

PROPERTY ECONOMICS



WELLINGTON REGIONAL RESIDENTIAL CAPACITY TERRITORIAL AUTHORITY SUMMARY

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SCHEDULE

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CONTACT DETAILS

Phil Osborne

Mob: 021 557713

Email: phil@propertyeconomics.co.nz

Web: www.propertyeconomics.co.nz

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1. INTRODUCTION

Property Economics has been engaged by the Wellington Regional Leadership Committee (WRLC) to assist with the preparation of an updated Housing and Business Capacity Assessment (HBA) for the territorial authorities that comprise the Wellington Region and Horowhenua District Council area within the context of Council's obligations under the National Policy Statement on Urban Development (NPS-UD).

The purpose of this report is to provide the WRLC with a high-level overview of the Residential Capacity in the Wellington Region by territorial authority. This high-level report is designed to supplement the more detailed assessment reports provided for each individual council.

More specifically, Property Economics was engaged individually by the Wellington City Council and Porirua City Council to undertake an assessment of the qualifying matter impacts in relation to their respective District Plan reviews to implement the NPS-UD-directed intensification planning standards. The WRLC subsequently engaged Property Economics to provide capacity modelling for the Upper Hutt and Hutt City Councils, Kapiti Coast, Combined Wairarapa and Horowhenua Districts.

This report provides a high-level overview of the capacity results for each for each of these districts and discusses any differences between them.

1.1. GLOSSARY

- **Theoretical Yield / Plan Enabled Capacity** – The total number of properties that could be developed under the proposed IPI Medium Density Residential Standards provisions within the permitted building envelope, irrelevant of market conditions.

- **Comprehensive Development** – A development option that assumes the removal of all existing buildings for a comprehensive redevelopment of the entire site with less restrictions.
- **Infill Development** - A development option that assumes the existing building is retained, and new residential house(s) are developed on balance of the site (i.e., the backyard).
- **Standalone House** – Single detached dwelling.
- **Terraced** – Dwellings that are attached horizontally to other dwellings but not vertically. This typology is always built to the ground floor (i.e., does not include homes built above retail stores).
- **Apartments** – Dwellings that are attached vertically and potentially horizontally. Usually in multi-storey developments of higher density.
- **Total Yield**- The total number of dwellings developed.
- **Net Yield** – The total number of dwellings constructed net of any existing dwellings removed. For Infill development, the total yield is equal to the net yield, while for Comprehensive development the net yield is equal to the total yield less the existing dwellings.
- **Medium Density Residential Standards (MDRS)** - The NPS-UD directed planning standards for general residential zones in Tier 1 territorial authorities. This directs councils to enable at least 11m height limit, 50% site coverage and 3 dwellings per site (among other standards).
- **Qualifying Matters (QFM)** – Under the NPS-UD, councils can enable less intensification than the MDRS standards would allow where intensification would be inappropriate due to a qualifying matter. Clause 3.32 of the NPS-UD defines what matters of consideration can be considered a Qualifying Matter. Common QFM's include natural and coastal hazards and heritage sites.

2. THEORETICAL (ENABLED) CAPACITY

Property Economics was provided with GIS layers for each district containing the sites available for infill, or comprehensive redevelopment. The Theoretical Capacity was calculated using either the current or proposed district plan policy settings and algorithmic, GIS and 3D modelling. Specifically, all the councils save for Horowhenua, and the Wairarapa Councils are undergoing plan changes to implement the Medium Density Residential Standards and Policy 3 of the NPS-UD. These plan changes are the driving factor behind the changes to theoretical capacity between this HBA and the previous capacity assessments for each district.

Table 1 below outlines the theoretical capacity outputs for each district based on the model provided to Property Economics (maximum dwelling number per site). In total, there is Theoretical Capacity of nearly 1.4m dwellings, just over 100,000 of which are Greenfield.

It is important to note that Table 1 represents the sum of the maximum attainable yield of any typology on an individual site basis. The theoretical model outputs provided to Property Economics contained several different development scenarios on each site, therefore the theoretical yield represents the scenarios on each site where the development potential is the highest.

TABLE 1 – THEORETICAL RESIDENTIAL DEVELOPMENT CAPACITY SUMMARY

Capacity Overview	Urban	Greenfield	Total
Wellington City	294,923	2,721*	297,644
Porirua City	144,450	6,604	151,054
Upper Hutt City	209,996	31,693	241,689
Kapiti Coast	260,049	40,947	300,996
Lower Hutt City	308,737	3,701	312,438
Combined Wairarapa Districts	35,189	8,727	43,916
Horowhenua District	21,497	7,072	28,569
Total	<u>1,274,840</u>	<u>101,465</u>	<u>1,376,305</u>

Source: Property Economics

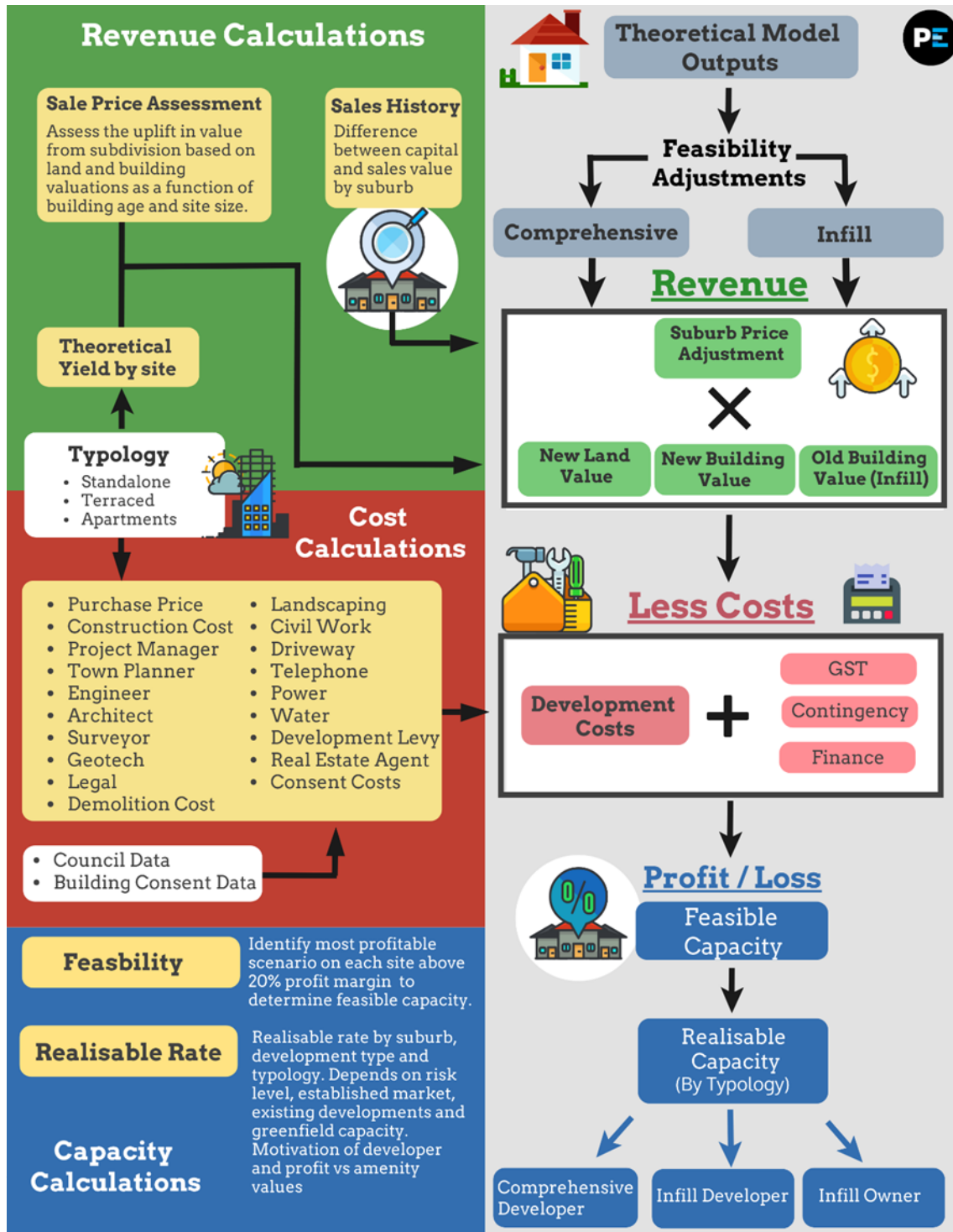
It should be noted that in the assessments for all districts except for Wellington and Porirua's, greenfield sites have been defined as sites larger than 5ha. In Wellington and Porirua, the greenfield capacity has been identified separately by council, with the feasibility not assessed by Property Economics.

For the most part, these greenfield sites in the areas modelled by Property Economics are treated the same as the smaller urban sites. The primary adjustments applied is to assume 30% of each site is required for internal roading and reserves.

3. FEASIBLE CAPACITY MODELLING

A high-level overview of the model utilised by Property Economics in determining the feasible residential capacity for each of the districts is outlined in the flow chart in Figure 1 below.

FIGURE 1: PROPERTY ECONOMICS RESIDENTIAL FEASIBILITY MODEL OVERVIEW



Improvement Value per SQM

Using the ratings database provided by each council, the land value per sqm and improvement value per sqm is calculated. This is then summarised by suburb, size and typology to give the average per sqm value for various types of dwellings.

By splitting the valuation into land and improvement value, it accounts for variations of both sizes e.g., a large dwelling on a small piece of land compared to the same size dwelling on a larger piece of land.

Values are not the same across each suburb (due to differing structures and quality), and thus it is required to give the per sqm value for each suburb individually. Also, the per sqm rate for land and improvement value are shown not to be consistent across all sizes. For example, a larger dwelling has on average a lower per sqm improvement value than a smaller one. This inverse relationship between size and per sqm value is the same for both land value per sqm and building value per sqm.

Table 2 demonstrates how a subdivision primarily makes it profit through an increase in land value. Note that this is a generic example in that it is simply included for demonstration purposes and is not representative of a specific site.

TABLE 1: EXAMPLE OF HOW BUILDING VALUE AND LAND VALUE CAN VARY BETWEEN STANDALONE AND TERRACED DEVELOPMENT OPTIONS

Development Option on 500sqm site	Building Value per dwelling	Site Size per dwelling	Land Value per dwelling	Sale Price per dwelling	Land Value Per SQM	Total Land Value
One 100sqm Standalone	\$ 400,000	500	\$ 500,000	\$900,000	\$ 1,000	\$ 500,000
Two 100sqm Standalone	\$ 400,000	250	\$ 400,000	\$800,000	\$ 1,600	\$ 800,000
Three 100sqm Terraces	\$ 400,000	167	\$ 360,000	\$760,000	\$ 2,160	\$ 1,080,000

Source: Property Economics,

As this table shows, the value of each individual 100sqm building does not change. Rather the value in building more terraces is inherit in the increase in land value from \$1,600 per sqm to \$2,160 per sqm, which is the result of being able to build more homes on the same site.



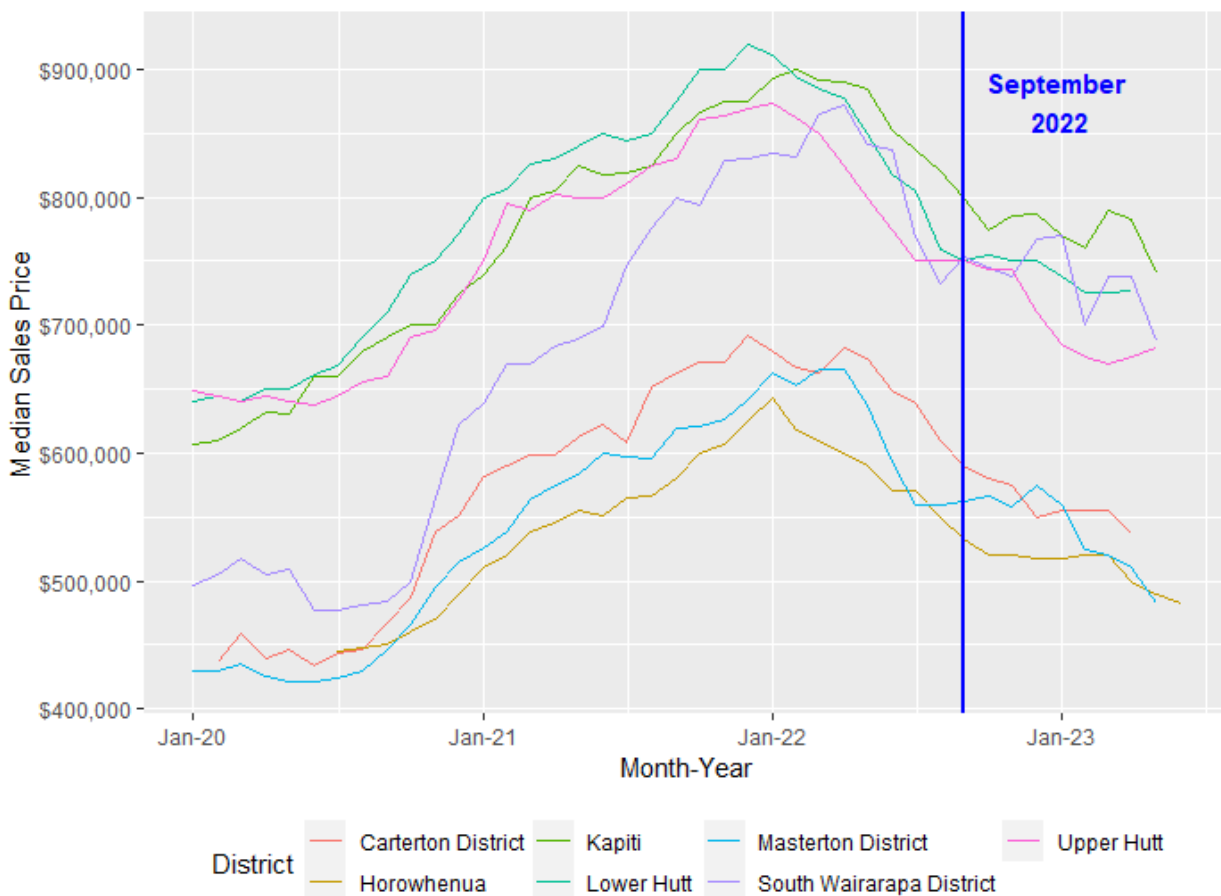
Changes to Sale Price in the Wellington Region

Figure 2 shows how the median sales price has changed in the Wellington Region for the districts included in this assessment. The point at time at which the feasibility assessments were undertaken for each of the districts (except Wellington and Porirua) is the September 2022 point shown on Figure 2. This graph therefore highlights how this average price point compares to the last three years of price differentials.

Specifically, prices increased across the region between January 2020 and January 2022, with the Lower Hutt City district exceeding a median of \$900,000. However, since then prices have dropped with the September 2022 prices being roughly equivalent to the January 2021 median sale prices.

This drop in price is primarily driven by the increase in interest rates, which has increased the cost of borrowing and lowered demand for housing.

FIGURE 2: ROLLING AVERAGE RATIO OF SALES PRICE TO CAPITAL VALUE BETWEEN JANUARY 2020 AND FEBRUARY



Source: Property Economics, Core Logic

Figure 2 also highlights that this downward trend has continued past the September 2022 point in time with further declines being experienced in all districts.

It should also be noted that in this same period, there has been significant inflationary pressures in most sectors of the economy, not least of which includes the construction sector. Core Logic's Construction Cost Index indicates the costs have risen by 10% in the last year and by 20% since 2020 and that it is continuing to rise.

This shift in the balance between the underlying land values and the large increase in construction costs has a significant impact on the urban feasibility. As a baseline, the feasibility assessment results below reflect a price point as at the valuation (September 2022) however Property Economics has also reported the feasible capacity under different price scenarios. The results for the districts assessed are outlined later in this report.

For Wellington City, the assessment was initially undertaken at the start of 2022, which as highlighted in Figure 2 was an all-time high. Given the direction that prices were heading, Property Economics also tested the feasible capacity under a scenario of a 10% drop in prices and a 10% increase in construction costs. It is this scenario that is published in this report.

Furthermore, it should be noted that in preparation for the HBA, Wellington City Council engaged Property Economics to make further adjustments to the capacity modelling. These adjustments included changes to the commercial ratios, dwelling size and QFM assumptions in order to reconcile these metrics with the modelling undertaken in the other districts.

For Porirua, the feasibility assessment undertaken to account for the QFM, was based on the original HBA assessment undertaken in late 2021. This assessment was based on the averages of sales between September 2020 and August 2021. Based on the overall trends in Figure 2, this would place the price point to be approximately 10% higher than the September 2022 point in time and with lower construction costs.

4. FEASIBILITY MODELLING OUTPUTS

4.1. FEASIBLE CAPACITY OUTPUTS

Property Economics has assessed the variables in each of the district's markets and run feasible capacity models across the range of locations, land values, improvement values, and land value changes. A key component of the market's willingness to develop infill is the relationship between a site's land value, fixed subdivision costs and the identifiable 'uptake' in value (sqm) through subdivision. A development is deemed to be 'feasible' where the ratios meet a profit level suitable to meet market expectations (20% for the purpose of this analysis).

Table 3 below outlines a summary of the Feasible Capacity within the Wellington Region by either an owner occupier or a developer, with the capacity representing the most profitable. This is an important difference as motivations and capital outlay are often different. These figures have removed all 'double ups' i.e., where multiple instances were tested on a specific site and represent the most profitable scenario for that site.

TABLE 2- FEASIBLE RESIDENTIAL DEVELOPMENT CAPACITY BY DISTRICT - OWNER AND DEVELOPER

Council	Theoretical	Standalone	Terrace	Apartments	Total	% of Theoretical
Wellington City	294,923	13,011	45,695	36,295	95,001	32%
Porirua City	144,450	2,516	24,117	14,631	41,264	29%
Upper Hutt City	241,689	13,005	11,000	1,538	25,543	11%
Kapiti Coast	300,996	14,468	39,142	1,773	55,383	18%
Lower Hutt City	312,438	5,104	35,978	16,486	57,568	18%
Combined Wairarapa Districts	43,916	5,525	20,847	-	26,371	60%
Horowhenua District	28,569	2,720	7,871	-	10,591	37%
Total	1,366,980	56,349	184,650	70,722	311,720	23%

Source: Property Economics

In total, there is the Feasible Capacity for almost 312,000 dwellings within the Wellington Region. This level of feasible capacity represents a 23% feasibility rate on the theoretical capacity.

As Table 3, highlights, there is a difference in the overall feasibility rate between each of the districts. The three key drivers of this ratio is the level of apartment enablement, underlying land values and the relative average size of the sites (i.e. how easy the existing sites are to subdivide), albeit Wellington and Porirua's higher feasibility rates are likely attributable in part to the fact that their assessments were taken at a different point in time, one where development was more favourable.

Lower Hutt City has high apartment enablement through their commercial and extensive High Density Residential Areas. This drives up the theoretical capacity although typically a smaller portion of apartment capacity is feasible. On the flip side, Horowhenua and the Wairarapa

Districts do not have any apartment enablement (as modelled). Consequently, the standalone and terrace developments have higher feasibility rates leading to higher feasibility rates.

It should also be noted that both the Wairarapa districts and Horowhenua are made up of smaller townships and rural settlements and tend to have significantly larger average dwelling sizes than the urban cities. Consequently, this lower density makes redevelopment, particularly owner infill significantly more practical and feasible.

The difference between the two, with the Wairarapa district having the highest feasibility rate is likely a consequence of their higher average land values. Figure 2 shows that Horowhenua District has the lowest median sale price of all districts assessed.

4.2. REALISABLE CAPACITY OUTPUTS

On top of the feasible capacity modelling, practical considerations must be taken into account as to what is likely to be developed in the real world. The realisation rates essentially provide for 'development chance' given the propensity for development variances.

These considerations are based on:

- Dwelling typology
- Development option
- Greenfield competition

The identification of these variables not only provides for sensitivities but also addresses the relativity between typologies. While all three typologies may be feasible the development model identifies the site scenario with the highest profit margin.

However, practically while the model assesses the standard 20% profit margin, there is greater risk in some typologies, and thus a matrix of 'risk factors' have been applied across each combination of typology and development type.

Risk has been accounted for developments undertaken by developers by increasing the required profit level for a development to be classified as 'realisable', on top of being feasible.

Table 4 below shows the profit levels required for each combination of typology and development option to be considered realisable by the model.

TABLE 4 – DEVELOPER REALISABLE PROFIT RATES

	Comprehensive Developer	Infill Developer	Infill Owner
Standalone	20%	17%	25%
Terraced	23%	20%	28%
Apartment	32%	28%	39%

Source: Property Economics

This reflects the market practicality that developments taken on by a developer have relatively lower risk if they are an infill development, rather than a comprehensive development. It also shows the increasing risk of development as the typology increases in scale from standalone dwellings, through to terraced product, and finally apartments.

Additionally, for an owner occupier the model considers the profit level of the development relative to the capital value of the existing dwelling(s). This is because motivations for an owner to subdivide their property are inherently linked with the relative profit, they can achieve against the value of their own home e.g., a \$100,000 profit on a \$1,000,000 site will be less likely

to be developed by the owner, compared to a \$100,000 profit on a \$500,000 site, assuming similar fixed costs.

Therefore, as a methodology for this, the model considers that the lowest quartile of feasible infill developments in terms of the relative profit / CV ratio will not be realised by the market.

Finally, there are additional matters in each of the district plan that may affect the realisation rate of capacity. Specifically, although the model focuses on permitted activities as the baseline, it has also included Restricted Discretionary Activities for sites where that is the only development pathway, namely flooding constraints. The specifics of how each planning constraint has been modelled in regard to realisable capacity is detailed within the individual reports.

Taking these market practicalities into consideration, Table 5 shows the realisable capacity by district. This shows the total capacity potential that is expected to be realised by taking the most “realisable” development option for each site. It is important to note that this is not a projection of what will be built over the next 30 years; the dwelling demand projection is less than half of this capacity. Rather, it represents Wellington’s modelled capacity potential or what profit-driven developers could be expected to deliver if there was unlimited demand.

TABLE 3: REALISABLE RESIDENTIAL DEVELOPMENT CAPACITY BY DISTRICT

Council	Theoretical	Standalone	Terrace	Apartments	Total	% of Theoretical
Wellington City	294,923	15,772	32,329	21,314	69,415	24%
Porirua City	144,450	6,805	11,343	2,202	20,350	14%
Upper Hutt City	241,689	15,084	2,485	891	18,461	8%
Kapiti Coast	300,996	20,291	11,869	513	32,673	11%
Lower Hutt City	312,438	10,207	8,182	9,847	28,236	9%
Combined Wairarapa Districts	43,916	5,806	15,263	-	21,068	48%
Horowhenua District	28,569	3,104	5,363	-	8,467	30%
Total	1,366,980	77,069	86,834	34,767	198,670	15%

Source: Property Economics,

Table 5 shows that the realisable capacity across the Wellington Region totals close to 200,00 dwellings, representing a 15% realisation rate on the total theoretical capacity. In essence, this represents a 64% realisation rate of the already calculated feasible capacity outlined in Table 3 above.

5. ALTERNATIVE SCENARIOS

Table 6 shows the Feasible and Realisable capacity based on sale prices in the first half of 2023s (i.e., a further reduction assessed at a district level according to the trends shown in Figure 2). This reduction in sale price correlates with a larger decrease in the land values as improvement values have not materially changed.

Table 6 shows the impact it has on the five districts assessed in preparation for this HBA. The two districts for whom the capacity was assessed separately has not had scenarios for early 2023 prices run and consequently, the capacity for these districts is shown separately.

TABLE 4: FEASIBLE AND REALISABLE CAPACITY AS AT EARLY 2023 PRICES

Council	Theoretical	Standalone	Terrace	Apartments	Total	% Change from Baseline
Upper Hutt City	241,689	9,581	1,951	347	11,879	-36%
Kapiti Coast	300,996	13,065	9,698	45	22,808	-30%
Lower Hutt City	312,438	7,138	2,685	5,400	15,223	-46%
Combined Wairarapa Districts	43,916	3,630	9,419	-	13,049	-38%
Horowhenua District	28,569	2,778	3,862	-	6,640	-22%
Total (This Modelling)	927,607	36,192	27,615	5,792	69,599	-36%
Wellington and Porirua	439,373	22,577	43,672	23,516	89,765	
Total Region	1,366,980	58,769	71,287	29,308	159,364	-

Source: Property Economics

This drop in sales price has a significant impact on the level of Realisable capacity, dropping the Realisable Capacity for the districts assessed by an average of 36%. This decreases the capacity across the region to just less than 160,000 (not accounting for any changes to the Wellington and Porirua districts)

The Realisable Capacity in Lower Hutt shows the greatest proportional drop of the districts assessed. This is because this district has the highest density of those assessed and therefore the resulting realisable capacity is made up of a higher quantum of comprehensive redevelopment. This development option tends to be more sensitive to changes in land prices compared to infill. Lower Hutt City also had the highest number of realisable apartments, and the realisation rate of these drop significantly with the shifts in land and construction prices.

6. SUFFICIENCY OF SUPPLY AND DEMAND

Table 7 shows the projected dwelling demand under the Sense Partners 50th percentile forecast and the NPS-UD¹ uplift requirement for the Wellington Region. It should be noted that this is based on the 2022 projection series showing growth between 2021-2051 except in the case of Horowhenua which is based on a 2023 projection series and a 2023-2053 time period.

This shows that over the next 30 years the Region requires capacity for close to 100,000 dwellings in order to meet its NPS buffer requirements. Wellington City has the highest dwelling growth projection, followed by Lower Hutt City.

TABLE 5: WELLINGTON REGION PROJECTED DWELLING GROWTH BY DISTRICT

Council	Attached dwellings	Standalone dwellings	Total dwellings	Including NPS Buffer
Wellington City	13,400	12,633	25,915	30,275
Porirua City	1,545	6,933	8,469	9,889
Upper Hutt City	1,736	5,089	6,810	7,955
Kapiti Coast District	4,615	7,291	11,899	13,913
Lower Hutt City	3,466	11,958	15,421	18,003
Carterton District	252	2,089	2,341	2,734
Masterton District	2,995	3,213	6,193	7,261
South Wairarapa District	253	2,123	2,376	2,776
Horowhenua	1,478	4,015	5,493	6,420
Grand Total	29,740	55,344	84,917	99,225

Source: Property Economics, Sense Partners

Finally, Table 8 shows a comparison of the Realisable Capacity against total Demand including the NPS-UD margin for each district. This shows that all the districts in the Wellington Region have more than sufficient capacity to meet the projected demand, with most districts having close to or more than double the Realisable Capacity compared to the dwelling demand projected under the 50th percentile.

¹ The National Policy Statement for Urban Development requires Councils to provide sufficient capacity to meet projected demand with a 20% competitiveness margin / buffer over the Short to Medium Term and a 15% buffer over the Long Term.

TABLE 6: WELLINGTON REGION SUFFICIENCY BY DISTRICT SUMMARY

Council	Total Dwelling Demand	Including NPS Buffer	Realisable Capacity	Capacity exceeding buffer	Buffer %
Wellington City	25,915	30,275	69,415	+ 39,140	168%
Porirua City	8,469	9,889	20,350	+ 10,461	140%
Upper Hutt City	6,810	7,955	18,461	+ 10,506	171%
Kapiti Coast	11,899	13,913	32,673	+ 18,760	175%
Lower Hutt City	15,421	18,003	28,236	+ 10,233	83%
Combined Wairarapa Districts	10,910	12,771	21,068	+ 8,297	93%
Horowhenua District	5,493	6,420	8,467	+ 2,047	54%
Total	84,917	99,226	198,670	+ 99,444	134%

Source: Property Economics