BEFORE THE HEARING PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of Proposed Plan Change 26 to the Operative Waipā District Plan

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STATEMENT OF EVIDENCE OF SUSAN MICHELLE FAIRGRAY

Dated 24 March 2023

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1. INTRODUCTION

1.1 My full name is Susan Michelle Fairgray and I am an associate director at Market Economics Ltd. Prior to this I held a senior position in Auckland Council's Research, Evaluation and Monitoring Unit ("RIMU").

1.2 I hold the qualifications of Master of Science (Honours) from Auckland University (Geography).

1.3 I have over 15 years of experience in urban economics developing and supporting central/local government and private-sector positions across a range of areas. Residential capacity, growth and demand assessments across a range of higher and medium growth urban economies have formed an important area of focus within the context of assessing and developing district plans. During this time, I have conducted a number of substantial assessments across the Future Proof Area, including the last two National Policy Statement on Urban Development ("NPS-UD") Housing and Business Assessment ("HBA") residential assessments and more recent intensification assessments. My experience traverses a wide range and scope of urban economics including but not limited to:

(a) Capacity and demand assessments: NPS-UD, HBAs, intensification plan changes and Future Development Strategies;

(b) assessing land use patterns and effects on urban form;

(c) developing robust and detailed methodologies for aligning residential capacity with demand;

(d) retail assessments, providing advice for commercial and public sector clients on the most appropriate scale and location of retail as well as the effects of retail location on the existing network and future urban form; and

(e) preparing and presenting evidence and expert conferencing.

1.4 My role in Plan Change 26 ("PC26") has been to model and assess the plan enabled and commercially feasible urban residential dwelling capacity in relation to dwelling demand within the district's main urban towns. This includes modelling capacity under the existing Operative Waipā District Plan ("District Plan") provisions, the unmodified medium density residential standards ("MDRS") and PC26, including the effect of qualifying matters. A copy of our report is attached as Appendix C to the Section 42A Report for PC26. I have provided economic assessment of the potential urban form growth patterns enabled under each set of modelled provisions. I have also provided economic assessment of relevant points raised in submissions.

2. CODE OF CONDUCT

2.1 I have read the Environment Court Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023 and agree to comply with it. I confirm that the opinions expressed in this statement are within my area of expertise except where I state that I have relied on the evidence of other persons. I have not omitted to consider materials or facts known to me that might alter or detract from the opinions I have expressed.

3. SCOPE OF EVIDENCE

3.1 My evidence covers the following matters:

(a) An overview of the proposed intensification planning instrument ("IPI") for Waipā district, as to the nature and geographic extent of the proposed PC26 provisions effects on dwelling capacity and growth patterns.

(b) A description of the economic residential capacity modelling which I have undertaken to assess the capacity enabled by the IPI and the impact of qualifying matters, within the context of housing demand.

(c) A summary of the earlier HBA study (2021) which established the existing baseline market context prior to the PC26 modelling.

(d) Modelling of plan-enabled and feasible capacity for housing, according to the proposed provisions to implement the MDRS and NPS-UD requirements, without modification through qualifying matters. This includes assessment of the additional capacity compared with the existing baseline plan provisions.

(e) Further modelling of housing capacity to show the effect of the proposed PC26 provisions. This is in the context of anticipated demand, and shows the effect of qualifying matters on capacity relative to an unmodified MDRS.

(f) Assessment of the likely economic urban form implications for the Waipā housing market of both potential futures (MDRS and PC26), in relation to the outcomes anticipated for the intensification provisions.

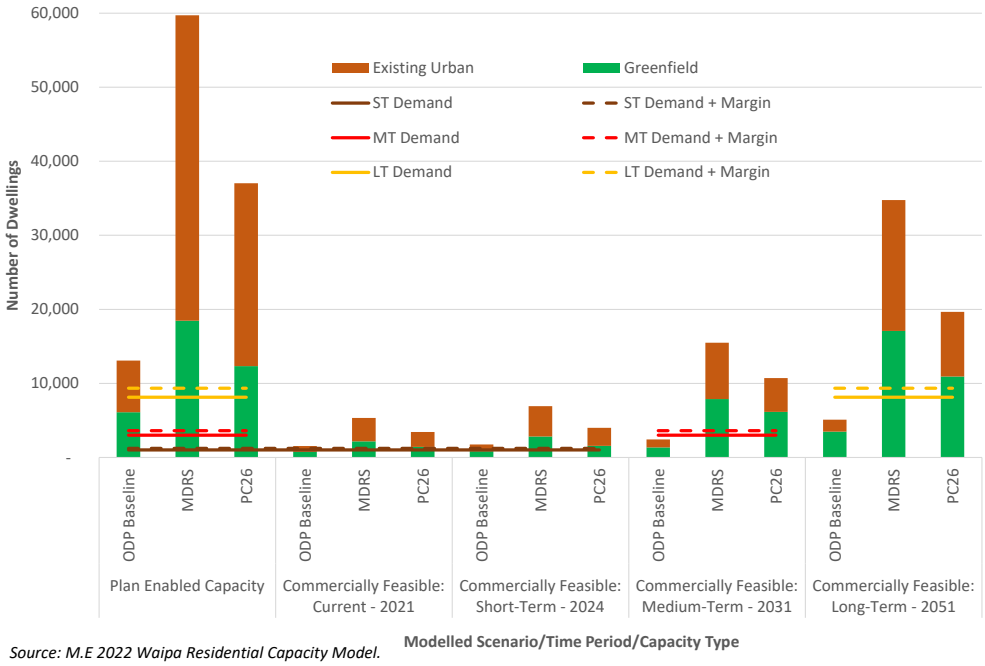
(g) An analysis of the key submissions points related to residential capacity and my response to these. These relate in particular to the provision for higher density development options within the urban towns, especially around the town centres.

4. EXECUTIVE SUMMARY

4.1 Market Economics has undertaken several comprehensive studies on residential development capacity and demand growth within Waipā district's main urban towns. Capacity and growth patterns enabled by different planning provisions have been modelled. These include the existing baseline District Plan provisions, intensification under an unmodified MDRS and PC26. The most recent modelling has tested the effect of PC26 and individual qualifying matters on the urban towns.

4.2 The plan enabled and commercially feasible capacity modelled most recently (2022) under each scenario (District Plan, MDRS and PC26) is summarised together with projected demand across the short, medium and long-term in Figure A below.

Figure A: Plan Enabled and Commercially Feasible Capacity and Demand by Modelled Scenario: Cambridge and Te Amamutu/Kihikihi



Source: M.E 2022 Waipa Residential Capacity Model.

4.3 Both the MDRS and PC26 provisions substantially increase capacity and options for more intensive development within the urban towns and, in my view, deliver more efficient outcomes than the existing baseline provisions. PC26 enables nearly three times (2.83) the amount of capacity than that enabled under the existing District Plan provisions. The modelled capacity under each intensification option is large relative to long-term demand at the total level, including with the application of qualifying matters.

4.4 The effect of each qualifying matter is summarised in Table A below. In combination, the qualifying matters reduce plan enabled capacity by 38% (-22,700 dwellings), with the largest effect from the Infrastructure Overlay qualifying matter. Other qualifying matters have a much smaller impact on capacity.

Table A: Effect of Individual Qualifying Matters on Total Modelled Urban Capacity

MODELLED SCENARIO	Plan Enabled Capacity	Commercially Feasible Capacity			
		Current	Short-Term	Medium-Term	Long-Term
	Net Additional Dwelling Capacity				
Full Intensification (MDRS)	59,700	5,300	6,900	15,500	34,800
All QMs Applied (PC26)	37,000	3,400	4,000	10,700	19,700
ICO only	37,400	3,600	4,400	11,600	20,100
Existing and New Heritage only	59,000	5,300	6,900	15,400	34,400
Stormwater only	59,700	4,400	5,800	14,800	34,300
Streams and Gullies only	59,700	5,300	6,800	15,400	34,700
	Net Change from MDRS (Full Intensification)				
All QMs Applied (PC26)	-22,700	-1,900	-2,900	-4,800	-15,100
ICO only	-22,300	-1,800	-2,600	-3,900	-14,700
Existing and New Heritage only	-700	-100	-100	-100	-400
Stormwater only	0	-1,000	-1,100	-600	-400
Streams and Gullies only	0	0	-100	-100	-100
	Percentage Change from MDRS (Full Intensification)				
All QMs Applied (PC26)	-38.0%	-35.4%	-42.2%	-30.8%	-43.4%
ICO only	-37.3%	-33.1%	-36.8%	-24.9%	-42.3%
Existing and New Heritage only	-1.1%	-1.3%	-1.1%	-0.8%	-1.0%
Stormwater only	0.0%	-18.4%	-16.3%	-4.2%	-1.2%
Streams and Gullies only	0.0%	-0.7%	-1.5%	-0.5%	-0.2%

Source: M.E Waipa Residential Intensification Model, 2022.

4.5 The total realised growth in urban dwellings is likely to be very similar under each modelled scenario (District Plan, MDRS and PC26). However, I consider that there are important differences in urban form between the three modelled scenarios, with each option encouraging different spatial patterns of growth across the existing and future urban areas. These give rise to important economic effects.

4.6 I consider that the universal application of unmodified MDRS across an undifferentiated residential zoning structure means that any intensification is likely to be more widespread through opportunistic development in outer suburban areas. In my view, unfocussed provision for intensification would represent a less efficient urban form as it would dilute the intensification around centres thereby undermining the benefits that are generally associated with development around centres.

4.7 I also consider that the alternative densities proposed under the PC26 Infrastructure Constraint Qualifying Matter Overlay ("Infrastructure

Overlay") may limit the potential for residential intensification in the areas surrounding the commercial centres, particularly within Cambridge. Higher yields are required in these areas to increase the feasibility of intensification through redevelopment.

4.8 For these reasons, I consider it is therefore important that the *medium-density provisions* are appropriately scaled to this context through sufficiently differentiating between areas surrounding centres and the wider general suburban areas.

4.9 I consider that in smaller economies, intensification around centres often occurs at a lower scale, with a much smaller share of higher density development. Most of the intensification around centres occurs in typologies such as terraced housing with very limited higher density vertically-attached apartment development.

4.10 I consider that if higher density development is enabled, then it is important that the location, scale and spatial extent of intensification provisions are appropriate and relate to the level and nature of market demand within the local economic context. These factors influence the level of intensification around centres and the extent to which higher density development is likely to directly support the functioning of the town centres.

4.11 In my view, it is important that policies suited to large cities are not simply transplanted into smaller towns. There is less potential for towns in smaller urban economies to be able to sustain this type of development with smaller areas around centres suited for intensification than in larger urban economies where the market is more established and greater trade-offs are made with location and other dwelling choice factors across the urban area. In my view, higher density development across a larger spatial scale may undermine intensification within centres and could result in isolated developments in outer areas that do not function

together with the centre and are inconsistent with the surrounding suburban area.

4.12 If there are areas that are appropriate for higher density development, then I consider that increased building heights beyond those in the baseline District Plan provisions are likely to be required for the developments to become commercially feasible.

5. DEMAND FOR HOUSING IN THE WAIPĀ DISTRICT

5.1 The Waipā district's main urban towns (Cambridge and Te Awamutu/Kihikihi) form part of the Future Proof tier-1 high growth urban area, which is anchored by the proximate larger urban economy of Hamilton City. As part of this broader high growth area, the district is projected to experience significant growth over the short to long-term.

5.2 The following table is from the Future Proof 2021 HBA ("2021 HBA") and shows the projected urban dwelling demand for Waipā district over the short, medium and long-term. In total, there is a projected demand within the main urban towns for 1,000 additional dwellings in the short-term, 3,000 in the medium-term and 8,100 in the long-term by 2050. With a margin applied, there is demand for capacity to accommodate an additional 9,400 dwellings in the long-term.

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

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

Source: M.E 2021 Future Proof HBA.

5.3 The table shows that Waipā district is projected to become increasingly urbanised over the long-term. Higher rates of urban growth mean that the share of the district's dwellings occurring in urban areas is projected to increase from around 68% in 2020 to nearly three-quarters (74%) by 2050. Nearly all of these are projected to be located within the main urban areas of Cambridge and Te Awamutu/Kihikihi.

5.4 The main urban towns dwelling base would need to increase by nearly two-thirds (62%) to accommodate the projected growth in urban demand. A continuation of current market development patterns would therefore result in significantly expanded urbanised areas for these towns.

6. RESIDENTIAL CAPACITY IN THE WAIPĀ DISTRICT: 2021 HBA

6.1 There has been detailed assessment of housing demand and potential supply in Waipā over the last 6 years, starting with the 2017 Housing Development Capacity Assessment (HBA) study by Market Economics to meet the requirements of the National Policy Statement on Urban Development Capacity.

6.2 Market Economics was again engaged in 2020/2021 by Future Proof Partners to undertake the next HBA to meet the requirements under the NPS-UD. This assessment included modelling and analysis of the plan enabled and commercially feasible residential capacity within the district's main urban towns of Cambridge, Te Awamutu and Kihikihi. It compared the estimated urban capacity with the projected urban dwelling demand in these towns over the short (2020-2023), medium (2020-2030) and long-terms (2020-2050) to assess the sufficiency of capacity.

6.3 The plan enabled capacity refers to the capacity enabled within each parcel (and aggregated to urban town totals) when applying the planning provisions. The greenfield capacity differentiates between capacity that

is expected to be within the extent of infrastructure networks at each point in time and capacity on land with no infrastructure provision.

6.4 The assessment then estimates the enabled capacity that is likely to represent a feasible development option for a profit-driven commercial developer if it were available to the market. This is based on a standard feasibility modelling approach of estimating whether the likely sales price of the plan-enabled dwelling options are likely to exceed the estimated development costs by a sufficient margin.

6.5 As required by the NPS-UD, Market Economics have estimated the commercially feasible capacity within the current market where prices and costs reflect the existing market conditions. We have also estimated the likely future feasibility of capacity through allowing gradual changes in costs and prices through time with market growth observed across nearly all growing urban economies. I consider that market growth scenarios of commercial feasibility form an appropriate basis to understand likely future capacity over the medium to long-term. Fixed market feasibility estimates are appropriate to understand short-term capacity, and potentially medium-term capacity for a conservative lower estimate.

6.6 Finally, the assessment estimates the reasonably expected to be realised ("RER") capacity. In our assessment, this is the estimated likely realised yield within feasible greenfield areas and the corresponding relative share of growth occurring within the existing urban area (i.e. urban intensification) based on past patterns of development and feasibility.

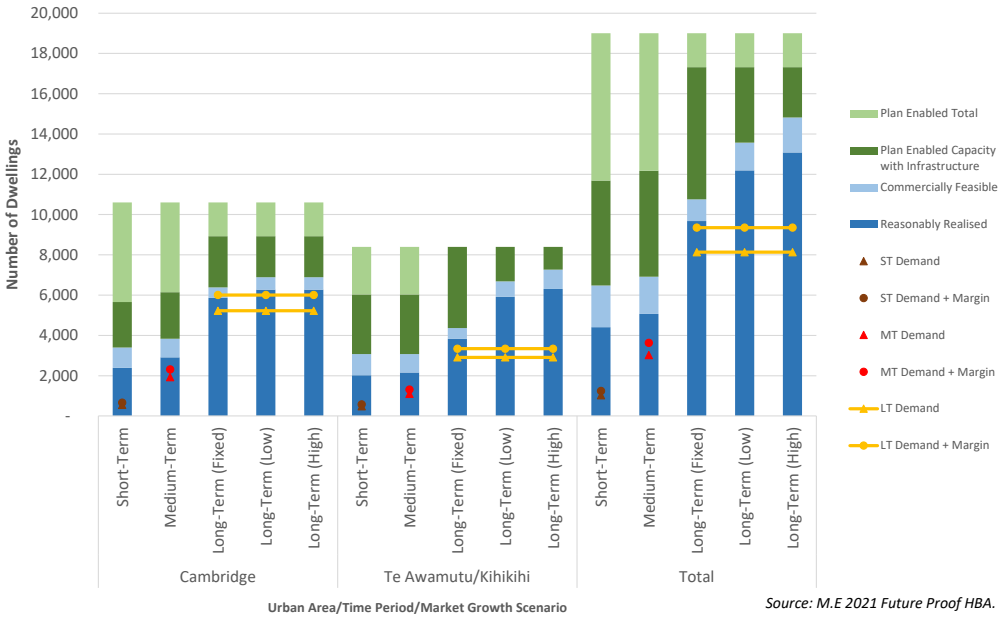
6.7 The 2021 HBA assessed the capacity to meet this growth from the existing District Plan provisions within the context of the 2021 market conditions. It identified that the residential market was characterised by larger dwellings on full sites. This was largely a function of the enabled planning provisions, the patterns of dwelling demand and developer responses to

these combined conditions. The assessment found little scope for more intensive development.

6.8 Lower density outward urban expansion in greenfield areas accounted for the largest share of growth, with the District Plan provisions and market conditions encouraging a continuation of this development pattern.

6.9 Figure 1 below summarises the HBA modelled urban capacity within the main towns of Cambridge and Te Awamutu/Kihikihi. It shows the RER capacity, the further commercially feasible capacity beyond the RER capacity, the further infrastructure-served plan enabled capacity beyond that feasible, and the further plan enabled capacity not served by infrastructure within each time period. The projected demand within each town and time period is overlaid on the capacity.

Figure 1: HBA Modelled Capacity and Demand by Waipā District Urban Area and Market Growth Scenario: Short, Medium and Long-Term



Source: M.E 2021 Future Proof HBA.

6.10 The 2021 HBA found that there was sufficient capacity within the district's main urban centres to meet short and medium-term demand. There was also a projected surplus in capacity for the long-term, with a minor shortfall occurring within Cambridge only if dwelling prices

remained fixed over the next three decades while demand continues to grow. Allowing instead for a gradual continued market growth (including growth in prices), there is instead a projected surplus capacity.

6.11 The assessment found that around 15% to 20% of the plan-enabled capacity under the District Plan within the existing urban area was required to meet long-term demand. The required share of greenfield capacity would be higher (at 56% to 59%) based on an estimated share of around 90% of growth occurring in greenfield areas.

6.12 While the assessment found there was sufficient capacity overall, it identified a number of likely market constraints in relation to the different types of development. It found very limited plan-enabled opportunity for higher density development, with a focus instead toward lower density development of larger dwellings on full sites. This is considered likely to increase any housing affordability pressures within the urban towns and provide limited ability for the market to respond to future growth in demand for smaller dwellings on smaller sites.

7. RESIDENTIAL MODELLING – MEDIUM DENSITY RESIDENTIAL STANDARDS

7.1 During 2022, Market Economics Ltd was engaged by the Future Proof Partnership to undertake residential capacity modelling across the urban residential zones in the Waipā district. This was to understand the level of urban capacity which would be enabled by the MDRS and NPS-UD provisions where these were applied to the existing zoning structure. A copy of the Market Economics report can be found at Appendix 5 of the Section 32 Report for PC26. The unmodified MDRS modelling has been further updated during the subsequent PC26 modelling, which is outlined in Section 8.

7.2 The MDRS provisions would enable a substantially different growth pattern to that modelled under the District Plan. The provisions would

substantially increase the enabled densities, to include a range of medium-density development options across a range of locations.

7.3 The updated assessment has modelled the plan-enabled and commercially feasible capacity (in the current market only to meet short-term growth) for housing which is enabled by the proposed provisions (District Plan with MDRS applied). It would also enable different housing development patterns from those under the existing District Plan.

7.4 The modelling showed that unmodified application of the MDRS to the District Plan zones would substantially increase both plan-enabled and commercially feasible capacity within the district's main urban centres.

7.5 I consider that it is important not to equate the additional plan-enabled capacity with projected growth in dwellings. The enabled capacity is likely to be taken up through time in line with growth in demand for housing as the resident population grows. The rate and location of take-up will also be determined by the range of other factors affecting preferences and feasibility including prices, accessibility, availability of services and facilities, and by developers' decisions.

7.6 The nature and geographic distribution of enabled capacity differs substantially to historic patterns of urban growth in the Waipā local economy. I consider that the enabled medium-density dwelling typologies are not yet well-established within the local market, but are likely to become more established through time over the medium to long-term. It is therefore likely, in my view, that capacity will get taken up at a range of densities, with the average urban density increasing through time. Initial patterns of growth are likely to be closer to existing patterns of development, with more widespread increases in density to include medium-density development through time.

7.7 In total, the estimated plan-enabled capacity enabled by the MDRS would accommodate an additional 42,000 dwellings within the existing urban

area if parcels were redeveloped to a higher density. There is further capacity for an additional 26,900 dwellings within the greenfield area, with a total combined plan-enabled capacity of 68,900 dwellings. It is estimated that around 6,300 of these are currently likely to potentially represent feasible development opportunities if available to the market. This currently feasible capacity is well ahead of projected short and medium-term demand, with increased portions of the plan enabled capacity likely to become feasible through time (although this was not modelled within this assessment). The plan-enabled capacity is well ahead of projected long-term demand, where only 11% of the total enabled development opportunity would be required to be taken up to meet demand, if developed at these densities.

7.8 It is important to recognise that the MDRS provisions increase the relative feasibility of development options. This occurs through a combination of increasing the potential yield on each parcel together with the increased development envelope on each site. The built capacity enabled would be greater relative to the cost of purchasing land, as more dwellings per site would generate higher returns. Sites can generally be developed more efficiently and intensively where larger dwellings or more built space can be constructed on smaller sites, particularly through the construction of medium density attached dwellings.

8. RESIDENTIAL MODELLING - PLAN CHANGE 26

8.1 PC26 is the district's IPI to incorporate the MDRS and give effect to the NPS-UD policies. It increases the enabled densities across the district's main urban towns of Cambridge and Te Awamutu/Kihikihi through the application of a Medium Density Residential Zone ("MDRZ"). This allows for medium-density intensification within the existing urban areas as well as medium-density development within greenfield areas. This would enable a greater range of development options, including more opportunity for attached dwellings or dwellings on smaller sites. At the

time of modelling, there is no proposed increase in the allowance for higher density residential development beyond the existing provision for 3 storey development within the Commercial Zone. A more detailed description of the PC26 planning provisions is included within the Section 42A Report for PC26.

8.2 Following notification of PC26, Market Economics Ltd undertook the second stage of modelling of the MDRS. This involved modelling the effect of the qualifying matters proposed in PC26, which would affect the capacity enabled under the unmodified MDRS. The plan enabled and commercially feasible capacity was again examined across the short, medium and long-terms. A copy of our report is attached as Appendix C to the Section 42A Report for PC26.

8.3 The modelled qualifying matters, and their relevant effects on capacity (with further planning detail in the Section 42A Report for PC26), include:

(a) The Infrastructure Overlay. This is applied across the extent of the proposed MDRZ to limit the effect of intensification on infrastructure networks to give effect to Te Ture Whaimana o Te Awa o Waikato—the Vision and Strategy for the Waikato River. The Infrastructure Overlay includes an alternative density which enables two dwellings to be developed on each site as a permitted activity rather than three under the MDRS.

(b) The Stormwater Constraint Qualifying Matter Overlay ("Stormwater Overlay"). This is applied to selected parcels within the urban towns where intensification would have high or critical impacts on stormwater infrastructure, which has the potential to result in adverse effects on the Waikato River. The Stormwater Overlay reduces the permitted site coverage to 40% from the 50% enabled under the MDRS.

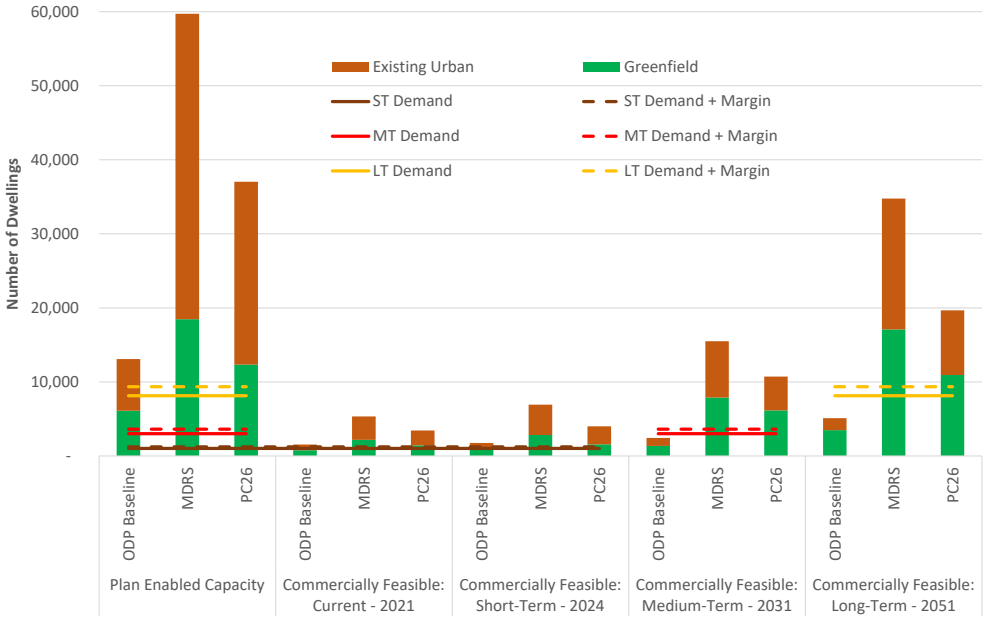
(c) New and existing character clusters. Resource consent is required for further dwellings on properties within the character cluster areas to maintain the character of the defined areas within the existing urban areas of the towns.

(d) The River / Gully Proximity Qualifying Matter Overlay ("River / Gully Overlay") is applied as a buffer area along the urbanised edges of the Waikato River, Mangapiko Stream, Mangaohoi Stream and gully areas within the urban extent. Development is restricted within these areas to maintain the character of the river surrounding areas. The River / Gully Overlay reduces the permitted site coverage to 40% from the 50% enabled under the MDRS.

8.4 The modelled plan enabled and feasible capacity under the existing District Plan provisions (with an updated market situation since the 2021 HBA), the MDRS provisions (applied to the baseline zoning structure[1]) and PC26 is summarised in Figure 2 below.

[1] There are some changes to the modelled areas since the MDRS modelling undertaken in July 2022. The main difference is the exclusion of Deferred Residential Zone within the March 2023 modelling report.

Figure 2: Plan Enabled and Commercially Feasible Capacity and Demand by Modelled Scenario: Cambridge and Te Amamutu/Kihikihi



Source: M.E 2022 Waipa Residential Capacity Model.

8.5 The differences in modelled capacity between PC26 and the MDRS and between PC26 and the District Plan baseline is shown below in Table 2. It shows the net and percentage difference in dwelling capacity between the different sets of provisions.

Table 2: Difference in Capacity between Modelled Scenarios

Time Period	Comparison	Existing Urban	Greenfield	Total
		Net Change in Capacity (Number of Additional Dwellings)		
Plan Enabled Capacity	PC26 vs. MDRS	-16,500	-6,100	**-22,700**
	PC26 vs. ODP	17,700	6,200	**24,000**
Commercially Feasible Capacity: Current - 2021	PC26 vs. MDRS	-1,100	-700	**-1,900**
	PC26 vs. ODP	1,200	700	**1,900**
Commercially Feasible Capacity: Short-Term - 2024	PC26 vs. MDRS	-1,700	-1,300	**-2,900**
	PC26 vs. ODP	1,500	700	**2,200**
Commercially Feasible Capacity: Medium-Term - 2031	PC26 vs. MDRS	-3,000	-1,700	**-4,800**
	PC26 vs. ODP	3,500	4,800	**8,300**
Commercially Feasible Capacity: Long-Term - 2051	PC26 vs. MDRS	-8,900	-6,100	**-15,100**
	PC26 vs. ODP	7,100	7,400	**14,500**
		Percentage Change in Capacity		
Plan Enabled Capacity	PC26 vs. MDRS	-40%	-33%	**-38%**
	PC26 vs. ODP	255%	101%	**183%**
Commercially Feasible Capacity: Current - 2021	PC26 vs. MDRS	-36%	-34%	**-35%**
	PC26 vs. ODP	156%	86%	**121%**
Commercially Feasible Capacity: Short-Term - 2024	PC26 vs. MDRS	-41%	-44%	**-42%**
	PC26 vs. ODP	170%	83%	**127%**
Commercially Feasible Capacity: Medium-Term - 2031	PC26 vs. MDRS	-40%	-22%	**-31%**
	PC26 vs. ODP	325%	353%	**341%**
Commercially Feasible Capacity: Long-Term - 2051	PC26 vs. MDRS	-51%	-36%	**-43%**
	PC26 vs. ODP	438%	213%	**284%**

Source: M.E Waipa Residential Capacity Model - 6 March 2023 modelling report.

8.6 The modelled results show that PC26 would substantially increase the plan-enabled capacity from that enabled under the current District Plan provisions. With PC26 in place with the proposed qualifying matters, there would be a substantial increase in capacity to nearly three times that currently enabled under the existing District Plan (baseline) provisions. Total plan-enabled capacity would be 2.83 times current enabled capacity.

8.7 The largest proportional increases are within the existing urban areas. PC26 enables around three and a half times the level of capacity enabled under the baseline provisions, amounting to an additional 17,700 dwellings from the existing provisions if constructed at the enabled densities. PC26 approximately doubles the enabled capacity within the greenfield areas, increasing the capacity by around 6,200 dwellings.

8.8 The feasibility of development is also increased where a larger share of the plan-enabled development potential is estimated to be feasible. This occurs through the increased yields and level of development areas enabled on each site, which particularly increases the viability of redevelopment. The amount of feasible capacity would be significantly greater than that under the baseline provisions, with the increases in feasible capacity becoming larger through time with market growth.

8.9 In total under PC26, there is a plan enabled capacity for an additional 37,000 dwellings, where it is projected that 19,700 of the additional dwellings would represent potentially commercially feasible development options in the long-term.

8.10 The application of qualifying matters would reduce the total plan-enabled capacity by 38% from the unmodified MDRS scenario (where there is plan enabled capacity of 59,700 additional dwellings). There would be a slightly larger relative reduction in capacity within the existing urban areas, where the plan enabled capacity would reduce by 40%.

8.11 With the qualifying matters in place, the amount of feasible capacity is also reduced. In the short-term, there is a 35% reduction in feasible capacity, amounting to 1,900 fewer dwellings. The relative effect on feasibility increases gradually into the long-term as the more intensive medium-density development options would otherwise increase in feasibility with market growth. In the long-term, the feasible capacity is reduced by 43%, amounting to 15,100 fewer dwellings.

8.12 The reduction in feasibility occurs through both a reduction in the enabled yields on sites (two under the Infrastructure Overlay rather than three) as well as a reduction in the range of sites that are estimated to be feasible to develop. A reduction in the potential yield reduces the feasibility of redevelopment, particularly within central areas where greater densities are required for development feasibility. The modelling indicates that the effect on feasibility increases through time into the long-term, where the development response to increase market growth for more intensive dwelling options may become constrained.

9. EFFECT OF INDIVIDUAL QUALIFYING MATTERS ON MODELLED RESIDENTIAL CAPACITY

9.1 The effect of individual qualifying matters on total modelled urban capacity across Cambridge and Te Awamutu/Kihikihi is shown in Table 3. It shows the plan enabled and commercially feasible capacity with only one qualifying matter applied at a time. It then shows the net and percentage differences in capacity from that enabled under the MDRS, which demonstrate the individual effect of each qualifying matter. Importantly, the individual effects are not entirely additive where many parcels are covered by multiple qualifying matters. The combined effect of the qualifying matters can instead be seen in the difference between PC26 and the MDRS.

Table 3: Effect of Individual Qualifying Matters on Total Modelled Urban Capacity

MODELLED SCENARIO	Plan Enabled Capacity	Commercially Feasible Capacity			
		Current	Short-Term	Medium-Term	Long-Term
	Net Additional Dwelling Capacity				
Full Intensification (MDRS)	59,700	5,300	6,900	15,500	34,800
All QMs Applied (PC26)	37,000	3,400	4,000	10,700	19,700
ICO only	37,400	3,600	4,400	11,600	20,100
Existing and New Heritage only	59,000	5,300	6,900	15,400	34,400
Stormwater only	59,700	4,400	5,800	14,800	34,300
Streams and Gullies only	59,700	5,300	6,800	15,400	34,700
	Net Change from MDRS (Full Intensification)				
All QMs Applied (PC26)	-22,700	-1,900	-2,900	-4,800	-15,100
ICO only	-22,300	-1,800	-2,600	-3,900	-14,700
Existing and New Heritage only	-700	-100	-100	-100	-400
Stormwater only	0	-1,000	-1,100	-600	-400
Streams and Gullies only	0	0	-100	-100	-100
	Percentage Change from MDRS (Full Intensification)				
All QMs Applied (PC26)	-38.0%	-35.4%	-42.2%	-30.8%	-43.4%
ICO only	-37.3%	-33.1%	-36.8%	-24.9%	-42.3%
Existing and New Heritage only	-1.1%	-1.3%	-1.1%	-0.8%	-1.0%
Stormwater only	0.0%	-18.4%	-16.3%	-4.2%	-1.2%
Streams and Gullies only	0.0%	-0.7%	-1.5%	-0.5%	-0.2%

Source: M.E Waipa Residential Intensification Model, 2022.

9.2 The Infrastructure Overlay qualifying matter has the largest effect on capacity. This reflects the large spatial extent of the Infrastructure Overlay (covering the full MDRZ area) together with the proposed alternative density. It reduces plan enabled capacity by 37%, and commercially feasible capacity by between 33% and 42%. The effect on commercial feasibility increases through time where the more intensive medium-density development that is limited by the Infrastructure Overlay would otherwise become feasible.

9.3 The existing and new character cluster areas have only a minor effect on both plan enabled and commercially feasible capacity. Plan enabled capacity is reduced by 1.1%, and commercially feasible capacity by 0.8% to 1.3%.

9.4 The Stormwater Overlay and River / Gully Overlay qualifying matters have no effect on modelled plan enabled capacity. It is assumed that the same

number of dwellings could potentially be constructed on each site, if configured efficiently, with the reduction in enabled site cover. However, these qualifying matters are projected to have an effect on feasible capacity through a reduction in the size of dwellings able to be constructed with the reduced permitted site coverage. The stormwater qualifying matter has a larger effect on feasible capacity due to the larger number of parcels where it is applied. The effect is greatest in the short-term, at a reduction of around 18%, but decreases in the long-term as a share of the parcels still become feasible with market growth.

10. ECONOMIC EFFECTS OF RESIDENTIAL CAPACITY AND ENABLED GROWTH PATTERNS

10.1 Despite the reduction in plan-enabled and feasible capacity, the modelling indicates that PC26 still has sufficient capacity to meet long-term growth as well as a large amount of headroom relative to demand. Just over one-fifth of total plan-enabled capacity would be required to meet long-term demand, and 41% of projected feasible capacity. The required shares are likely to be higher within the greenfield areas, with a lower share of intensification required within the existing urban area.

10.2 The further assessment has also modelled an updated baseline capacity under the existing District Plan provisions (without MDRS) to take account of market changes that have occurred since the 2021 HBA. Most significantly, these market conditions reflect the recent increase in construction costs. These market changes have generally reduced the feasibility of existing lower density development patterns. They have also altered the relativities in feasibility between low and medium-density development patterns.

10.3 Both the MDRS and PC26 provisions substantially increase capacity within the urban towns and, in my view, deliver more efficient outcomes than the existing baseline provisions. However, I consider that there are important differences in urban form between the three modelled

scenarios. Each future can be expected to encourage different growth patterns across the existing and potential future urban areas. These arise from a combination of differences in the enabled development potential and then the effect of these differences on the feasibility of development in different locations. They are likely to have correspondingly different effects on the economies of each town and the district overall.

10.4 Importantly, I consider that the total level of housing growth (i.e. take-up of capacity) is likely to be very similar under each modelled scenario at the total urban area level. One key reason for this is that the plan-enabled and feasible capacity is substantially greater than projected demand. However, there are likely to be differences in the spatial distribution of growth from the capacity enabled under each modelled scenario. It is the differences in the patterns and nature of growth (i.e. urban form) that give rise to important economic effects from the provisions.

10.5 The unmodified MDRS and PC26 provisions are both likely, in my view, to increase the ability to intensify within the existing urban areas. They will enable dwelling typologies (e.g. attached and terraced housing) that would see more development around central areas and at a lower scale across suburban areas. This applies to towns in the smaller economies such as Waipā, and would arise from the greater opportunities which are not currently enabled under the District Plan. Over time, this can be expected to alter the relative distribution of growth between existing urban and greenfield areas, especially as the towns increase in size and the central areas offer a greater depth in household goods and services, including the hospitality sector. That said, shifts in dwelling and preferences are likely to be relatively slow.

10.6 However, the universal application of the unmodified MDRS across an undifferentiated residential zoning structure means that intensification is also enabled across the whole of the suburban areas of the towns. I consider that this is likely to reduce the incentive to intensify in areas of

higher convenience and accessibility surrounding commercial centres. One key reason is that opportunistic development in the outer suburban areas which are further from the town centres will nonetheless take a share of demand, especially in areas with relatively lower land values and/or larger lot sizes. The district's likely limited market for medium density development in the shorter term especially means that greater shares of growth occurring away from the town centres would dilute the level of intensification around those centres. This would represent a less efficient urban form, and therefore limit the economic benefits of centrally focussed intensification to support the viability and vitality of the centres.

10.7 In similar vein, I consider that the alternative densities proposed under the PC26 Infrastructure Overlay qualifying matter overlay may limit the potential for residential intensification in the areas surrounding the commercial centres, particularly within Cambridge. These are generally higher value areas which require a higher potential yield to increase the feasibility of redevelopment. Typologies such as terraced housing typically form an important part of intensification in these locations within the context of a smaller urban economy such as Waipā. The alternative densities may limit the ability to develop sites into terraced housing and therefore restrict the ability to intensify in these more efficient locations. I note, however, that the modelling does not include any potential future infrastructure upgrades that may refine the spatial extent of the Infrastructure Overlay qualifying matter.

10.8 In my view, the alternative densities produce a more appropriate site-level development opportunity across the remainder of the suburban area (beyond the inner suburban areas surrounding the commercial centres) than those within the unmodified intensification scenario. An allowance of two dwellings per site enables lower intensity attached dwellings that have a greater market substitutability with detached dwellings, which dominate the past patterns of demand within the

district's urban areas. The enabled density of attached dwellings is similar to that occurring within the more recent outer suburban areas of the adjacent larger urban economy of Hamilton. Furthermore, in my view, the restriction on more intensive forms of attached dwellings (e.g. terraced housing) within outer suburban areas decreases the propensity for demand to be diluted away from more appropriate areas (i.e. around centres) for intensification (if these areas are instead enabled).

11. RESPONSE TO SUBMISSIONS

11.1 An analysis of the key submission points related to residential capacity and my responses to these are discussed below. These include responses to points contained within the following submissions:

(a) Kāinga Ora – submission number 79;

(b) Cogswell Surveys Ltd – submission number 53;

(c) Waka Kotahi – submission number 63; and

(d) Retirement Villages Association – submission number 73 and Ryman Healthcare Limited – submission number 70.

Responses to Kāinga Ora Submission

11.2 The Kāinga Ora submission proposes a range of changes to PC26 that would enable a substantially greater level of development across the urban towns of Cambridge and Te Awamutu. The main aspects of the submission relevant to the economic capacity modelling include:

(a) An increase in enabled building heights up to 6 storeys within the Commercial Zone in Cambridge and Te Awamutu urban areas, within which residential uses are permitted to be constructed above ground level.

(b) A High Density Residential ("HDR") Zone is proposed to be applied to a 400m to 800m walkable catchment area surrounding the Cambridge commercial centre and a 400m walkable catchment area surrounding the Te Awamutu commercial centre. The proposed HDR Zone would enable residential buildings of up to 6 storeys to be constructed.

(c) No requirement for minimum lot sizes or land areas per dwelling within the HDR Zone, with development instead controlled by building standards.

(d) A removal of the Infrastructure Overlay qualifying matter in its entirety with the application of the full densities enabled under the MDRS instead.

11.3 I agree that it is beneficial to intensify urban residential development around centres and key areas of amenity, and that it is important for this to be able to occur. These areas offer an efficient location for residential growth, increasing the vitality and viability of centres and being a more sustainable urban form.

11.4 The current capacity modelling suggests that intensification around town centres is likely to be limited under the PC26 and existing District Plan provisions. This is set out in section 8 of my evidence.

11.5 In my view, it is important that both the scale and spatial extent of intensification provisions are appropriate. This relates to the locations where they are applied, the geographical extent of these locations, and the intensification provisions themselves. Together these factors influence the degree to which intensification growth patterns are likely to occur around centres and the extent to which higher density development is likely to directly support the functioning of the town centres.

11.6 I consider that it is also important that the provision for higher density development relates to the level and nature of market demand, and the local economic context. Smaller urban economies, such as in Waipā, generally have lower levels of demand for higher density development than in larger cities such as Auckland and Hamilton. This means there is less potential for towns to be able to sustain this type of development with smaller areas around centres suited for intensification than in larger urban economies where the market is more established and greater trade-offs are made with location and other dwelling choice factors across the urban area. Moreover, in towns such as Cambridge and Te Awamutu 800m or 400m radius intensification areas will include a substantial share of total capacity, when these more intensive living environments will not match the preferences of many in the market. An 800m walkable catchment around Cambridge would accommodate a substantially larger share of the total population than would the same area in Auckland or Hamilton. In my view, it is important that policies suited to large cities are not simply transplanted into smaller towns.

11.7 In my view, provision for higher density development that is very extensive, within the local economic context, risks the dilution of higher density development across larger areas and therefore undermines the intensification benefits that would otherwise occur within the centre. If the provision is too expansive, then there is also a risk of isolated higher density developments occurring opportunistically in locations that do not function together with the town centre and that are inconsistent with the surrounding urban form. These developments may also absorb a sizeable share of the demand and therefore reduce the intensification that may otherwise occur in more appropriate locations.

11.8 I have conducted further high-level modelling to estimate the scale of capacity enabled by the Kāinga Ora proposed provisions and understand their appropriateness within the context of likely market demand for

higher density development within these urban areas. I set out my main findings below:

(a) The modelling estimates that the Kāinga Ora proposal would increase the vertically-attached apartment plan-enabled capacity to around 42,000 to 44,000 dwellings. Most of this (24,000 to 26,000 dwellings) occurs within the proposed HDR Zone, with a sizeable amount also within the Commercial Zone with the increased height allowance.

(b) I estimate that there is a likely long-term (2021-2051) market size for around 250 additional higher density dwellings based on current development patterns within the district's main urban towns.

(c) If Waipā were to instead behave in a way consistent with a much higher growth urban economy like Hamilton, then the market demand may be around 1,200 apartments dwellings, although this would be unlikely and relies on disproportionate growth structures relative to other locations.

(d) This means that only around 0.5% to 3% (within the largest higher density demand scenario) of the enabled capacity would need to be taken up to meet higher density demand (0.7% to 4% within Cambridge).

11.9 Based on these outputs, I consider that there is no demonstrated need to provide the extent of capacity occurring within the Kāinga Ora proposal.

11.10 I consider that the spatial extent of the proposed HDR Zone is likely to dilute the intensification that would otherwise occur in and around the commercial centres. In my view, the proposed spatial extent of the HDR Zone is too large and may result in isolated opportunistic higher density developments occurring in areas away from the centre that are

inconsistent with the surrounding urban form. The small market size for higher density development means that these developments are likely to absorb a relatively significant share of the market demand that would be more appropriately located in or within closer proximity to the centre.

11.11 In my view, the limited market size means that the centres are unable to sustain consistent density gradients of higher density development to the proposed spatial extent. In smaller urban economies, the intensification around centres would instead be characterised by more medium density development such as terraced housing and other medium density dwellings. I note that more intensive medium-density development is likely to also be able to meet higher density demand with a level of substitutability between these markets.

11.12 In comparison, I estimate that there is a maximum theoretical potential plan-enabled capacity for up to nearly 5,000 apartment dwellings within the Commercial Zone areas of Cambridge and Te Awamutu under the existing District Plan provisions. This represents a maximum potential yield if all parcels were redeveloped to their highest potential, including one level as residential uses. Importantly, I consider that this level of development is very unlikely to occur, with any potential take-up likely to be limited by the level of market demand.

11.13 In my view, the current provisions for three level development may limit the feasibility and consequent take-up of higher density development within the Commercial Zone areas. Feasibility of higher density development typically relies on a greater number of storeys being developed to offset the higher development costs from this form of development.

Responses to Cogswell Surveys Ltd Submission

11.14 The Cogswell Surveys Ltd submission states that the Infrastructure Overlay is applied across the entirety of the residential urban area of the

towns. It proposes that growth of the densities otherwise enabled by the MDRS should instead be allowed to occur within this area up to the point at which an infrastructure constraint occurs as identified through continuous monitoring.

11.15 I consider that it would be less appropriate to enable the MDRS densities to occur across the entire suburban area. In paragraph 10.6 I set out that, within the context of Waipā, more intensive development within suburban areas is likely to be a less efficient pattern of growth than if it were to occur in a more appropriate location. It may undermine the intensification that would otherwise occur within more accessible areas surrounding centres. I therefore consider that a locational based approach for enabling growth at the MDRS densities (rather than the Infrastructure Overlay alternative density) would form a more appropriate approach than applied across the suburban area without regard for location.

11.16 The submission also proposes that a HDR Zone, with an allowance of up to four storeys, should be applied across the existing areas of the Compact Housing Overlay as well as properties bordering a reserve or commercial centre.

11.17 I consider that the application of a HDR Zone across the existing extent of the Compact Housing Overlay or other parcels bordering a reserve may enable higher density development to occur in less appropriate locations. This would include areas that are significantly distant from the commercial centres and would be unlikely to function together with the centre. As set out in paragraphs 11.10 to 11.11, I consider that higher density growth in locations distant from the centre, within the context of a small market size and small urban economy, may undermine the intensification that would otherwise occur around the centre.

Responses to Waka Kotahi Submission

11.18 The Waka Kotahi submission proposes further investigation to identify whether there is opportunity for high density residential development provision within the towns of Cambridge and Te Awamutu. It considers that higher density development should be enabled if supported by an accessibility study to determine the extent of walkable catchments surrounding the centres.

11.19 I agree that provision for higher density residential development could be further investigated within the Cambridge and Te Awamutu towns. In my view, the appropriateness of any higher density provision needs to take into account the local economic context. It needs to consider the density at which intensification occurs within smaller economies and the spatial extent across which this applies from core areas of accessibility.

11.20 In paragraph 10.6 I describe how unfocussed provision for intensification, within the local economic context, may dilute the intensification around centres thereby undermining the benefits that are generally associated development around centres.

Responses to Retirement Villages Association and Ryman Healthcare Limited ("RVA") Submissions

11.21 The RVA submission seeks a conversion of the deferred Residential Zone greenfield areas to a live MDRZ for immediate development.

11.22 I consider that there is no demonstrated need to provide further greenfield areas for immediate development. The capacity modelling shows that the feasible capacity within the greenfield areas already exceeds long-term demand by a sizeable margin, with further infrastructure-served plan enabled areas beyond this capacity.

11.23 The deferred Residential Zone areas are located further away from the existing urban edge than other feasible, live-zoned greenfield areas. Development of the deferred zone areas ahead of the development of other more efficiently located areas would result in a less efficient sequence of urban growth for these towns.

12. CONCLUSION

12.1 There have been several comprehensive studies undertaken by Market Economics on residential development capacity and demand growth within Waipā district's main urban towns. These include modelling of the capacity and growth patterns enabled by the existing baseline District Plan provisions and that enabled under the MDRS and PC26 planning intensification provisions. The modelling has tested the effect of PC26 and individual qualifying matters on the urban towns.

12.2 Both the MDRS and PC26 provisions substantially increase capacity within the urban towns and, in my view, deliver more efficient outcomes than the existing District Plan provisions. The modelled capacity under each intensification option is large relative to long-term demand at the total level, including with the application of qualifying matters.

12.3 The MDRS and PC26 provisions each enable greater options for urban intensification than the baseline District Plan planning provisions. The enabled development options differ substantially to past patterns of lower density development patterns enabled under the District Plan, where much growth occurred through outward greenfield expansion. Intensification is likely to occur gradually through time as the market for more intensive development options becomes more established.

12.4 The total level of urban housing growth (in terms of number of dwellings) is likely to be very similar under each modelled scenario. However, I consider that there are important differences in urban form between the

three modelled scenarios (District Plan, MDRS and PC26), with each option encouraging different spatial patterns of growth across the existing and future urban areas. These give rise to important economic effects.

12.5 I consider that the universal application of unmodified MDRS across an undifferentiated residential zoning structure means that any intensification is likely to be more widespread through opportunistic development in outer suburban areas. In my view, unfocussed provision for intensification would represent a less efficient urban form as it would dilute the intensification around centres thereby undermining the benefits that are generally associated with development around centres.

12.6 I also consider that the alternative densities proposed under the PC26 Infrastructure Overlay qualifying matter may limit the potential for residential intensification in the areas surrounding the commercial centres, particularly within Cambridge. Higher yields are required in these areas to increase the feasibility of intensification through redevelopment.

12.7 For these reasons, I consider it is therefore important that the *medium-density provisions* are appropriately scaled to this context through sufficiently differentiating between areas surrounding centres and the wider general suburban areas.

12.8 I consider that in smaller economies intensification around centres often occurs at a lower scale, with a much smaller share of higher density development. Most of the intensification around centres occurs in typologies such as terraced housing with very limited higher density vertically-attached apartment development.

12.9 I consider that if higher density development is enabled, then it is important that the location, scale and spatial extent of intensification provisions are appropriate and relate to the level and nature of market demand within the local economic context. Together these factors

influence the degree to which intensification growth patterns are likely to occur around centres and the extent to which higher density development is likely to directly support the functioning of the town centres. There is less potential for towns in smaller urban economies to be able to sustain this type of development with smaller areas around centres suited for intensification than in larger urban economies where the market is more established and greater trade-offs are made with location and other dwelling choice factors across the urban area. In my view, it is important that policies suited to large cities are not simply transplanted into smaller towns.

12.10 If there are areas that are appropriate for higher density development, then I consider that increased building heights beyond those in the baseline District Plan provisions are likely to be required for the developments to become commercially feasible.

12.11 In my view, higher density development across a larger spatial scale may undermine intensification within centres and could result in isolated developments in outer areas that do not function together with the centre and are inconsistent with the surrounding suburban area.

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Dated 24 March 2023