward. While any move to attach, for instance, a non-complying activity status on detached independent dwellings will be hugely unpopular within the development community, forums are available for education and consultation on the areas where these may still be progressed and those for which higher densities are required to ensure efficiency of infrastructure supply and land use within Peacocke.

5. Reduce consenting risk by Council lowering the risk of notification during the Resource Consent process where developers are following a desired process.

The risk of notification can be a significant barrier and hindrance for developers wanting to undertake large comprehensive developments in a greenfield area. Notification creates another layer of uncertainty and cost as it may draw attention away from the matters for which Council has reserved control or discretion. Increased risk and uncertainty will directly influence developers' decisions to

progress with more challenging models of development due to issues with financing. Precluding notification is one of the easiest ways in which Council can incentivise a development pathway provided that it is not *ultra vires*. In this regard, it may be necessary to only offer this in areas where there is a high degree of confidence that the effects of the proposal will be internalised and less than minor.

If a developer follows a desired planning process (for example, preparing a resource consent for a comprehensive development within the requirements of the ODP and/or Urban Design Guidelines), Council should consider precluding notification alongside a lowered activity status. Opposingly, if the developer does not intend meeting ODP requirements, a heightened activity status and subsequent risk of notification should be considered. Ultimately, this steers the developer to complying with Council's desired outcomes, whilst providing a level of certainty that they can achieve a resource consent in a low risk, time, and cost-efficient manner.

Additionally, developers may be more inclined to push for more innovative development plans which encourage a range of mixed typologies and uses, rather than what becomes immediately obvious as the 'path of least resistance'.

#### Structure Plan

6. Develop a strategy for consultation with landowners and developers to identify areas that will be promoted for comprehensive development and intensification through the Structure Plan refresh process.

Landownership in Peacocke is fragmented. The largest area within single ownership has already been consented for development. If the ley activity/mixed use node approach is to be implemented, it is likely that they may be located in an area with multiple owners. Consultation will be required to ensure that the location of activities and, if required, intensive design processes have buy in from all parties involved. The opportunity for promoting a land amalgamation policy could also be introduced. The consultation platform can also be used to educate the development industry and landowners of the viability and desirability of good density within the correct urban framework. This includes discussing the typology ranges and communicating the feasibility of development options. The case studies have shown that buy in or early adoption from a single developer or consortium can be a key factor for delivering on densities and diversity in housing typologies.

- 7. Revise the Peacocke Structure Plan through:
  - a. Identifying new areas suitable for key activity nodes and along local transit arterial routes and prepare guidelines for those areas that support the realisation of available intensification opportunities.

This recommendation means adopting the walkable neighbourhood approach to spatial planning. This will enable medium density residential development within a comprehensive mixed-use approach for development that promotes increased walkability to goods and services, public transport, and open spaces / recreational / leisure opportunities. This will mean a base minimum density of at least 20 dw/ha. With sufficient controls to assure diversity and good urban design outcomes.

b. Supporting key activity nodes through a detailed design led process for the entire Peacocke Area.

Outcomes from the existing neighbourhood scale masterplan process have compromised the ability of the previously identified suburban centre to deliver the full range of benefits it could provide. The loss of this area and the benefits that could be provided therefore require a rethink of how these could be delivered in other areas in Peacocke.

While the likely densities realised (18 dw/ha) are above the minimum target set within the RPS, the Terrace areas supporting this development could have realised much higher densities. The implication of this is that higher densities may be pursued in areas that are less suited to support them. These can comprise the ability of Peacocke to provide a high quality, sustainable urban environment.

c. Undertaking a detailed urban design exercise that defines discrete spatial areas, block layouts and informed individual housing yield targets.

A core theme of the successful medium density examples has been the level or urban design that has happened prior to any development occurring. This has happened either at the plan change stage or as a comprehensive development plan. This enables an easily communicated vision for the development area that can then be pulled through into the policy framework that gives effect to the structure plan. Defining housing yields can often become mired in debating the benefits of one target over another. However, it is necessary in that it provides guidance to developers and for the implementation of increased density and diversity in housing typologies. Setting a target that is beyond the threshold for what can be achieved with standard greenfield development patterns can push developers to look at other housing typologies. This can then also be pulled through into a rule framework that can apply noncomplying activity status for those developments that do not current meet the yield targets.

### Plan Change

- 8. Develop and deliver a policy and rule framework through the Plan Change that differentiates between areas that have been identified to:
  - a. Accommodate key activity nodes that contain complementary activities to promote a transit based focus to development

To be successful, medium density residential development needs to be comprehensively planned as part of 'mixed use' approach where a variety of different living, working and recreational activities are in proximity within a walkable neighbourhood. Neighbourhood centres should be within 400/500m walking distance from residential and a larger centre such as a Key Activity Centre can extend that walking distance to 800/1,000m. This gives a catchment of 50 hectares and 200 hectares. Neighbourhood, mixed use centres should include:

- Food outlet, cafés, restaurants and other shops;
- Public transport stop;
- Open space / recreational / leisure opportunities;
- Educational facilities (not necessarily any particular type);

- Regular public transport on a direct route to City or other Key Activity Centre; and
- Some low level commercial activities (doctors, dentists, shared office space).
- b. Requires development to be undertaken in accordance with urban design guidelines implemented within the district plan that can be used to assist developers and decision makers. Urban Design guidelines should be developed to guide developers on a range of housing typologies and should form part of Council's regulatory decision-making process. Design guidelines need to be implemented and integrated within the district plan processes (i.e. a requirement to consider as part of any master plan, or resource consent matter of discretion when development does not comply with ODP). The guidelines should consider the typologies presented in Section 44 and the subdivision design that should be considered for the delivery of these. Guidelines should outline:
  - Site sizes;
  - Outline site dimensions that support various housing typologies,
  - Propose a mix of typologies,
  - Bulk and location of buildings,
  - Materiality of buildings,
  - Private, semi-private and public space, and
  - Landscape and public realm.
- c. Provide strong policy framework that supports for proposal satisfying a range of criteria that:
  - Provides for Mixed uses;
  - Achieves specified density or yield targets;
  - Meets a required target mix of housing typologies;
  - Innovative design to recognised standards;
  - Provision for alternative transport modes and density that supports that;
  - High quality urban and architectural design;
  - Establishes density or yield targets for a spatial areas. E.g. Minimum of 20 households per hectare net for the entire with preference for a higher figure in specified areas, and
- 9. Provide for a Comprehensive Development consenting approach to greenfield development.

There is an implicit connection between land use and subdivision when it comes to achieving density and housing diversity. Achieving a desired built form outcome relies upon a lot or lot arrangements that can provide for a housing typology mix. Where medium density development has been achieved successfully in the case studies, subdivision been married to the resultant typologies. This is not to say that the exact architectural designs should be known prior to consenting, rather there should be a clear understanding of what style of residential development will be delivered in that location.

This is where the Comprehensive Development approach is an important tool for the delivery of a mix of housing typologies. As discussed previously in recommendation 4 the availability of easier development options needs to be reconsidered. The Comprehensive Development consenting approach can be an effective regulatory vehicle for removing these options. This approach does not need to preclude traditional patterns of greenfield development, as these can be delivered alongside present or future development that will deliver upon other typologies.

10. Require the supply of identified super lots within subdivisions in the short term to ensure that a mix of housing densities and typologies can be spread throughout Peacocke.

A key identified issue and objective for this assessment is in how the interplay between achieving housing density while accommodating development option feasibility can be achieved. This is especially important due to the need to meet short-term yield targets for Peacocke and avoiding mono housing supply in areas where infrastructure becomes available earlier. Our assessment has identified that supe lots or future development lots that are reserved within subdivisions for higher density housing typologies are an effective way of managing this trade off. Identified super lots can accommodate shortfalls in housing yields for subdivision in the short term that will not meet the required or identified density targets for that development area. It would be impractical and detrimental to require all development in the short term to meet those yield targets as developer resistance could mean that no housing is delivered in Peacocke over the short term.

Super lots or future development lots are a pragmatic solution for achieving yield targets through avoiding applying non-complying activity status to development that will meet short term demand and overall yield targets over the next 10 years. These allotments can be earmarked for more intensive forms of development when they become commercially feasible. The successful implementation of these is in how required densities will be met for these allotments. Encumbrances can be placed upon the title of these lots that require the development of the lot to achieve certain yields or densities. This approach has been used within the Residential New Neighbourhood Zone in the CC Plan and the Auckland Unitary Plan. The palatability of such an approach should be explored.

### 11.3 Analysis of Strategic Planning Options for Peacocke

The options presented in Section 9.1 above have been evaluated to identify a 'best fit' approach to realising the commercial feasible development options identified in the M.E Report. The following table (Table 11-1) considers the strengths and weaknesses of the planning toolbox options, in order to identify an effective implementation strategy for greenfield development in the Peacocke area.



Table 11-1: Strength and weakness assessment of the planning tools available for managing greenfield growth in Peacocke.

Option	Strength	Weakness
Bespoke Zoning and Precincts	<ul> <li>Can be used to manage areas within Peacocke to facilitate different densities and housing typologies/housing development options.</li> <li>Strong emphasis on spatial planning through requiring zone and precinct boundaries to be defined that will contribute to high amenity value/mixed use nodes being established. This recognises that not all areas of Peacocke can provide/are suitable for more intensive patterns of greenfield development.</li> <li>Enables the natural characteristics of Peacocke to be accommodated.</li> <li>Can enable comprehensive planning of high value areas that will prevent ad-hoc development that ultimately reduces the potential yield and opportunities for the establishment of high density residential.</li> <li>Enables specific policy framework to be prepared for these areas that supports the desired outcome for these areas</li> <li>Zoning/precincts can be developed that target/enable the delivery of housing that meets the forecast feasible development options.</li> <li>Provides for standards/design guidelines to be developed for areas that can be used to exclude current greenfield development patterns</li> <li>Implementation through plan change process will enable consultation and engage developers/landowners early</li> <li>This is an agile approach that can easily allow for other tools to be integrated into this response and applied where they are appropriate.</li> </ul>	<ul> <li>Resource intensive to develop policy framework for each zone.</li> <li>Effective implementation relies on robust policy framework and activity status that enables Council to decline development that does not deliver desired outcomes.</li> <li>Potential for rules and framework to be watered down through plan change process.</li> <li>Requires a comprehensive consultation to legitimise what the 'desired' outcomes are intended for the area.</li> <li>Difficult to achieve consensus when there are multiple landowners</li> </ul>
Apply existing Medium Density Residential Zone	<ul> <li>Creates a greater level of consistency across the district and certainty for developers on how rules/applications are assessed.</li> <li>Established and tested policy framework that can employ existing assessment criteria for design, layout, character, and amenity for residential development</li> <li>Greater certainty on what the existing zone provisions currently deliver and how it would therefore shape new greenfield development areas.</li> <li>Existing Medium Density Residential Zone provides for design assessment criteria and comprehensive development plan process.</li> </ul>	<ul> <li>Danger that if the existing zone provisions are not 'well tested' and are inappropriate for the scale of greenfield development in Peacocke, the desired housing supply and typologies and built form will not be delivered.</li> <li>Medium Density Zone provides for a very limited range of non-residential activities. Would not effectively provide for mixed uses around any activity nodes, so the zoning response would need be wider than just a Medium Density Zone response.</li> </ul>



Option	Strength	Weakness
Outline	<ul> <li>Duplex, apartment, and single dwellings all have the same activity status within comprehensive development plan process.</li> <li>Easy to transition through plan change process with limited resource required compared to creating new provisions.</li> <li>Allows Council to guide high level design process prior to rollout of</li> </ul>	<ul> <li>Suitability of existing zone has not been evaluated since implementation. Insufficient evidence to support the effectiveness of this response for Peacocke.</li> <li>Emphasis on total yield from greenfield areas subject to this zone are not supported by strong urban design guidelines.</li> <li>There is little evidence of this delivering different outcomes from normal conventional development.</li> <li>Resource intensive before greenfield development can commence.</li> </ul>
Development Plans and the Resource Consent Process	<ul> <li>development in greenfield areas.</li> <li>Could be used as a tool to design and implement key activity areas with a high level of transparency for developers as to where specific residential typologies of different densities should be focussed (as well as other mixed uses i.e. commercial, educational).</li> <li>Allows a natural 'staging' approach to be enabled, by having staged areas within the ODP which can deliver the most in-demand housing typology (i.e. 3+ bedroom detached dwelling over short term), whilst setting aside key activity areas for when area is more established.</li> <li>Allows Council to manage 'complimentary activities' i.e. the location of key transport hubs, ensuring walkability of less than 800m to mixed use activities (i.e. commercial, educational, open space).</li> <li>Allows for further detailed design integration of good urban design principles such as green and blue lanes throughout the development (such as was achieved in the Halswell North area).</li> <li>Allows developers to prepare resource consent applications with a lowered activity status (i.e. controlled compared to restricted discretionary) if complying with the requirements of the ODP and therefore, creating an incentive for developers to follow Council strategy as well as making application process more attractive by providing greater investment certainty.</li> <li>Could promote 'comprehensive design' planning rules which require developers to undertake subdivision and land use under the same consent.</li> </ul>	<ul> <li>Require additional resource from Council compared to a developer led master plan process.</li> <li>Halts development from occurring until ODP has been approved and implemented within District Plan.</li> <li>Often relies on 'comprehensive development' provisions which can be onerous for developers.         Is only as strong as the rules that control subdivision application.     </li> </ul>
Future Urban and	Sensitive to the changing commercial feasibility of land through time and the changing demand over the medium to long terms.	Could artificially constrain land supply and harm overall housing affordability in the long term.



Option	Strength	Weakness
Transition Zoning	<ul> <li>Could contribute to limiting the cherry picking of easy developments that meet the short to early medium-term demand but overall harm the delivery of an integrated neighbourhood.</li> <li>Controls land scarcity to increase commercial feasibility of higher densities to meet the demand in the short to medium term.</li> <li>Increasing land scarcity could encourage developers to explore higher density development options with marginal feasibility over the short and early medium term.</li> <li>Integrates well with the overall timing of infrastructure supply across Peacocke.</li> </ul>	<ul> <li>Does not address or provide policy response for encouraging greenfield development with increased density and housing diversity.</li> <li>Relies on market response to deliver diversity which is subject to external influences and the unavailability of easier greenfield development options with urban boundary of HCC.</li> </ul>
Master Planning	<ul> <li>Developer led and therefore not cumbersome on Council in terms of resources but also timeframes compared to ODP approach.</li> <li>Enables early design review and tailoring of master plan to deliver on desired housing density and diversity.</li> <li>Requires developer to provide high-level detail around housing typologies, design, and implementation therefore providing greater certainty on meeting housing requirements.</li> <li>Promotes coordinated development across a whole neighbourhood rather than ad hoc development of individuals sites/areas.</li> </ul>	<ul> <li>Developer led exercise.</li> <li>Most often for subdivision only so control extends to lot size and arrangement.</li> <li>Land use consent can still be obtained for single storey dwelling.</li> <li>Requires robust policy framework for evaluation of masterplan and to provide leverage to request change.</li> <li>Has not worked effectively as shown by Amberfield development.</li> </ul>
Design Guidelines	<ul> <li>Provides strong evaluation tool for Council within the resource consent process that goes beyond standards within the plan.</li> <li>Can be tailored for specific areas and zones.</li> <li>Additional level of control that can have more subtlety than exact rules.</li> <li>Can be used in the education or raising the awareness of development options for developers.</li> </ul>	<ul> <li>If not integrated within the district plan often ineffective. Evidence has shown that if implemented at a non-statutory level they cannot be considered an effective tool.</li> <li>Needs to be accompanied by an ODP to be successful.</li> </ul>

# 12 Recommended Approach

As evidence from multiple local authorities in New Zealand shows, relying on the market to deliver housing can compromise the sustainable use of land, infrastructure and deliver sub-optimum housing and community outcomes. The M.E report is invaluable to the options assessment for encouraging greenfield developers to deliver increased densities and housing diversity in Peacocke. What is clear is that increased density requires better and walkable amenity, enhanced design, public transport and quality public realm. This section and the recommended approach provide for a 'where to next' for Hamilton City Council within the Plan Change process that has been informed by our assessment of the considerations and options for increasing density and housing typologies within Peacocke. The recommended approach has been shaped by the core assessment objectives and how these relate to the overall aim of the options assessment:

- 1. How can short term demand for existing patterns of greenfield development be provided for in a way that will not undermine the future supply of higher density housing development options?
- 2. How can HCC deliver diverse housing typologies over the medium to long term when they become commercially feasible?
- 3. How can a strategic planning framework enable increased density while maintaining a high-quality built environment?
- 4. What needs to be considered for establishing high amenity nodes to support higher density typologies?

Hamilton City Council has a number of options to facilitate greenfield residential development in Peacocke that achieves the key considerations and recommendations from the planning and urban design assessment. What is clear from this assessment is that a detailed design led process is required to achieve increased density and housing diversity. This establishes the overall vision for Peacocke and is not dissimilar to the approach of the current Structure Plan. However, the emphasis within this vision is required to be on increasing housing density and diversity in the Peacocke area that do not adversely impact upon the areas important natural and ecological values of the Peacocke receiving environment. Stronger policies are required to deliver diversity, density and good urban- and environmental outcomes. This can then be used to inform the creation of a policy and rule framework that can be relied upon to deliver, for example, attached terraced housing at 25-30 dwellings a hectare (net) within the decision-making process.

From the strengths and weaknesses assessment, each available tool has limitations. However, they need not be used in isolation and can be deployed together as complementary pieces. Therefore, the following section provides a recommendation on a mixed or 'hybrid' approach which combines the key strengths and reflects best practice as identified within the National Planning Standards. A broad-brush response to greenfield development issues that applies to the entire Peacocke area will not address the opportunities and constraints that exist within Peacocke. The solution therefore lies within layers of implementation of the strategic vision for Peacocke and the spatial scale and location at which these layers apply (Figure 12-1, see the above numbers items). The use of Structure Plan, Zone, and then Precincts enables differential outcomes to be outlined within the planning framework and enables the appropriate tools to be applied where they are necessary to achieve those outcomes. This approach forms the basis of our recommended approach below that explores what is required to deliver on the recommendations provided, the tools that should be used, and how these tools deliver upon those recommendations. We believe this could provide an overall implementation strategy for Hamilton City Council and the applicability/efficiency of the tools

and recommendations under should either form the basis of Council's evaluation or strongly influence the response that is progressed.

Peacocke Strategic Planning Framework

Figure 12-1: Recommended strategic planning approach

# Revised Peacocke Structure Plan Bespoke Peacocke Special Purpose Zone Mixed Use/Key Activity Precinct Mixed Housing Precinct Gully/Landscape Precinct Gully/Landscape Precinct Peacocke Design Guide Gully/Landscape Precinct

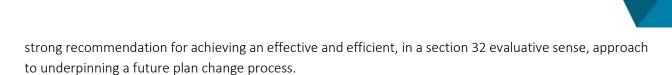
#### Peacocke Structure Plan (Revisit through Plan Change)

Updated Peacocke Structure Plan advanced by a Plan Change process which would be prepared as a detailed design exercise and provide the overarching vision for Peacocke. The detailed design exercise would break down the block layout and anticipated land uses for the entire Peacocke Area and outline expected yields either from those blocks or from broader development areas. The method for the delivery of those yields would be managed through the layers below the Structure Plan (Zone and Precincts). Importantly, the design exercise could account for fragmented land ownership in defining the spatial boundaries.

This exercise would identify the key nodes and transit arterial routes and provide an indicative block layout and open space networks. As discussed in further detail below, this would also include defining the spatial boundaries for the various precincts that will manage the greenfield development.

Undertaking a detailed design exercise for the entire area represents a significant resource cost for Council, however, we consider that in order to achieve a robust platform to underpin the future plan process, it is a necessary expense. This will provide greater certainty to developers and Council as to the outcomes that can be expected from these areas and importantly, ensure that the natural character and ecological values contained within the Peacocke area can be safeguarded. Undertaking the design of these areas at this level then enables it to become a strong evaluative tool for consenting and avoids the potential for *ultra vires* provisions relating to activity status that currently exist.

No other option was considered as appropriate for achieving density and diversity in greenfield development. Experience has shown that a detailed design exercise needs to be undertaken and this is our



#### 'Peacocke Special Purpose Zone'

The implementation of a Structure Plan relies upon a Zoning response that is fit for purpose. This can be best demonstrated by the development of the Residential New Neighbourhood Zone for Halswell for the delivery of that structure plan. To achieve density and diversity in Peacocke, it is considered that a bespoke zoning approach should be employed. While this will come at a considerable cost, the trade-off between retrofitting an existing zone to deliver the revised structure plan and the potentially compromised outcomes that may result from that course of action should be considered in any evaluation of the costs and benefits involved. A Bespoke Peacocke Special Purpose Zone is also required to provide the basis for the Precinct style of regulatory response that is explored further below. Decision making within those precincts will rely on a policy framework that is commensurate to and sufficiently robust to aide in the delivery the outcomes envisioned for those precincts. If it is decided that Precincts should not be developed for all of Peacocke, the framework within this zone can then be employed to manage greenfield development outside of those precincts.

The Bespoke Peacocke Special Purpose Zone would be formulated with an objective and policy framework that gives effect to the vision outlined at the Structure Plan level. This can be loosely based upon the existing Peacocke Character Zone, however, as has been discussed, the approach of the existing zone is inappropriate for achieving the desired housing outcome for Peacocke. There are two main options for managing development activities within this Zone.

**Option A** is requiring an additional detailed design exercise to be progressed by the developer requiring resource consents to be applied for as comprehensive development activities. This can enable a simplified rule framework where this is, for instance, a restricted discretionary activity otherwise, a non-complying activity status will apply. A well established and clear assessment criteria will need to be established that includes meeting the target yields and achieving a typological mix. To simplify linking subdivision and land use, indicative housing typologies will be specified in the supporting urban design guidance that can be used by the developer. These would be informed by the established commercially feasible development options. This approach would also use the detailed design proposed within the revised structure plan as a test for whether the development is appropriate. This is needed to provide certainty to the developer as this represents a significant compliance (consenting) cost and should not be compounded by additional deadweight costs from uncertainty.

Option B is in the formulation of an enabling rule framework through technical standards surrounding initial subdivision site size, target lot size mixes, typology mixes, and technical urban design standards for lot layout, frontage, and amenity spaces. Breaches to these standards result in a progressively elevated rule framework that enables more regulatory discretion. Issues arise with the implementation of this option, as enabling approaches managing greenfield growth to achieve density and diversity can be mutually exclusive. Technical standards would need to be sufficiently robust to enable the feasible development options in the short term, while ensuring that higher densities can still be achieved. The resource required to develop this framework duplicates some of the work for the detailed design of the Structure Plan. The compliance costs associated with this approach are significant and could result in an increasingly complicated regulatory environment that may not achieve the desired outcomes. While this approach

could prevent ad-hoc development patterns, an easier development pathway would likely be found that may produce an undesirable outcome.

Option A is the preferred approach as variations of this is what has been shown to work in the past (e.g. Hobsonville Point and Halswell). Key features of this zone would be:

- Comprehensive Development Process required for either an entire development area defined in the Structure Plan or for a minimum site area eg.10 hectares.
- Provides for super lots/future development lots for intensive development when it becomes
  feasible in the medium term to long term. These would require encumbrances on the allotment
  title that sets a specified density to ensure that shortfall in achieving minimum yield is met from
  this block
- Provides policy framework that is robust enough to apply non-complying activity status to comprehensive developments that do not meet the yield thresholds and for non-comprehensive development activities.
- Establish as matters of discretion or assessment criteria that require alignment with the Urban Design Guidelines and the Structure Plan.

The comprehensive development activities would establish that all subsequent subdivision and development in the underlying zones will be subject to a restricted discretionary resource consent process that allows for an urban design review as part of Council's discretion.

In development areas where multiple landowners are located, Council should look to promote integrated development responses across property boundaries linked through development agreements that sit outside the regulatory framework.

The creation of the Peacocke Special Purpose Zone has been assessed as appropriate for managing greenfield growth in this area. This zone has been assessed against the criteria for additional special purpose zones within the National Planning Standards below. Additional Special Purpose Zones must only be created when the proposed land use activities or anticipated outcomes for the additional zone are:

- 1. Significant to the district, region or country: The creation of the special purpose zone is considered to be significant for the district and region due to the proportion of housing demand that this area will meet in the future and the consequences for housing affordability and loss of productive land if yields are not realised in this area.
- 2. Are impractical to be managed through another zone: As detailed above, the other available zones (particularly the Medium Density Residential Zone) are unlikely to achieve the desired outcomes of a revised Structure Plan for Peacocke. The policy and rule frameworks for existing zones would require significant retrofitting to achieve the density and diversity in Peacocke. This would have consequences for the accessibility, readability, and legibility of the overall Plan. A robust and bespoke policy framework is required to simplify the process for developers and Council.
- 1. Are impractical to be managed through a combination of spatial layers: Further spatial tools are proposed to be applied below the zone. As a high-level design tool, the Structure Plan requires translation into a policy framework prior to spatial layers being applied to give effect to the Structure Plan Vision.

#### Design Guide

A comprehensive design guide underpins the delivery of the Precincts outlined below as it informs the development of and the evaluation of subsequent developments. The design guide is the essential interpretive tool between the commercially feasible development options identified by the ME report and what is required for the delivery of those development options. A comprehensive design guide is an essential element for the delivery of this Precinct approach as it provides a strong evaluative framework that be used to deliver a mix of housing typologies that achieve either the density targets or yield targets that are established for those Precincts. This can be seen in the case studies that were explored. The use of a typology matrix such as in The Buckley Comprehensive Development Plan clearly outlined what is required for the delivery of each typology and links these to the lot size and dimensions. It was an essential interpretive tool between the yield targets for those development areas and how they could be delivered.

It is essential that the design guide is incorporated as part of the regulatory response so should be referenced directly within the plan through its inclusion within the rule frameworks for each subsequent Precinct. This enables developments to be considered for consistency with the design guide. The contents of the design guide were outlined in recommendation 8b.

The design guide is developed so that it offers certainty to developers as to what is expected and how subsequent subdivision and development will be assessed which reduces the uncertainty with the development process. If the developer decides to deliver typologies that do not align with that guide and what is expected within that Precinct, then the costs incurred are the responsibility of the developer including an elevated consenting risk.

This preferred approach avoids the alternative response of codification of urban design which is a blunt instrument to be delivering the nuances of a successful greenfield development. The codification would require or imply that development that satisfies all standards could be undertaken as a permitted or controlled activity. Due to the difficulty in drafting standards it would be possible for an undesirable outcome to occur despite compliance with all those standards. This alternative response incurs significant costs in both preparation and the regulatory environment as it provides for a complex rule framework with little recourse for an agile application of regulatory discretion within development.

#### **Precincts**

Precincts are the appropriate spatial tool for Peacocke as they allow for character, intensity, development areas, and yields to be considered. This is where the differential outcomes for areas identified within the structure Plan would be implemented. Precincts are the recognised through the National Planning Standards as an appropriate spatial overlay method for achieving a modification in the outcomes from what an underlying zone would achieve. Precincts will be embedded within the Peacocke Special Purpose Zone and give effect to the policy framework. They are the simplest way of providing for key activity nodes and mixed uses. We recommend that the implementation of the following precincts be explored further:

- Mixed Use/Key Activity Precinct;
- Mixed Housing Precinct; and
- Gully/Landscape Protection Precinct.

It is important to identify the housing outcome envisioned for each precinct. The assessment of typologies provided in Section 44 has informed the development of the housing outcomes envision for each precinct.

Should this Precinct approach be advanced, we strongly recommend that Council should look to or assess the suitability of providing for the activities, typologies and tools within each Precinct:

- 1. Mixed Use/Key Activity Precincts are defined for the key activity centres and neighbourhood centres. These mixed-use precincts would contain the commercial, community and other complementary non-residential activities. The establishment of these precincts is the essential component for providing high amenity nodes to facilitate high density residential development. They would support higher densities of residential development (up to the feasible development option of a minimum of 40 dwellings for KAC). The policy and rule framework should be strong enough to exclude lower density development options from these areas to avoid comprising the potential yield from these zones. Required typology mixes could be established for these areas. The following typologies that were discussed in Section 44 would be envisioned within this Precinct:
  - Maisonette
  - Mixed Use Apartments
  - Walk Up Apartments
  - Narrow Terrace House
  - Attached Broad Terrace
  - Detached Townhouse

We strongly recommend that the implementation of the **Mixed Use/Key Activity Precinct** be explored by Hamilton City Council within the plan change process. This includes the consideration of the following tools that reflect the recommendations from this assessment for the delivery of these areas include:

- Enable commercial and community land uses in the short term on lots or development areas identified within the revised Structure Plan. Explore the application of lower activity status for these activities.
- Density or Yield Targets that achieve a minimum density of 40 dwellings a hectare net.
- Design Guide that reflects the subdivision design identified in Section 59 required to support the typologies identified above.
- Identify and reserve areas for apartment buildings.
- Specify typology mix targets for residential development, with typologies promulgated through the urban design guidelines as discussed above.
- Provide for Comprehensive Development Consents.
- Exclusion of low density through application of non-complying activity status.
- Enabling ground floor retail for residential units.
- 2. **Mixed Housing Precinct** are defined to cater for a range of residential densities. Site sizes are defined that reflect the overlap of feasible development density options between standalone dwellings and attached typologies. Super lots/future development lots will be expected to be provided in subdivisions within this precinct to ensure a mix of typologies is spread through-out the area and cater for future housing opportunities above what are currently feasible. These should be located either alongside key transit routes or areas of high public amenity. This provision of super lots enables short term demand to be met while transitioning to higher densities through time. The policy and rule frameworks provide support for increasing required densities from

subdivision through time. The areas sit beyond the immediate walkable catchment of the neighbourhood (50 hectare) and KAC (200 hectare) centres but still well connected to encourage walking and cycling to these centres. The following typologies that were discussed in Section 44 would be envisioned within this Precinct:

- Attached Broad Terrace
- Detached Townhouse
- Narrow Terrace House
- Maisonette
- Detached Dwelling.

We strongly recommend that the implementation of the **Mixed Housing Precinct** be explored by Hamilton City Council within the plan change process. This includes the consideration of the following tools that reflect the recommendations from this assessment for the delivery of these areas:

- Density or Yield Targets for that achieve a minimum density of 20 dwellings a hectare net.
- Design Guide that reflects the subdivision design identified in Section 59 required to support the identified typologies above.
- Specify typology mix targets for residential developments, with typologies promulgated through the urban design guidelines as discussed above
- Require Comprehensive Development Consents.
- Provide or require super lots/future development lots to enable short term demand to be
- Exclusion of low-density development through application of non-complying activity status for those developments that do not meet yield or density targets.
- 3. **Gully/Landscape Protection Precincts** are defined that reflects the existing landscape sensitivities. Larger lot development is enabled where appropriate, but this zone is primarily for the formation of a reserve network and ecological corridor through Peacocke. Small more intense clusters may be appropriate to preserve larger areas of landscape.



# **Appendix 1 Planning Toolbox Examples**

# Bespoke Zone and Precincts: Porirua City Council – Plimmerton Farm Plan Change 18 special

The Plimmerton Farm Zone has been developed to provide a planning framework that reflects the constraints and opportunities that exist for growth within the Plimmerton Farm greenfield area. The development of a bespoke zone and precincts was the preferred approach due to the certainty that this approach offers for achieving high quality residential and urban development<sup>21</sup>. The development of a bespoke zone has enabled new objectives and policies to be established, with the overarching objective for the entire zone to be achieving integrated development that increases housing supply and diversity through the implementation of the Plimmerton Precinct Plan. Further objectives and policies have been established that reflect the constraints.

The key to achieving the overarching objective Plimmerton Zone is in the implementation of the Plimmerton Precinct Plan which divides the zone into four precincts based upon their suitability for increased housing densities and diverse housing typologies. Each Precinct has objectives that outline the precincts purpose and expected character and amenity as shown in Table 1 below.

The precinct plan is then implemented through urban design policy and bulk and location rules that reflect the desired character and amenity. The implementation is also supported through the objectives and policies for subdivision in the Plimmerton Zone. All subdivision is required to result in allotments that give effect to the Precinct Plan<sup>22</sup> and the subdivision standards are established which further support the desired character and amenity. For example, subdivision within Precinct A does not have minimum lot sizes, nor does it prescribe a shape factor for multi-unit housing development.

The strength of this approach is in that it provides for high quality development in conjunction with the protection of extensive areas of high landscape, biodiversity, and visual amenity value. The site specific constraints were not catered for within the existing District Plan. This enables specific criteria to be established that can be used to drive a detailed analysis of development proposals to ensure that it is achieving the intended outcome of the Zone.

<sup>&</sup>lt;sup>21</sup> Proposed Plan Change 18 Plimmerton Farm Section 32 Report, Porirua City Council, December 2019.

<sup>&</sup>lt;sup>22</sup> Policy SUB<sub>PFZ</sub>-P1 – Notified Plimmerton Farm Zone Chapter, Porirua City Council

Table 1: Plimmerton Farm Zone Precinct Plan Summary

Precinct	Precinct Purpose	Precinct Character and Amenity Values
Precinct A	Primarily provides for medium density residential activities.  Provides for range of non-residential activities that support the health and wellbeing of people and communities and are compatible with the character and amenity values of Precinct A.  To enable medium density residential activity, no minimum lot sizes are defined.	The scale, form and density of subdivision, use and development in Precinct A is characterised by:  1. A built form of predominantly two-storey and threestorey buildings, detached, semi-detached and terraced housing and low-rise apartments;  2. High quality urban design and residential amenity; and  3. An urban environment that is visually attractive, safe, easy to navigate and convenient to access.
Precinct B	1. Primarily provides for general residential activities; and 2. Provides for a range of non-residential activities that support the health and wellbeing of people and communities, and are compatible with the character and amenity values of Precinct B.	The scale, form and density of subdivision, use and development in Precinct B is characterised by:  1. A built form of single-storey and two-storey buildings;  2. A lesser density of buildings than anticipated in Precinct A;  3. Landscaping and trees, especially on street frontages and within road corridors; and  4. High quality urban design and residential amenity
Precinct C	Residential development is sensitively located in relation to identified natural and landscape features and in accordance with the Plimmerton Farm Precinct Plan.	This precinct is further divided into areas based on landscape sensitivity and enables a range of development types that reflect the character of the existing natural environment.
Precinct D	Precinct D is characterised by commercial, retail and residential activities in accordance with the Precinct D Plan, with associated employment opportunities.	Precinct D is safe and attractive with buildings that are well-designed, and where they adjoin another precinct, are of a compatible scale and proportion.

# Extending Existing Zoning (Auckland Unitary Plan): Whenuapai Structure Plan

Whenuapai has been identified by the Auckland Council as an area for accommodating future growth within the urban growth boundary and has had a structure plan prepared to inform greenfield development. Whenuapai is a semi-rural area located 23km northwest of Auckland's CBD. The Structure Plan area comprises approximately 1,500 hectares and is currently zoned Future Urban under the Auckland Unitary Plan.

The Structure Plan provides a housing yield target of between 8,100 and 10,700 dwellings and it also offers residential densities across different areas. These range from ranging from low to high yield areas. The implementation of the Whenuapai Structure Plan will rely upon a staged plan change approach that applies existing zoning under the Auckland Unitary Plan that aligns with the indicative land uses. *Plan Change 5:* Whenuapai Plan Change has targeted the southern section of the wider structure plan area which adjoins Hobsonville Point for rezoning where existing zone provisions are overlaid. The zones that are proposed to be applied include:

- Single House Zones,
- Mixed Housing Suburban Zones,
- Mixed Housing Urban Zones,
- Terrace Housing, and
- Apartment Buildings Zone.

A range of densities and variation of housing typologies are realised. For example, the Mixed Housing Urban Zone enables up to three dwellings per site as a permitted activity and bulk and location rules than support multi-unit residential development. Subdivision of parent sites greater than 1 hectare to support development in this zone establishes minimum, minimum average, and maximum average net site areas of 240m², 300m², and 360m² respectively.

This approach has the benefit of a utilising a well-tested planning framework for achieving the desired densities and typologies within a market that has significant demand for diverse housing typologies, and developers with extensive experience in delivering them.

#### Future Urban Zoning: Dunedin City Council – Urban Land Transition Zoning

To accommodate future urban growth within the operational lifetime of the 2GP, the Dunedin City Council (DCC) applied a Residential Transition Overlay Zone (RTZ) which enables land to be transitioned to residential zoned land through the establishment of clear circumstances or triggers for this to occur. This zone enables landowners to apply for the transitional zoning to be removed if evidence can be supplied of:

- 1. The estimated total residential capacity is less than 120% of the projected total residential demand in the RTZ residential capacity assessment mapped area over the next five years;
- 2. Infrastructure capacity is sufficient to support additional residential development; and
- 3. An agreement between the DCC and the developer is in place for the method, timing, and funding of transportation infrastructure.

The application is required to also include a structure or development plan for that area that outlines at a minimum, the allotments, stages of development, and public infrastructure. This is to ensure that the ensuring subdivision and development will be in accordance with the objectives and policies of the specific future residential zone.