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**Statement of Evidence in Reply of Tilly Erasmus**

**Date:** 24 May 2024

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## **Introduction**

- 1) My name is Tilly Erasmus, and I am a Senior Consultant at Market Economics Ltd. (M.E).
- 2) I prepared a summary statement and presentation on this matter dated 4 April, 2024, in which I described my involvement in the Plan Change 5 (**PC5**) process.
- 3) I reaffirm the commitment to adhere to the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023.
- 4) I have read the evidence provided by the submitters to the Independent Hearing Panel that is relevant to my area of expertise.
- 5) This statement will respond to the evidence of Mr Tim Heath on behalf of Kāinga Ora in relation to the Economics topic (9 April 2024).
- 6) The fact this rebuttal statement does not respond to every matter raised in the evidence of Mr Heath should not be taken as acceptance of the matters raised. I have focused this rebuttal statement on the key points of difference that warrants a response.

## **Scope of Evidence in Reply**

- 7) The evidence in reply covers the following key areas:
  - Changing market conditions to estimate feasibility.
  - Revised plan enabled capacity model inputs and results.
  - Extent to which Scenario 2B enables sufficient capacity.
- 8) This evidence also summarises the results of additional modelling undertaken after the hearing, to assess proposed zone changes in Flaxmere and Mahora (Hastings).

## **Overview**

- 9) I note that Mr Heath supports the overall direction of PC5 which aims to provide for growth in efficient locations within a compact urban form, i.e., focused in and around the three main centres, but believes it doesn't go far enough. As noted in paragraph

20, “a material point of difference between the relief sought by Kainga Ora and the Section 42A report recommendations is the spatial extent to which urban intensification development should be enabled.”

- 10) While I agree with Mr Heath’s position that “enabling an efficient supply of housing are just as important in smaller urban areas” (paragraph 23), a key factor in determining the suitability of higher-density development provisions is their spatial extent in relation to the projected market size, location and timing.
- 11) Smaller urban economies have less potential demand for higher density development than larger urban areas, making it crucial to scale these provisions appropriately. Generally, demand for higher density typologies increases as a city grows. In smaller urban areas such as Hastings, the demand for these types of housing is lower, meaning that it is essential to capture that demand around centres. If the area designated for higher-density development is significantly greater than the relevant demand for higher density housing, a small number of developments could occur further away from the centres’ core. While a small number of developments, they would absorb a disproportionate share of demand, spreading out the limited market demand, and reducing the potential benefits that would otherwise occur because of concentration.
- 12) Similarly, if the spatial extent of the area designated for higher density development is too extensive, there is a risk that opportunistic, isolated developments that do not integrate well with the town centre, will occur. Again, these standalone developments may reduce the degree to which growth is concentrated around nodes, thereby diluting the benefits associated with a highly focused intensification approach.
- 13) If intensification provisions are too widespread, it could reduce Council’s ability to achieve infrastructure efficiencies<sup>1</sup> and may increase infrastructure costs through the requirement to supply increased infrastructure across larger areas due to the possibility of intensification. Furthermore, these opportunistic, standalone

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<sup>1</sup> Infrastructure costs (per unit) are generally lower if demand is more spatially concentrated than the higher costs from more expansive networks required to serve more dispersed patterns of growth.

developments might require Council to provide additional infrastructure at a time or in a location they did not anticipate. The unplanned expenditure can strain budgets and redirect funds from other planned projects, putting additional burden on rate payers.

### **Points raised**

#### **Changing market conditions**

- 14) In paragraph 54 Mr Heath states his preference for using current market conditions to estimate feasible capacity. Using this approach, Property Economics estimates feasible capacity in the order of 2,883.
- 15) The assumption implicit to this position is that expansion of the urban economy, population growth, and growth in demand for housing – arising from the projected growth in household numbers, changes in socio-demographics, and so on – must have no effect on land and housing prices throughout the next 30+ years. It also assumes there will be no change in costs over this period, and the housing market will remain unchanged. This implies the existing economy will no longer function in the way it has over the decades to date and land markets are assumed to be in effect locked in place for the next 30+ years, i.e., a ‘locked market’.
- 16) This position suggests that the capacity that is currently feasible will forever be feasible – if prices will not change over 30 years, it will not change over 60 or 90 years. The only way then to increase feasible capacity is by increasing plan enabled capacity.
- 17) The locked market approach also implies that anticipated growth and associated changes in all other areas of the economy will have no impact on either building costs or prices.
- 18) It is my view that the locked market approach, while it might be appropriate over the short term, represents an unusual and unworkable position for an economic assessment of feasible capacity over the medium to long term.

- 19) In contrast, I use an economy-based position<sup>2</sup>, which recognises how urban economies function. It allows for the core economic processes observed and studied to date, to continue to have an effect in a manner that is generally consistent with the scale and timing of growth in an economy.
- 20) As Mr Heath points out in paragraph 46, I have estimated the likely future feasibility using an economy-based approach, allowing gradual changes in costs and prices through time. I consider this approach to estimate commercial feasibility on a more appropriate basis for understanding likely future capacity over the medium to long-term.
- 21) The feasibility of development is assessed by direct comparison of the costs of development (dwelling construction, services, land, professional fees, etc.) with the potential return (dwelling sale price). If there is sufficient margin between sale price and costs, then a development is considered (commercially) feasible.
- 22) Dwelling sale prices, construction costs, land values and services costs vary over time. They do not vary at the same rate. This means that the feasibility of individual developments will also vary over time.
- 23) In paragraphs 46 to 48 Mr Heath highlights his concerns with the M.E approach to feasibility calculations, and quotes house prices and construction costs over the past three years to show that feasibility has worsened over this period. While I agree that the past three years have seen significant price shifts and inflationary pressures through the economy and residential sector, I remain unconvinced that focusing on the short term and ignoring historic patterns is appropriate. It is my view that a longer-term view is more robust when making assumptions about expected growth

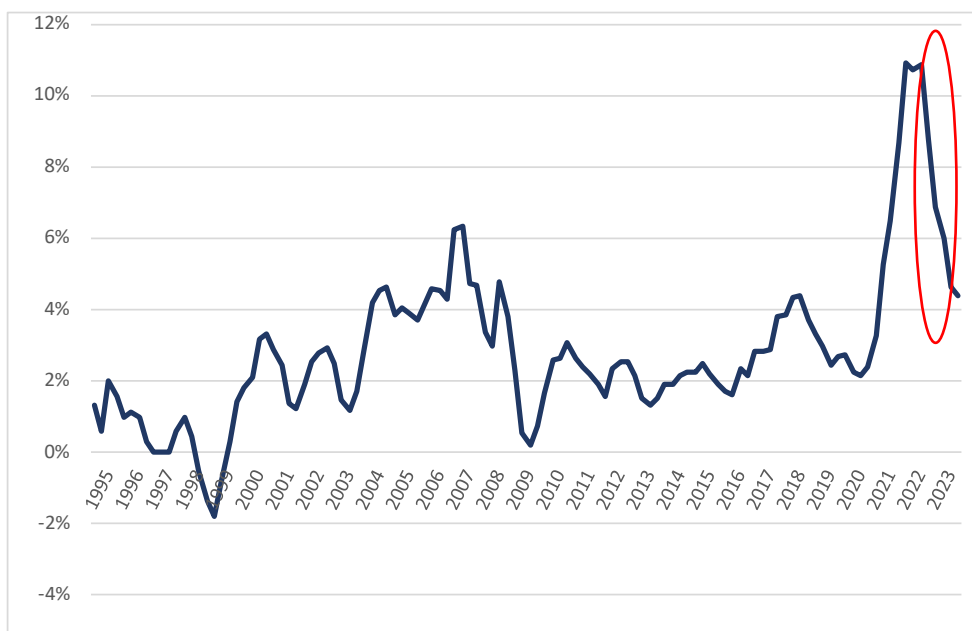
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<sup>2</sup> This approach is consistent with that used in work for other Councils' Intensification Planning Instruments and plan changes, and work under the NPS-UD, including Tauranga City Council Napier City Council, Hamilton City Council, Waipā District Council, South Waikato District Council, Far North District Council, Rangitikei District Council, Rotorua Lakes District Council, Nelson City Council and Queenstown-Lakes District Council. To my knowledge Mr Heath's approach was adopted by the Wellington Regional Council and New Plymouth District Council.

rates. It is important to look through short term volatility when modelling long term trends.

- 24) Figure 1 shows the growth rate for residential construction costs in NZ since 1995, based on the Producers price index (PPI) published by Statistics NZ. This presents a longer-term view of the construction costs. Mr Heath's figures in paragraph 48, refer to the period indicated here in red. The average annual growth rate used in the feasibility model is based on the long-term average, i.e. 3%.

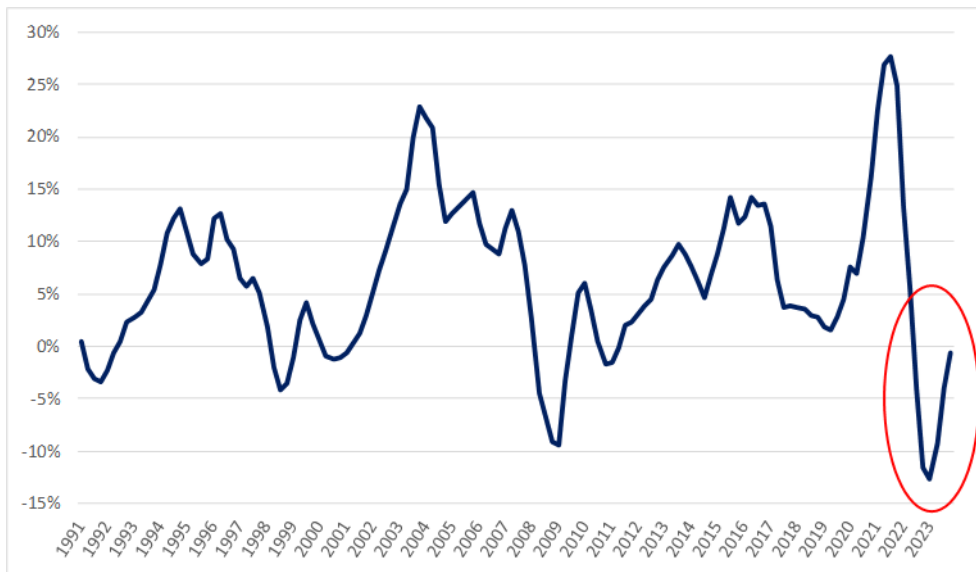
Figure 1: Producers Price Index: Residential Construction – Annual average growth rate



Source: Statistics NZ

- 25) Figure 2 shows the annual average growth rate of national house prices, based on the house price index (M10) published by the Reserve Bank of New Zealand. Again, I highlight the time period that Mr Heath refers to in paragraph 48, in red. Over the longer term, between March 1991 and December 2023, the annual average growth rate, is around 6%.

Figure 2: House Price Index - Annual growth rate (national)



Source: Reserve Bank of NZ

- 26) The disruption to the housing market over the past four years due to the COVID-19 pandemic, is well-documented. Selecting short periods of time to inform the parameters of the feasibility model is inappropriate, particularly when these periods are influenced by extraordinary events such as a global pandemic.
- 27) It is important that the feasibility assessment is able to take into account how urban spatial economies work – notably how economic processes which drive feasibility, have effects over time. I therefore consider the gap between construction costs and anticipated sales prices, entirely appropriate.
- 28) The common pattern in growing cities is that the rate of price growth is typically greater than the rate of cost growth, the former reflecting the underlying increase in the size of the urban economy, which helps drive feasible development, which in turn drives land use patterns and how these change over time. It is a necessary condition for development or intensification to occur. It is therefore important that the feasibility analysis allows for this differential change.
- 29) I agree with Mr Heath’s point in paragraph 53 that the housing market exhibits volatility and is complex to project. However, simply ignoring market growth and its

impact on prices, would be a misleading. For example, what would Mr Heath's conclusions be if he replicated his analysis during the GFC, or during the period immediately following the Covid—lockdowns when the economy was accelerating. The assumptions used in the feasibility modelling are based on observed long-term trends (30+ years) which is used to look through the short-term volatility.

- 30) In paragraph 54 Mr Heath states: *“Furthermore, the assumption essentially relies on house prices growing faster than both costs and income, thereby potentially making housing less affordable which is contrary to the purpose of PC5 and the NPS-UD.”* This is the symptom that the NPS-UD is seeking to address. Not modelling it does not make it disappear. The purpose of the plan change is to support the market by increasing capacity, thereby fostering additional competition across different locations and housing types. The dynamics between sales prices and development costs are inherent in the market. Hence, excluding price changes from a future feasibility analysis fails to account for actual market trends.

#### **Modelling of plan enabled capacity**

- 31) In points 55 to 59, Mr Heath raises concerns with the M.E capacity modelling, concluding that the potential capacity associated with PC5 has been overstated. I have reviewed the inputs with Council and identified a mismatch in inputs. The identified issues and the actions to address them are:

- It appeared that the settings used in the General Residential zone (GRZ) outside of the walkable catchment did not match the reported PC5 settings. This meant that the capacity model overestimated attached dwellings in the GRZ as pointed out by Mr Heath. This has now been corrected and the results re-estimated.
- In Flaxmere, the minimum lot size in the GRZ was modelled as 350sqm under Scenario 2A and 2B, rather than 500sqm as reported. The setting has been updated in the model, and the results re-estimated.
- We have refined the assumptions about dwelling densities for attached dwellings in the Medium Density Residential Zone (MDRZ) and amended them to better align with the potential outcomes, i.e., slightly larger lots



even though higher densities are enabled. This refinement reflects the fact that PC5 is not proposing a minimum density standard for the MDRZ and consequently assumptions are needed to model the enabled capacity.

32) We have re-run the assessment with the corrected settings and the updated results were presented to Council in a memorandum dated 15 May 2024, in terms of:

- Plan enabled capacity (**PEC**),
- Feasible capacity (**FC**), and
- Potential development capacity (**PDC**).

33) Table 1 presents the updated plan enabled capacity under each scenario, and summarises the results for the main urban settlements, and in terms of typology (detached and attached).

Table 1: Plan Enabled Capacity

PLAN ENABLED CAPACITY	Redevelopment (net)		Infill		Vacant	
	Detached	Attached	Detached	Attached	Detached	Attached
<b>Scenario 1</b>						
Hastings	11,390	37,840	1,860	4,480	140	280
Havelock North	2,630	9,590	470	1,240	60	210
Flaxmere	2,420	8,920	290	910	50	70
Rest of Hastings District	2,090	0	590	0	130	0
<b>Total</b>	<b>18,530</b>	<b>56,350</b>	<b>3,210</b>	<b>6,630</b>	<b>380</b>	<b>560</b>
<b>Scenario 2A</b>						
Hastings	7,380	10,880	1,350	1,550	120	30
Havelock North	1,790	3,310	330	380	50	100
Flaxmere	1,100	2,930	160	370	50	50
Rest of Hastings District	2,090	0	590	0	130	0
<b>Total</b>	<b>12,360</b>	<b>17,120</b>	<b>2,430</b>	<b>2,300</b>	<b>350</b>	<b>180</b>
<b>Scenario 2B</b>						
Hastings	6,660	5,790	1,250	950	120	20
Havelock North	1,790	3,310	330	380	50	100
Flaxmere	1,100	2,930	160	370	50	50
Rest of Hastings District	2,090	0	590	0	130	0
<b>Total</b>	<b>11,640</b>	<b>12,030</b>	<b>2,330</b>	<b>1,700</b>	<b>350</b>	<b>170</b>
<b>Scenario 3</b>						
Hastings	16,670	62,110	2,450	6,980	190	510
Havelock North	3,030	9,880	520	1,290	60	190
Flaxmere	2,460	7,170	290	760	50	50
Rest of Hastings District	2,100	40	590	10	130	0
<b>Total</b>	<b>24,260</b>	<b>79,200</b>	<b>3,850</b>	<b>9,040</b>	<b>430</b>	<b>750</b>

34) With redevelopment and vacant capacity combined, the modelling suggests plan enabled capacity are as follows:

- Scenario 1<sup>3</sup> 18,910 to 56,910 dwellings,
- Scenario 2A<sup>4</sup> 12,710 to 17,300 dwellings,
- Scenario 2B<sup>5</sup> 11,990 to 12,200 dwellings,
- Scenario 3<sup>6</sup> 24,690 to 79,950 dwellings.

35) Crucially, while there is a notable drop in plan enabled capacity (compared with the original assessment), across all scenarios, my conclusions included in my summary statement presented on 9 April 2024, remain valid. I remain of the view that there is adequate plan enabled capacity to provide for a competitive residential development market.

36) As Mr Heath rightly points out in paragraph 60, plan enabled capacity is a direct input into the feasibility modelling. I am therefore also presenting a summary of the updated feasible capacity results.

37) A summary of the feasible capacity under profit-maximisation pathway is presented in Table 2. This is the same approach which was followed in the original modelling. In reality, a developer will have a multitude of options and could make multiple adjustments or follow another pathway altogether. Nevertheless, this provides an indication of the potential capacity which could be provided in terms of typology and location under the different scenarios by the mainstream market.

Table 2: Feasible capacity (profit-maximisation)

FEASIBLE CAPACITY	Scenario 1		Scenario 2A		Scenario 2B		Scenario 3	
	Detached	Attached	Detached	Attached	Detached	Attached	Detached	Attached
Hastings	6,080	4,015	2,890	1,280	2,005	1,480	5,960	16,725
Havelock North	1,730	1,530	810	1,030	810	1,030	1,160	3,010
Flaxmere	1,015	335	150	740	150	740	355	1,890
Rest of Hastings District	665	-	665	-	665	-	665	-
<b>Subtotal</b>	<b>9,490</b>	<b>5,880</b>	<b>4,515</b>	<b>3,050</b>	<b>3,630</b>	<b>3,250</b>	<b>8,140</b>	<b>21,625</b>
Total		<b>15,370</b>		<b>7,565</b>		<b>6,880</b>		<b>29,765</b>
Hastings	60%	40%	69%	31%	58%	42%	26%	74%
Havelock North	53%	47%	44%	56%	44%	56%	28%	72%
Flaxmere	75%	25%	17%	83%	17%	83%	16%	84%
Rest of Hastings District	100%	0%	100%	0%	100%	0%	100%	0%
<b>Subtotal</b>	<b>62%</b>	<b>38%</b>	<b>60%</b>	<b>40%</b>	<b>53%</b>	<b>47%</b>	<b>27%</b>	<b>73%</b>

<sup>3</sup> PC5 as notified.

<sup>4</sup> MDRZ within 400m walkable catchment and main transport routes plus notified MDRZ areas outside the walkable catchment.

<sup>5</sup> MDRZ within 400m walkable catchment only.

<sup>6</sup> MDRZ across Hastings City Living and General Residential Zone and 800m catchment from Havelock North and Flaxmere town centres.

The updated feasible capacity across the four scenarios is estimated to be:

- Scenario 1 15,370 dwellings,
- Scenario 2A 7,565 dwellings,
- Scenario 2B 6,880 dwellings,
- Scenario 3 29,765 dwellings.

38) This provides an indication of the options available to developers. Only a portion of this opportunity is expected to be taken up, which is likely to be more aligned with the projected level of demand.

### **Sufficiency of capacity enabled by Scenario 2B**

39) Mr Heath points out in paragraph 73 that the Heretaunga Plains Urban Development Strategy (**HPUDS**) aims to provide for 60% of growth (additional demand) through urban intensification, and subsequently states in paragraph 74, that M.E's report suggests only 3,380 dwellings will be released. It is my understanding that he refers to the estimated potential development capacity (PDC) under Scenario 2B. Mr Heath's suggestion that the balance, i.e., 5,780 dwellings, will be supplied through greenfield development does not take into account other segments of the housing market.

40) The M.E capacity assessment focuses on capacity which could be delivered by commercial developers (mainstream market) and did not explicitly look at the role of social housing providers or the retirement village sector. Once these sectors have been accounted for, it is estimated circa 3,285 dwellings<sup>7</sup> would be needed from the mainstream market.

41) The projected demand is based on analysis of historical residential building consents. On average 40% of annual urban growth was accommodated through brownfield development between 1995 and 2023.

42) I will highlight again, potential development capacity is informed by demand for housing, since it stands to reason that commercial developers will not provide

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<sup>7</sup> This excludes competitiveness margins.

housing for which there is no demand. That suggests demand acts as an upper limit for the potential capacity which will be developed.

- 43) PDC does not attempt to predict the future, but rather provides an indication of the probability that feasible capacity will be realised. Detail about estimating PDC and the factors that influence assumed uptake rates, are included in the memorandum provided to Council, dated 24 January 2024.
- 44) Despite lower levels of plan enabled and feasible capacity as a result of the refined inputs, the tested scenarios are expected to deliver similar levels of PDC (Table 3) because the level of demand (growth) is the same across the scenarios.

Table 3: Potential Development Capacity (RER-equivalent)

Potential Development Capacity	Scenario 1		Scenario 2A		Scenario 2B		Scenario 3	
	Detached	Attached	Detached	Attached	Detached	Attached	Detached	Attached
Hastings	1,930	400	2,020	540	1,610	480	1,820	630
Havelock North	420	50	330	110	650	260	390	100
Flaxmere	380	120	150	150	150	150	260	100
<b>Subtotal</b>	<b>2,730</b>	<b>570</b>	<b>2,500</b>	<b>800</b>	<b>2,410</b>	<b>890</b>	<b>2,470</b>	<b>830</b>
<b>Total</b>		<b>3,300</b>		<b>3,300</b>		<b>3,300</b>		<b>3,300</b>
Hastings	83%	17%	79%	21%	77%	23%	74%	26%
Havelock North	89%	11%	75%	25%	71%	29%	80%	20%
Flaxmere	76%	24%	50%	50%	50%	50%	72%	28%
<b>Total</b>	<b>83%</b>	<b>17%</b>	<b>76%</b>	<b>24%</b>	<b>73%</b>	<b>27%</b>	<b>75%</b>	<b>25%</b>

- 45) Despite much higher levels of feasible capacity being delivered under Scenarios 1 and 3, it is not expected that more residential development will occur, because demand serves as an upper limit of growth that developers will deliver.
- 46) Estimating PDC is not an algorithm driven approach, and a degree of subjectivity remains, so it can vary slightly when the feasible capacity shifts. During the previous iteration of the modelling, the assumed uptake rates resulted in a variance smaller than 100 across the four scenarios. During this iteration the variance was smaller and with rounding, it is not detectable.
- 47) If the 60% 'target' set by HPUDS is reached, provision is needed for circa 5,780 additional dwellings (including a competitiveness margin) over the next 30 years.

Expressed as a share of feasible capacity<sup>8</sup> under the modelled scenarios, the demand<sup>9</sup> would be:

- Scenario 1 38%
- Scenario 2A 76%
- Scenario 2B 84%
- Scenario 3 19%

- 48) This implies even if growth shifts away from greenfield development towards greater urban intensification (relative to historical patterns), there is adequate redundancy in the market so that demand can be met, under each of these development scenarios. The excess feasible capacity provides an indication of the level of choice which is provided under each of the scenarios.
- 49) The excess feasible capacity is despite a 'worst case' scenario approach to demand, which assumes:
- future growth patterns will deviate significantly from historic trends<sup>10</sup>,
  - no contribution by social housing providers or the retirement sector, and
  - inclusive of the competitiveness margin.
- 50) In paragraph 71 Mr Heath appears to suggest that the development capacity which would be provided by adopting Scenario 2B plus Mahora, will satisfy the '*bare minimum*' requirement of Council, under the NPS-UD. In my opinion this is simply not the case in view of the redundancy demonstrated in paragraph 47.

### **Alternative zoning in Mahora and Flaxmere**

- 51) Council has also proposed zoning changes in Flaxmere and Mahora from what was originally modelled. These changes are applied to Scenario 2B to estimate the impacts on the plan enabled and feasible capacity.

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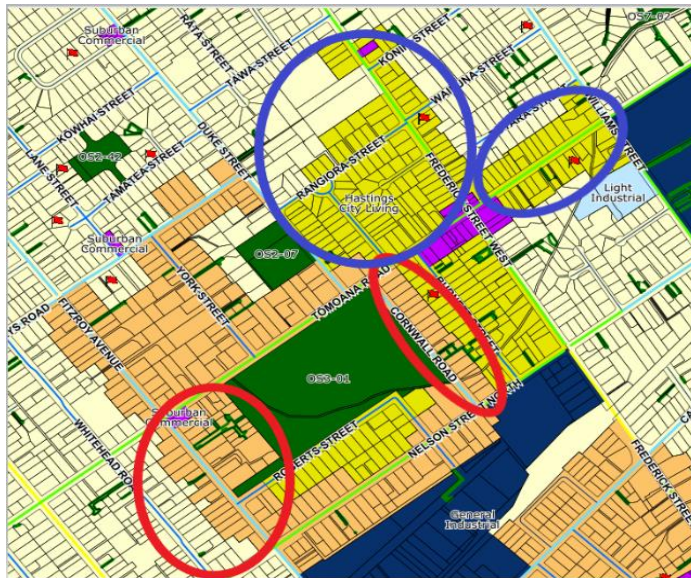
<sup>8</sup> Excluding changes to Mahora zoning.

<sup>9</sup> Inclusive of the relevant competitiveness margins. I acknowledge that the actual number of dwellings taken up will be lower, because the market will not supply excess dwellings. Excluding the margins, suggests 4,930 dwellings are required over the long term.

<sup>10</sup> 60% brownfield demand compared with 40% over the past 30 years.

- 52) In Mahora, Council is proposing to retain the Character residential zoning (CRZ) around Cornwall Park (two areas marked in red on the map Figure 3). In the results presented in the s42A report, these two areas formed part of the MDRZ capacity.

Figure 3: Proposed changes to zoning in Mahora



- 53) To compensate for the retention of these properties, Council is proposing to zone the areas encircled in blue, MDRZ. These areas are zoned City Living zone (CLZ) in the ODP and were proposed to be part of the General residential zone (GRZ) under Scenario 2B. After modelling these changes, we can confirm that there will not be a decrease in total plan enabled or feasible capacity as a result of these changes. Instead, a slight net increase is enabled.
- 54) The plan enabled capacity is between 125 and 680 dwellings greater after the change. The range reflects typology, and this is the theoretical maximum, i.e., redevelopment plus vacant capacity. The increase is a combination of the area being added to MDRZ being larger than the area of the parcels being removed from MDRZ, as well as the higher dwelling density enabled in MDRZ compared with GRZ. Subsequently, there is a net increase in feasible capacity of between 190 and 215 dwellings.
- 55) The net increase in feasible capacity is greater than plan enabled capacity because of interplays between the type and size (and location) of capacity that is enabled

(and feasible). For example, the net increase<sup>11</sup> in feasible capacity in the new MDRZ location (blue circles) is greater than the net increase in plan enabled capacity in that location.

- 56) Figure 4 shows the properties being considered in Flaxmere. Council is proposing to change the zoning on some parcels along Birkenhead Crescent and five properties along Liverpool Crescent (marked in red) to GRZ. Under Scenario 2B these parcels were zoned MDRZ.

Figure 4: Affected areas in Flaxmere



- 57) To compensate for the loss of MDRZ, Council is proposing that parcels marked in blue on the map, be changed to MDRZ. These include six properties on Peterhead Place<sup>12</sup>, some along Peterhead Avenue, Wilson Road, Tilbury Street and Liverpool Crescent. Under Scenario 2B, these parcels were zoned GRZ.
- 58) The modelling indicates that this swap enables between 15 and 50 additional dwellings, when compared to plan enabled capacity under Scenario 2B. However, there is no change in feasible capacity arising from the proposed changes. This implies that the proposed changes will deliver almost identical capacity.

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<sup>11</sup> Difference in capacity between GRZ and MDRZ.

<sup>12</sup> The six properties across the road from these on Peterhead Place, adjacent to Peterhead School, are already proposed to be part of the MDRZ under Scenario 2B.

## **Conclusion**

- 59) In response to the points raised by Mr Heath during the PC5 hearing, I have revisited the inputs and assumptions that are used in the capacity modelling and presented the updated results.
- 60) I acknowledge that adjusting the input settings decreases the attached capacity. However, despite the downward revisions in plan enabled capacity and associated feasible capacity, sufficient long term development capacity remains. This means that the benefits of concentrating higher density residential development in high amenity areas (i.e., around commercial centres and green spaces) will still be achievable.
- 61) The economy-based approach which was taken to estimate feasibility is based on long-term trends and is considered appropriate and consistent with the approach of other comparable councils.
- 62) The feasible capacity assessment reveals there is excess capacity when compared with anticipated demand. This remains even when a 'worst case' scenario approach to demand is explored.
- 63) Combined, the adjustments in Mahora and Flaxmere result in a small net increase in plan enabled capacity and feasible capacity over and above the figures outlined in table 2, paragraph 37 and therefore also in the percentage share of feasible capacity outlined in paragraph 47.
- 64) I remain of the view that there is adequate plan enabled capacity to provide for a competitive residential development market and sufficient feasible capacity to ensure projected housing demand can be met in the short, medium and long term to 2053.

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Tilly Erasmus

24 May 2024