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# Chapter 5: Kāpiti Coast District Council

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# Executive Summary

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This report presents the results from the housing update of the Wellington Regional Housing and Business Development Capacity Assessment (HBA) for the Kāpiti Coast District Council (the Council). The HBA reports on the demand and supply of residential development capacity over 30 years from 2021 to 2051.

Analysis has identified that there is sufficient development capacity at the district level to meet forecast demand for housing over the short and medium term ((2021 – 2024) – (2024 – 2031)), but insufficient capacity to meet demand across the full long-term period (2031 – 2051).

*Table 1: overall summary of supply to meet demand*

| Type                                  | 2021-2024 | 2024-2031 | 2031-2051 | TOTAL  |
|---------------------------------------|-----------|-----------|-----------|--------|
| Demand (inflated with 20%/15% buffer) | 1,756     | 4,367     | 10,063    | 16,185 |
| Development capacity (realisable)     |           | 7,818     |           | 7,818  |
| Balance                               | 6,882     | 2,515     | -8,367    | -8,367 |
| Sufficiency                           | Yes       | Yes       | No        |        |

## Background

The Kāpiti Coast District has historically experienced periods of significant growth and is forecast to grow by approximately 32,000 across the next 30 years. Similar to national and regional trends, Kāpiti Coast has experienced increased demand for housing which has led to significant increases in local property and rental prices.

The impact of this increase is a particular challenge for Kāpiti, due to the drivers of underlying growth and its location in the region. As Kāpiti sits between metropolitan and provincial areas, its on-going attraction of people from across the region and other parts of the country is creating additional affordability pressures, particularly on those residents who live and work locally.

As with much of the Wellington region, Kāpiti Coast's topography and natural features also impact where and how the district continues to grow, with opportunities to develop and increase density within existing urban areas an increasingly important factor for meeting future demand.

The following HBA provides context around Kāpiti Coasts housing markets, future demand for residential development, and current levels of development capacity available to support future housing growth. The assessment of development capacity includes identifying what could be

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enabled under the current District Plan, the feasibility and likelihood of that development being built, as well as the availability of local infrastructure to service new development.

## Residential demand

Forecasts provided by Sense Partners are used to understand future population growth and the impact this has on housing demand in Kāpiti. Sense Partners median forecasts have been used as the baseline for this assessment by all councils within the Wellington urban area.

The median forecast indicates Kāpiti Coast district's population will grow from 58,225 in 2021, to 90,069 people by 2051. This is an increase of almost 32,000 people and equates to an annual average growth rate of around 1.5% or a 55% increase in population. This population growth has been modelled to indicate demand for approximately 14,000 additional dwellings across the district. Adding an additional buffer of demand to this forecast to provide for additional competitiveness<sup>1</sup>, increases demand up to 16,185 additional dwellings.

Based on forecasts of future household composition, 57% of all new housing is expected to be standalone, while joined housing including terraced housing, flats and apartments are expected to make up 43% of all new housing. This has shifted from the 84% and 12% identified for these typologies from the last assessment and also reflects shifts in government policy to enable intensification under the National Policy Statement on Urban Development (NPS-UD).

## Residential capacity

Residential capacity identifies the amount of housing enabled, or able to be developed under the provisions of the current District Plan. This includes development of greenfield and future development areas, and infill and redevelopment in existing urban areas.

Modelling has identified a theoretical plan enabled capacity of 17,983 additional dwellings across the district. This includes 3,116 from greenfield and future development areas, and 14,867 from infill/redevelopment of existing areas.

While the District Plan enables theoretical capacity for development, the feasibility and realisation of that development are based on market factors.

Of the theoretical plan enabled capacity, 10,097 dwellings are considered feasible to develop based on current market factors, including the price of land, land development costs and building costs. 7,331 of these are in existing residential areas and 2,766 in greenfield areas.

Of the 10,097 feasible development capacity, 7,818 dwellings are likely to be realised for development. For Kāpiti, realisable development continues to show a higher proportion of standalone housing (6,760), over terraced housing (1,058). This continues to be largely due to the current development settings of the current District Plan and market preferences for standalone housing. However, this assessment shows both the demand and realisation of medium density

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<sup>1</sup> A requirement under the National Policy Statement on Urban Development

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development typologies have changed since the last assessment. In the 2019 assessment terrace and medium density typologies did not feature at all in the realisable capacity given the higher risks factors for its development and strong market preferences for standalone housing. This shift reflects the increasing interest we are seeing locally for medium density developments over the last two years.

## Infrastructure capacity

Infrastructure capacity identifies the current availability or commitment to provide infrastructure to support future residential development. This includes assessment of capacity and potential constraints on future growth across Council's drinking, waste and stormwater (three waters), open space and local roading networks. An assessment is also provided from other agencies on the State Highway, public transport and education networks.

The completion of the first HBA in 2019 identified that most of Council's infrastructure networks generally had sufficient capacity available or planned to meet current and future growth needs. Where there were known constraints, these were typically able to be managed or mitigated on a case-by-case basis or identified to be addressed through future infrastructure investment. Ōtaki was an exception, where unforeseen growth in the area identified available capacity for water and wastewater would be taken up much sooner than anticipated.

Further work has since been undertaken to identify additional investment and capacity in Ōtaki. However, since the last assessment it has also become apparent that the district is growing much faster than previously projected, at twice the rate of growth identified in the 2019 assessment. This higher level of growth is projected to continue across the next 30 years, driven by increasing demand for housing, improved connectivity of the district north and south, and the ongoing appeal of flexible working and lifestyle attracting people to the district.

The current assessment identifies that while infrastructure capacity continues to be generally available across most areas of the district in the short to medium term, the increase in growth presents challenges and opportunities for how longer-term growth is supported. This includes looking at the shape and nature of infrastructure networks required to support and enable good outcomes alongside the future growth of the district.

A number of infrastructure networks such as open space and stormwater previously met growth needs on a case-by-case basis as development has emerged. This has been assisted by hydraulic neutrality requirements in the District Plan. However, the scale of future growth and shifting balance between greenfield growth and intensification may require different long-term approaches in order to meet future growth outcomes.

The nature and location of future growth also creates a challenge for water and wastewater networks as they are impacted by increasing physical costs to develop and maintain their efficiency and effectiveness as networks grow and expand, but also the costs of meeting higher health standards and environmental controls relating to receiving environments.

Improvements in mode share and public transport are important to improve accessibility and alleviate congestion across the district. This is increasingly important as the district grows and

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intensifies. The East-West connector road is one project planned to alleviate congestion in Paraparaumu and support future growth. Improved public transport is particularly important for Ōtaki, where the need for improved rail and bus services has long been advocated to support residents access to jobs, education and services. Addressing this deficiency is also important to support future growth of Ōtaki which borders two regional boundaries and sits at the heart of the northern gateway as part of the Wellington Regional Growth Framework.

The Long Term Plan 2021-2041 identified a significant increase in capital funding to support additional infrastructure capacity needs across the next 30 years. Further assessment work will be undertaken following the recent completion of the District Growth Strategy and help inform further planning and investment as part of the Long-Term Plan and Infrastructure Strategy in 2024.

## Next steps

A review of Kāpiti Coast Districts approach to future growth was recently completed with the District Growth Strategy *Te tupu pai - Growing well* adopted in February 2022. The Strategy sets out a vision and direction for how, where and when Kāpiti grows over the next 30 years.

The Strategy will inform future changes to the District Plan, starting with an urban development plan change (Plan Change 2 – Intensification) expected to be notified by 20 August 2022. The urban development plan change is one of a number of plan changes planned to meet the requirements of the National Policy Statement on Urban Development for enabling intensification and further development capacity to meet forecast demand.

Further work on the planning and investment of infrastructure will be undertaken to support the approach of future growth in the growth strategy. This work will help inform the next HBA and provide updated information to help inform planning and investment for growth and infrastructure as part of the next Long-term Plan process in 2024.

Council, in partnership with local iwi, is also currently undertaking a Housing Needs and Social Impact Assessment and work to develop a housing strategy. Alongside the HBA, these will help us better understand the full nature and extent of housing demand across our district and guide Council's work and partnerships with iwi, central government, developers and community housing providers to deliver better housing outcomes for our community.

It is important to note that this assessment does not reflect or include the residential medium density residential standards (MDRS) that were introduced by amendment to the Resource Management Act 1991 in late 2021, enabling development of three houses up to three storeys in general residential areas. Work is underway to incorporate these new standards as part of the intensification plan change underway to meet requirements of the NPS-UD. Changes to residential settings from the standards and intensification plan change will be included in the next HBA alongside assessment of development capacity for current and future demand for business.

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# 1 Introduction

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This report seeks to meet the requirements of the National Policy Statement on Urban Development (NPS-UD) for the Kāpiti Coast District by assessing the amount of development capacity available to meet future residential demand.

In particular, it estimates demand for dwellings, types of dwellings and locations and the supply of development capacity to meet that demand in the short, medium and long-term (3, 10 and 30 year periods). It also assesses the availability (current and planned) of infrastructure capacity to support development.

The Kāpiti Coast District is one of the northern gateways to the Wellington Region. The district covers 730 square kilometres and sits between the Tasman Sea and the Tararua Ranges. Historically, development and growth has concentrated around its early coastal and inland settlements along the 40-kilometre stretch of the district.

Paraparaumu is the District's Centre, supported by Waikanae and Ōtaki townships to the north, Paraparaumu Beach to the west, Raumati and Paekākāriki villages to the south, and the rural/beach settlements of Te Horo and Peka Peka in between.

Historically an area of rural services with a number of seaside settlements, the district has seen periods of substantial growth over the last 100 years. Opportunities for lifestyle living, proximity to Wellington and regionally affordable housing options have been key drivers of its growth and popularity.

Under current forecasts, the district's current population is expected to continue to grow to 90,000 by 2051.

The upcoming completion of national roading projects in the district are also expected to impact future growth, with increased accessibility making it easier for people to live and work on the coast driving further development. This growth presents both challenges and opportunities for the district as described further in this report.

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## 2 Current policy context

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Council's ability to supply and support residential land is influenced by a number of local Strategies, Policies and Plans.

### 2.1 Kāpiti Coast District Plan

Kāpiti Coast District Council's District Plan became operative in June 2021.

The District Plan manages development activities across the districts urban and rural areas.

The current overall approach to development within the District Plan is to maintain a consolidated urban form within existing urban areas and a limited number of growth areas which can be efficiently serviced and integrated with existing townships. This reinforces an overall hierarchy of centres and the effective and efficient use of infrastructure.

The District Plan provides for residential use across the General Residential Zone and also has provision for residential use within its Metropolitan, Town and Local Centre zones and mixed-use zone. A number of significant areas of future growth and expansion are also identified as Future Urban Zone in the Ngārara (Waikanae), Waikanae North and North Ōtaki areas.

An urban development plan change is currently underway to provide further capacity to meet future growth needs and intensification requirements under the National Policy Statement on Urban Capacity (NPS-UD) and to incorporate the medium density residential standards. These upcoming changes are not factored into this assessment but will be reflected in the next HBA.

### 2.2 Wellington Regional Growth Framework

The Wellington Regional Growth Framework (the Framework) is a regional spatial plan that describes a long term (30+ year) vision for how Wellington Region will grow, change and respond to key urban development challenges and opportunities.

The objectives sought from the Framework include:

- increasing housing supply, and improving housing affordability and choice;
- enabling growth that protects and enhances the quality of the natural environment and accounts for a transition to a low/no carbon future;
- improving multi-modal access to and between housing, employment, education and services;

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- encouraging sustainable, resilient and affordable settlement patterns/urban form that make efficient use of existing infrastructure and resources;
  - building climate change resilience and avoiding an increase in the impacts and risks from natural hazards; and
  - creating employment opportunities.

The Framework brings together iwi, central government and local government to support a regional approach to growth and is supported by a three-year work programme and informs planning and investment for growth across the Kāpiti Coast District.

## 2.3 Kāpiti Coast's District Growth Strategy

Kāpiti Coast District Council has recently reviewed and adopted a new District Growth Strategy *Te tupu pai: Growing well*. The Strategy provides an outline for managing how, where and when the district grows over the next 30 years.

The Strategy will inform how we shape the development of land and manage activities across our town centres and urban, rural and business areas, including through changes to the District Plan and infrastructure planning and investment decisions.

It is a key part of making sure there is adequate planning and investment in the necessary infrastructure, services and facilities needed by our future population.

The Strategy sits alongside other Council strategies, including the economic development strategy, sustainable transport strategy, draft open spaces strategy and the climate change action framework, to provide direction and coordination of activities to help support and achieve our community outcomes for the district.

The Strategy provides detail on how Kāpiti Coast sees itself growing alongside the Wellington Regional Growth Framework (WRGF) and requirements of the NPS-UD.

Consultation on a proposed approach to growth was undertaken from 19 October to 19 November 2021 and the final District Growth Strategy *Te tupu pai - Growing well* was adopted in February 2022.

## 2.4 Infrastructure Strategy 2021-2051

The Infrastructure Strategy identifies how Council plans to deliver core services for transport, stormwater, water supply and wastewater over the next 30 years. This includes information around some of the key challenges across its services and details for how they will be managed. The Strategy accompanies the Long-term Plan 2021 – 2041.

The Strategy looks to position the district for projected population growth, respond to the climate change emergency, and support the district's recovery from COVID-19. It sits alongside the Financial Strategy, which outlines the required rating and debt levels to fund the required investment in the district's infrastructure. Together the two strategies outline how Council intends to balance investment in assets and services with affordability.

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The strategy identifies four key challenges in maintaining effective infrastructure services for the district:

- growth and development;
- natural hazards, many of which are predicted to increase in frequency and intensity due to climate change;
- the impact of COVID-19, particularly on the global supply chain and the ability to source and deliver works
- the changing legislative and regulatory context.

Further assessment of infrastructure networks will be undertaken to inform implementation of the District Growth Strategy and plan changes and help inform planning and investment ahead of the next Long-term Plan 2024.

## 2.5 Roads of National Significance and Town Centres Transformation

The construction of the MacKay's to Peka Peka Expressway, Peka Peka to Ōtaki Expressway and the Transmission Gully Roads of National Significance, are once in a lifetime projects, creating both challenges and opportunities for the District. Collectively these projects improve accessibility to the district, but also divert traffic away from town centres. While alleviating impacts around congestion and safety in some areas, this also creates potential loss of activity in those same areas.

A Town Centres Transformation Plan was developed in 2015 to identify, offset and capitalise on changes created by the Expressway to ensure that the district's two largest town centres, Paraparaumu and Waikanae, remain attractive places for people to do business, invest and visit.

The Town Centres Transformation Plan seeks to create vibrant, diverse and thriving town centres that are easily accessible, reflect the unique flavour of each town, attract visitors and investment, and seek to enable more people to work locally in higher paid jobs. This includes the Paraparaumu Town Centre's role as the beating heart of the district, with a primary focus for retail, commercial, cultural, and civic activity.

Further work to scope and develop town centre plans has been identified as part of the District Growth Strategy that will build on transformation work and continue to support how our town centres grow and evolve over time.

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# 3 Residential demand and capacity

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The NPS-UDC requires the Council to identify the overall sufficiency of development capacity to meet the district's future demand for housing over the short (3 years), medium (10 Years) and long term (30 years).

The following section looks at:

- identifying population growth and housing demand by type, location, price point and different groups of the community
- supply of currently zoned development capacity for housing
- developability of capacity, including feasibility and realisation of development
- Overall sufficiency of development capacity to meet future demand

Firstly, some background is provided on current and past residential development to provide context to this assessment.

## 3.1 Historic urban growth and settlement

The natural and physical characteristics of Kāpiti have been subject to significant change over a relatively short period of time, with a large proportion of this change attributed to human settlement and development. In turn, the form of settlement in Kāpiti has largely been shaped by three elements:

- natural features, particularly the Ōtaki and Waikanae Rivers and their estuaries;
- the main locations of pre-European Māori settlement; and
- the establishment of the railway and then the State Highway.

Significant periods of growth occurred on the Kāpiti Coast Post World War II, in the 1970s and, more recently, through the 90's and 2000's.

These periods of growth reflect critical infrastructure developments, including the extension and electrification of passenger rail to Paekākāriki, Paraparaumu and more recently Waikanae; the development of Centennial Highway; reticulation of drinking and wastewater services across the

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Paraparaumu, Raumati and Waikanae areas during the early 80's; and the development of Kāpiti airport and Te Roto industrial areas.

Over time, the pattern of growth in Kāpiti has consolidated around existing settlements in both inland and coastal areas to form larger contiguous urban areas.

Alongside the development of these urban areas, the demand for rural lifestyle has also seen areas of surrounding rural land becoming subdivided into smaller lifestyle blocks. As development has progressed over the years, some of these lifestyle areas now surround, with some sitting within, more densely developed urban areas.

More recently, the MacKay's to Peka Peka Expressway has been completed, while the Peka Peka to Ōtaki Expressway is currently being constructed along with the Transmission Gully Motorway project. Both are expected to open in the near future and further increase accessibility to the district and contribute to further population growth.

### 3.2 Current growth and settlement trends impacting housing in the Kāpiti Coast

A number of factors are shaping demand and supply of residential development in the Kāpiti District. The following points are drawn from demographic data from Census 2018, Statistics New Zealand, Ministry of Housing and Urban Development's (HUD) NPS-UD monitoring dashboard indicators discussed later in this report.

Migration is a key driver of growth in Kāpiti. The district receives a large proportion of its new residents from within the Wellington Region, but also elsewhere in New Zealand and internationally. Proximity and connection to Wellington for work, lifestyle and more affordable housing options are factors attracting new people to the district.

While Kāpiti has experienced growth across a cross-section of its age groups, it has a high and growing proportion of residents over 50 years of age. This is linked to overall aging of our population nationally, but also strong growth in the retirement sector locally, which is reflected in the high percentage of single (29%) and two-person (38%) households across the district.

The rate of building consents for new residential dwellings has been increasing following lows post the Global Financial Crisis in 2008 and has averaged between 210 – 270 consents per year across the last 5-year period. While there has been a slight increase from levels in the last HBA, this level remains slightly lower than the average of 300 building consents per annum for new dwellings that was experienced in the early 1990's before a sustained period of higher growth through the late 1990's to 2000's. Consent data also shows a strong increased investment to current housing stock alongside the provision of new houses.

Of the stock being built, there continues to be a preference for larger standalone houses. This creates a mismatch with the high number of smaller households in the district. However, recent increases in demand and house prices have seen an increase in the numbers of smaller houses and medium density developments emerging on the market.

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Kāpiti continues to have lower household income levels than the regional and national average. While median household incomes for the Kāpiti District have increased from 53,400 to 64,100 from the 2013 to 2018 Census, they continue to be well below the national median of 75,700. Coupled with some parts of the district being identified as some of the most deprived in New Zealand, the ability to afford to rent or buy a house is increasingly an issue for existing residents. This is a particular issue in Ōtaki, which has a high proportion of Māori and where rents were, but no longer are affordable.

Kāpiti has higher levels of home ownership than regional and national levels. Census data from 2018 on private occupied households saw those that owned or partially owned their house increased from 58.9% to 59.8% from 2013. At the same time, those who didn't own their house or have it in a trust (assumed rental) also increased from 25.2% to 25.8%, with those whose house was held in a family trust decreasing from 15.7% to 14.4%. Over the same period, national levels of those who owned or partially owned their house increased from 49.9% to 51.3%, those who didn't own their house or have it in a trust increased from 35.2% to 35.5% and dwellings held in a trust fell from 14.8% to 13.3% over the same period.

More recent data on the Ministry of Social Development's social housing registrations has also shown that registrations for social housing have more than doubled from 63 to 189 over the last two years from June 2018 to June 2021.

Alongside increasing house and rental prices, the demographic make-up, housing tenure and incomes of Kāpiti are all key factors affecting the affordability of many residents and has seen housing and rental affordability in the district become some of the worst in New Zealand. This also has a flow on effect for Council, with increasing numbers of households on low and fixed incomes impacting Council's ability to collect residential rates, and in turn, maintain and increase services as the district grows.

The Covid-19 Pandemic has also impacted housing demand and pressures in the district, where residents returning to New Zealand and people looking for a better lifestyle balance has added to existing demand. This is adding additional competition to the limited local housing market preventing people from moving here and impacting options for some residents to stay in the district, particularly those on lower incomes.

While housing stock is in demand, Kāpiti also has a higher proportion of unoccupied private dwellings. These are concentrated across its beach settlements, which have been historically popular for baches and second homes. At the 2018 Census, vacant dwellings made up 16% of stock in the Waikanae and Ōtaki Beach areas and 12% in Te Horo.

Since its introduction in 2015, AirBnB has created a market for housing as visitor accommodation. As a popular place to visit, data shows that Kāpiti Coast District's proportion of Wellington Region's AirBnB listings has been steadily increasing over the past 5 years. In this time Kāpiti Coast District's proportion of AirBnB house listings have increased from 73 to 297, an increase from 12% to 18.7% of the Wellington regional house listings.

The percentage of Māori population is increasing across the district, up from 13% in 2013 to 14.7% in 2018. Māori make up between 8-15% of the population across five of the housing areas with

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Ōtaki standing out with 33% of its population being Māori. A study by BERL in 2016 on the Māori Economy identified 2,200 hectares of Māori Freehold Land identified across Kāpiti<sup>1</sup>. Two local iwi are also currently undertaking Treaty settlement processes. This provides opportunities to support future residential and business needs for iwi, including opportunities for papakāinga.

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<sup>1</sup> BERL. 13 December 2016 *The Māori economy in the Kāpiti Coast District*.

# 4 Future housing demand

## Key Findings

*Kāpiti Coast District will grow by 31,814 people by 2051, requiring an additional 13,852 dwellings.*

The following section provides analysis and insight into future population forecasts for Kāpiti, including future demand for housing by type, location and price. Information on demand is based on updated population and dwelling forecasts from Sense Partners.

**NOTE:** The rounding of numbers from modelling means that totals and sub-totals for population, households and dwellings do not always add up when looking at a particular year or total of data.

## 4.1 Population and household growth

A range of forecasts are available to inform planning for future growth. This includes Statistics New Zealand's forecasts and those developed by Sense Partners for all districts across the Wellington region.

A comparison of Statistics New Zealand's (SNZ) high and medium and Sense Partners (SP) low, median and high forecasts is provided in Table 1. Short and long-term assumptions on migration is a key difference across the two sets of forecasts with Statistics New Zealand projecting a lower future migration rate contributing to demand (0.1% growth per year), whereas Sense Partners forecasts identify a higher 0.7% increase per year, which reflects the historic long run average from 1991 and 2018.

Table 2. Forecasts for population growth for Kāpiti Coast District, 2018-2048

| Type       | 2018   | 2023   | 2028   | 2033   | 2038   | 2043    | 2048    | Change |
|------------|--------|--------|--------|--------|--------|---------|---------|--------|
| SNZ High   | 55,200 | 59,300 | 62,200 | 64,900 | 67,400 | 69,600  | 71,600  | 16,400 |
| SNZ Medium | 55,200 | 58,000 | 59,600 | 60,900 | 61,900 | 62,700  | 63,100  | 8,000  |
| SP High    | 55,126 | 61,695 | 70,303 | 79,853 | 89,976 | 100,225 | 110,602 | 55,476 |

| Type      | 2018   | 2023   | 2028   | 2033   | 2038   | 2043   | 2048   | Change |
|-----------|--------|--------|--------|--------|--------|--------|--------|--------|
| SP Median | 55,126 | 60,420 | 66,728 | 72,574 | 77,841 | 82,718 | 87,204 | 32,078 |
| SP Low    | 55,126 | 60,471 | 64,591 | 67,477 | 69,717 | 70,798 | 70,324 | 15,198 |

The Sense Partners median forecast has been identified as the baseline used to inform this HBA. The median forecast reflects an annual average rate of growth of 1.5% which reflects similarly against the growth rate Kāpiti has experienced from 1996 – 2020 and the rate of growth identified in the population forecasts used to inform the Long term Plan 2021 – 41.

The Sense Partners median forecast has also been extended from 2048 to 2051 to enable analysis across the short (2021- 2023) medium (2024- 2030) and long-term (2031-2051) periods (3, 10 and 30-year periods) required under the NPS-UD.

*Table 3. Short, medium and long-term population growth for Kāpiti Coast District, 2021-2051*

| Type                  | 2020   | 2021-2024 | 2024-2031 | 2031-2051 | Total  |
|-----------------------|--------|-----------|-----------|-----------|--------|
| Sense Partners Median | 57,201 | 3,377     | 8,544     | 19,893    | 31,814 |

Understanding the future growth and change to household compositions allows us to translate this population growth into the number of dwellings required i.e. the demand.

*Table 4. Short, medium and long-term demand for dwellings for Kāpiti Coast District, 2021-2051*

|                                | 2021-2024 | 2024-2031 | 2031-2051 | Total  |
|--------------------------------|-----------|-----------|-----------|--------|
| Number of additional dwellings | 1,463     | 3,639     | 8,750     | 13,852 |

In accordance with the NPS-UD, a buffer of 20% is added to the short and medium-term demand, and 15% is added to the long-term demand. The inclusion of this buffer ensures there is additional capacity to support competitiveness in housing demand. The resulting demand is as follows:

*Table 5. Inflated demand for dwellings for Kāpiti Coast District, 2021-2051*

|  | 2021-2024 | 2024-2031 | 2031-2051 | Total  |
|--|-----------|-----------|-----------|--------|
| Number of additional dwellings (with buffer added) | 1,756     | 4,367     | 10,063    | 16,185 |

## 4.2 Residential demand by type

Having established overall residential demand, we can consider what types of dwellings are in demand.

Broadly, demand is described in this HBA in three categories based on Statistics New Zealand definitions:

- Stand-alone housing – typically housing on its own allotment, typically associated with lower density areas
- Joined housing – including terraced housing, flats and apartments and is more representative of medium density development and include townhouses, semi-detached dwellings and low-rise apartments<sup>1</sup>.
- While ‘other dwellings’<sup>2</sup> compose part of total dwellings under Census data, they have not been included in Sense Partners forecasts.

As a note, the use of modelling and rounding of forecasts to housing types means not all subtotals add up to the totals. Using the Sense Partners median forecast, the estimate of demand for dwellings by type is:

Table 6. Projected dwelling demand by type. Sense Partners median forecast.

| Dwelling type       | 2021-2024    | 2024-2031    | 2031-2051    | Total         |
|---------------------|--------------|--------------|--------------|---------------|
| Stand-alone housing | 954          | 2,370        | 4,522        | 7,846         |
| Joined housing      | 515          | 1,254        | 4,235        | 6,004         |
| <b>Total</b>        | <b>1,469</b> | <b>3,624</b> | <b>8,757</b> | <b>13,850</b> |

If we inflate this to account for additional demand the estimate of demand for dwellings by type is:

Table 7. Projected dwelling demand by type. Inflated Sense Partners median forecast.

| Dwelling type       | 2021-2024<br>(20 %) | 2024-2031<br>(20%) | 2031-2051<br>(15%) | Total         |
|---------------------|---------------------|--------------------|--------------------|---------------|
| Stand-alone housing | 1,145               | 2,844              | 5,200              | <b>9,189</b>  |
| Joined housing      | 618                 | 1,505              | 4,870              | <b>6,993</b>  |
| <b>Total</b>        | <b>1,756</b>        | <b>4,367</b>       | <b>10,063</b>      | <b>16,185</b> |

<sup>1</sup> For the purposes of this HBA low rise apartments are identified as up to three storeys in height.

<sup>2</sup> Other dwellings include mobile and improvised dwellings, roofless or rough sleepers, and dwellings in a motorcamp.

### 4.3 Residential demand by location

In addition to identifying overall residential demand, we have identified six broad housing areas to help identify differences in the demand for housing and housing types across the district. This includes differences across the main urban areas and the surrounding rural area.

The current housing areas are made up from underlying Statistics New Zealand SA2 boundaries. In most cases these SA2 areas provide a good fit with the areas of urban development and forecasts as part of this assessment. However, there is an exception in Ōtaki, where a large area of future urban development is projected to occur on the border of the current Ōtaki urban area in a rural SA2 area. To account for this, the projected growth for the Forest Lakes SA2 area has been included in calculations for the wider Ōtaki housing area but is not shown on the following map. This is more reflective of the nature and type of demand projected for the area.

Housing areas used for analysis as part of this assessments are shown below in Figure 1.



Figure 1. Map of the broad housing areas used for analysis of residential development capacity.

The following table identifies the inflated demand for projected dwellings by type across each of the housing areas.

Table 8. Projected dwellings by type, by housing area, inflated Sense Partners median forecast, 2021-2051

|                     | 2021-2024 | 2024-2031 | 2031-2051 | Total |
|---------------------|-----------|-----------|-----------|-------|
| <b>Paekākāriki</b>  |           |           |           |       |
| Stand-alone housing | 5         | 11        | 37        | 52    |
| Joined housing      | 0         | 1         | 9         | 10    |
| Total               | 5         | 12        | 46        | 63    |
| <b>Raumati</b>      |           |           |           |       |
| Stand-alone housing | 184       | 463       | 823       | 1,470 |
| Joined housing      | 49        | 85        | 133       | 268   |
| Total               | 228       | 554       | 965       | 1,747 |
| <b>Paraparaumu</b>  |           |           |           |       |
| Stand-alone housing | 366       | 899       | 1,668     | 2,932 |
| Joined housing      | 212       | 391       | 1,064     | 1,667 |
| Total               | 569       | 1,288     | 2,728     | 4,584 |
| <b>Waikanae</b>     |           |           |           |       |
| Stand-alone housing | 319       | 698       | 1,333     | 2,350 |
| Joined housing      | 274       | 442       | 1,832     | 2,547 |
| Total               | 558       | 1,144     | 3,146     | 4,848 |
| <b>Ōtaki</b>        |           |           |           |       |
| Stand-alone housing | 179       | 480       | 841       | 1,499 |
| Joined housing      | 106       | 328       | 1,365     | 1,798 |
| Total               | 283       | 856       | 2,159     | 3,297 |
| <b>Other</b>        |           |           |           |       |
| Stand-alone housing | 94        | 294       | 500       | 888   |
| Joined housing      | 26        | 157       | 573       | 756   |
| Total               | 120       | 493       | 1,044     | 1,657 |
| <b>Total</b>        |           |           |           |       |
| Stand-alone housing | 1,145     | 2,844     | 5,200     | 9,189 |

|                | 2021-2024    | 2024-2031    | 2031-2051     | Total         |
|----------------|--------------|--------------|---------------|---------------|
| Joined housing | 618          | 1,505        | 4,870         | 6,993         |
| <b>Total</b>   | <b>1,756</b> | <b>4,367</b> | <b>10,063</b> | <b>16,185</b> |

Considering dwelling demand across these housing areas confirms some existing and expected growth patterns.

- The strongest demand for residential housing is in the Waikanae and Paraparaumu areas, which account for nearly two thirds of all projected growth, with 30 and 28 percent respectively.
- Ōtaki has increased demand, doubling that from the last HBA at 20 percent Raumati and the ‘other’ housing areas have 11 and 10 percent of the remaining demand.
- Demand for standalone housing makes up 57 percent of future projected growth, but this is down from the previous 84 percent identified in the previous HBA.
- Demand for joined housing (terraces, town houses and low-rise apartments) has increased from 12 to 43 percent of future demand. This reflects changes underway to enable intensification and medium density development under the NPS-UD and Wellington Regional Growth Framework.
- Growth in Paekākāriki drops to under 1 percent of the district’s overall future demand reflecting the current constraints for development in the area.

Sense Partners forecasts also identified that a portion of the future growth in households would be met through increased use of vacant housing currently found across the district. Census 2018 indicated particularly high levels of vacant housing at Ōtaki Beach (15%), Te Horo (11%) and Waikanae Beach (16%), which are areas that have been popular for baches and second homes in the past.

An average household size of 2.3 persons is also forecast across the next 30 years. This is a slight decrease from the average of 2.5 average identified as part of the Long-term Plan in 2021. This decrease in size is due to the growth forecast for smaller couple and single households over family households over the next 30 years.

#### 4.4 Demand by price

The previous HBA provided analysis of demand by price point for new build activity and house sales to help further understand the shape of demand for housing in the district.

Table 7 looks at the percentage of residential sales and new build construction from 1 Jan 2018 to May 2021 by value across our six housing areas.

This information identifies a clear difference in the lower value and costs to build and buy in Ōtaki which is further to the north of the district, to those values and costs for Raumati to the South of the district. This likely reflects the lower land prices in Ōtaki but may also be a reflection of the type of housing and income levels in the area. The other observation is that all ranges have increased

from the comparison in the last assessment, reflected overall increases in value and costs across this period.

What we have not been able to identify, is understanding how much of this sale and build activity is being driven by local residents over those migrating to the district.

Table 9. Percentage of residential sales (s) and new builds (NB) by value Jan 2018 – May 2021

| Sale/Value Range        | Paekākāriki |    | Raumati  |    | Paraparumu |    | Waikanae |    | Ōtaki    |    | Other    |    |
|-------------------------|-------------|----|----------|----|------------|----|----------|----|----------|----|----------|----|
|                         | S           | NB | S        | NB | S          | NB | S        | NB | S        | NB | S        | NB |
| \$0-\$99999             | 1           | 0  | 1        | 1  | 1          | 10 | 1        | 0  | 1        | 3  | 0        | 2  |
| \$100000-\$199999       | 0           | 0  | 1        | 17 | 1          | 10 | 1        | 3  | 1        | 4  | 0        | 9  |
| \$200000-\$299999       | 2           | 14 | 1        | 5  | 1          | 15 | 2        | 5  | 6        | 17 | 1        | 10 |
| \$300000-\$399999       | 2           | 14 | 4        | 9  | 7          | 21 | 3        | 22 | 26       | 49 | 6        | 12 |
| \$400000-\$499999       | 14          | 0  | 15       | 21 | 17         | 17 | 13       | 29 | 24       | 18 | 19       | 19 |
| \$500000-\$599999       | 16          | 29 | 20       | 10 | 21         | 10 | 20       | 18 | 21       | 4  | 33       | 22 |
| \$600000-\$699999       | 19          | 0  | 20       | 10 | 20         | 7  | 21       | 11 | 13       | 3  | 13       | 13 |
| \$700000-\$799999       | 18          | 29 | 13       | 7  | 12         | 3  | 15       | 7  | 6        | 3  | 10       | 5  |
| \$800000-\$899999       | 10          | 0  | 10       | 6  | 9          | 1  | 11       | 2  | 2        | 1  | 7        | 2  |
| \$900000-\$999999       | 3           | 14 | 5        | 7  | 6          | 4  | 5        | 2  | 0        | 0  | 2        | 2  |
| \$1000000-\$1099999     | 2           | 0  | 3        | 1  | 2          | 1  | 2        | 1  | 0        | 0  | 2        | 0  |
| \$1100000-\$1199999     | 3           | 0  | 2        | 0  | 1          | 0  | 2        | 0  | 0        | 0  | 0        | 1  |
| \$1,200,000+            | 8           | 0  | 6        | 4  | 3          | 3  | 4        | 3  | 0        | 0  | 7        | 2  |
| Median household income | \$77,500    |    | \$74,866 |    | \$67,085   |    | \$63,875 |    | \$55,425 |    | \$95,500 |    |

## 4.5 Housing demand for other groups

This section provides an initial overview of the demand for housing by certain groups in line with Clause 3.23(2) of the NPS-UD. This was a new area introduced in the recent revision to the NPS-UD. Council, in partnership with local iwi, are currently undertaking a Housing Needs and Social Impact Assessment which is capturing more detailed quantitative and qualitative information to help inform understanding of a variety of demand pressures across the district, across the housing continuum. This includes research with our iwi partners into the housing and social needs in their rohe. This information will be undertaken in greater detail and will be available to inform the next HBA. This section provides an initial overview to help provide some context around different demands and pressures affecting different parts of the community.

### 4.5.1 Māori household statistics

Census 2018 data identifies that the number of Māori living in Kāpiti has increased up from 13.2% of the population in 2013 to 14.7% in 2018. Looking at household data shows that Māori households are spread across the six housing areas used as part of this assessment. While Paraparumu has the highest number of Māori households at approximately 1092, if we look at the number of Māori households proportionately to all households in each housing area we see a

different picture. Ōtaki stands out with approximately 33% of all households identify as Māori. The next highest is Paekākāriki at 15%, with Paraparumu and Raumati 11% and 10%, and Waikanae 9%. The “other” predominately rural housing area comes in with the lowest at just under 8%.

Comparing Māori and Non-Māori household statistics also identifies some key differences. Looking at household make-up across the district shows that there are less couple and one person Māori households and higher group and other family households than non-Māori households.

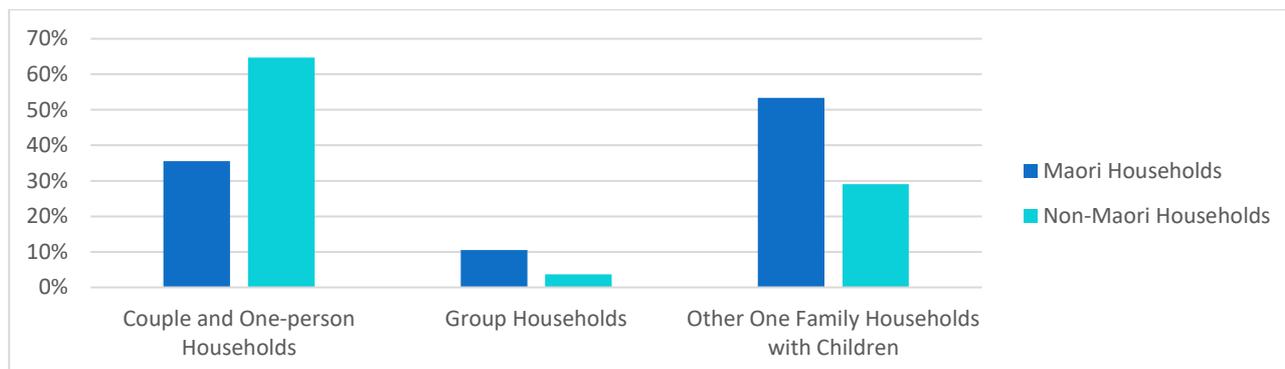


Figure 2. Comparison of household compositions for Māori and Non-Māori in the Kāpiti Coast District.

Kāpiti also has higher levels of house ownership than the national average, with lower levels of renting. However, Figure 3 below shows differences in household tenure for Māori and non-Māori households across the district, with just under 50% of Māori households own or partly own the dwelling they live in compared to 61.7% of non-Māori households. As a result, a much higher percentage of Māori households are renting in Kāpiti (approximately 40%). However, the percentage of Māori households who own or partially own their property in Kāpiti is higher than the national average of 41.8%, and percentage renting is lower than the national average of 47%.

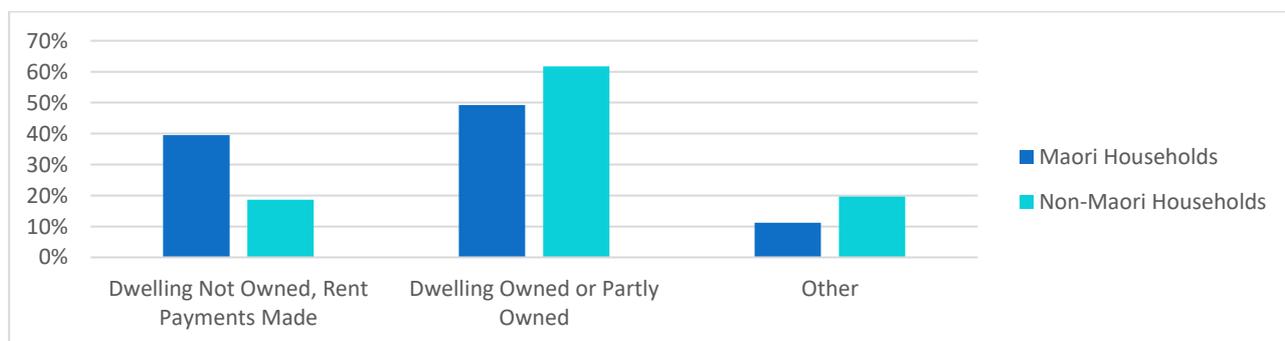


Figure 3. Comparison of household tenure for Māori and Non-Māori in the Kāpiti Coast District.

Differences in cultural composition of family units and supporting living arrangements may explain some of these differences around household compositions between Māori and Non-Māori households. We are also aware that costs are also attributing to larger households forming to be able to afford to live in areas and where people are returning to live with whanau due to housing challenges elsewhere. We know that provision and use of papakāinga is important to iwi in our district to help whanau have access to housing, live in their rohe and maintain close connections to their marae. With recent price increases affecting both the ability to buy and rent, it is clear from tenure differences that Māori households are more susceptible to housing affordability issues

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across the district. The current research and Housing Needs and Social Impact Assessment will help further identify the nature of demand and needs for Māori housing across the district.

#### 4.5.2 Public Housing demand

Kāinga Ora Homes and Communities currently manage a portfolio of approximately 260 dwellings in the Kāpiti Coast district, with most of these homes located in Ōtaki and Paraparumu. Kāinga Ora is undertaking work as part of the Central Government's Public Housing Plan 2021-24 to deliver additional capacity (itself and working with Community Housing Providers) to meet increasing needs in the district. Kāinga Ora are also in the process of developing an Area Development Strategy for Kāpiti that will help inform how they support future needs and demands across the district.

The Ministry of Social Development's (MSD) Housing Register provides an indication of the increasing demand for public housing in the district. As of June 2021, Kāpiti had 189 eligible applicants on the Housing Register. There has been a significant increase from the initial 26 registrations published in September 2016. This includes a doubling of registrations over the last two years - from the 93 in June 2019.

Of applicants, 61% were matched to a one-bedroom home, 26% a two-bedroom home, 10% a three-bedroom home and the remaining 2% a four-bedroom home. The proportion of demand for one-bedroom properties in Kāpiti is much higher than that in many of our surrounding districts and the national average.

In 2019 the Property Group undertook analysis of public housing needs in the district as part of work to establish a housing programme for Council. This work included engagement with the district's public and community housing providers. This identified hidden demand for public housing in Kāpiti for 205 persons. Including the 93 eligible applicants on the MSD's Housing Register at the time, demand for public housing in the district was identified at approximately 300 persons at that time. Assuming the link between the proportion of public housing registrations and hidden demand has continued alongside ongoing increases in local rent and house prices, with registrations doubling, it is likely that the unmet need is now likely to be more in the vicinity of 600.

The work underway on the Housing Needs and Social Impact assessment will help update our understanding of housing needs in the district. This will help support Council's work with government agencies and community housing providers to address affordability issues and increase public housing needs across the district, including emergency and transitional housing.

#### 4.5.3 Housing for older persons

The Kāpiti Coast District has one of the oldest populations nationally, with 19.4 percent of its population over 70 compared to the national average of 10.4 percent. Similarly, the district has a high proportion of one person households at 28 percent compared to the national average of 21 percent.

Future forecasts expect the over 70 age group to grow further to 23.8 percent by 2048. This is driven by the natural aging of New Zealand's population, but also the continued attraction of the

area as a retirement location with Kāpiti providing a large proportion of the regions retirement sector, with further retirement villages expected to support this growth.

In addition, Council also provides a small portfolio of housing to support older persons that are able to live independently. This includes 118 one-bedroom units. Fifty-six percent of these are provided in Ōtaki (66) with 38 percent in Paraparaumu and less than 3 percent in each Waikanae and Paekākāriki. Council currently has 57 approved applicants on the register for future places and has continued to see increasing demand for these places as pressure has increased over the last few years.

#### 4.5.4 Demand for Student Accommodation

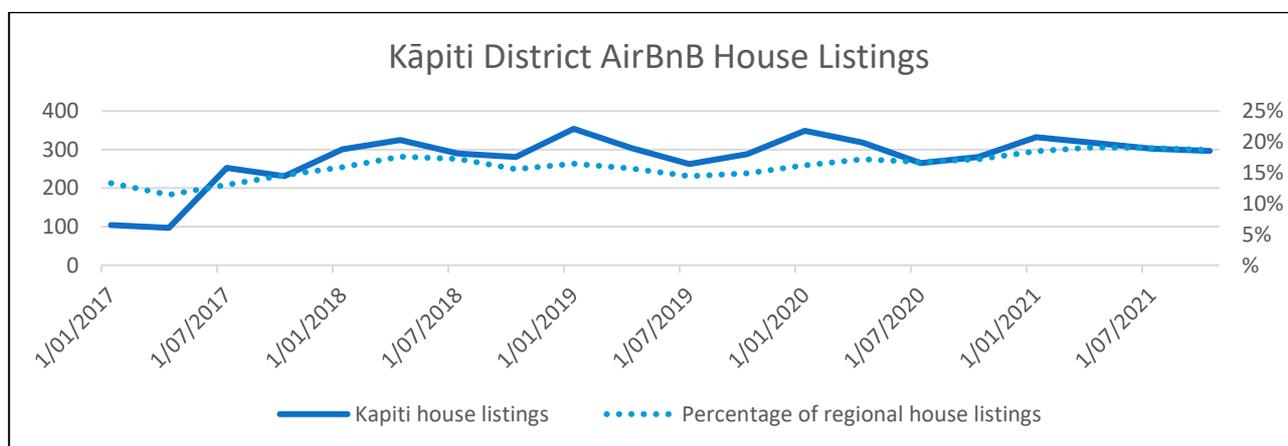
Demand for student accommodation is a factor with a particular impact on housing demand in Ōtaki, where Te Wānanga o Raukawa is located, where students locate to the area to undertake their studies (often with supporting whanau). This local accommodation demand has added to the demand for rental accommodation within the Ōtaki area. The availability of rental housing or other suitable accommodation is also a factor and constraint to attracting more students to the area.

Substantial increases in demand for housing in Ōtaki (in part driven by more affordable options than places such as Wellington) has seen local demand pressures worsen over the last two years, impacting both the price and availability of rental and affordable housing options in the area. The demand and impacts are being looked at further as part of the research supporting the needs analysis work.

#### 4.5.5 Visitor Accommodation

The Kāpiti Coast has long attracted visitors to the area with its coastline and recreational opportunities. The introduction of Air BnB in 2015 created an ability to use house listings to support short-term stays in the district.

Since its introduction, Kāpiti Coast District's numbers of house listings has increased from 73 to 297. This has also seen the district's proportion of regional house listings increase from approximately 12% to 18.7%.



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*Figure 4. Number and percentage of regional AirBnB house listings for the Kāpiti Coast District.*

The use of housing for visitor accommodation adds to the overall demand for housing. While we suspect some Air BnB properties may coincide with the district’s historical stock of baches and second homes, the data does not identify listings by location to support further analysis.

Assumptions around the impacts of accommodation and the usage of vacant housing is something we would like to analyse further following the next Census, which will be able to help identify any shifts in the occupancy of housing stock across the district.

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# 5 Housing development capacity

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## Key Findings

*Modelling indicates that Kāpiti Coast's District Plan currently provides for up to 17,983 dwellings.*

This section sets out the calculation of development capacity. Development capacity identifies the amount of potential housing that could be developed under the current provisions of the District Plan. The feasibility and likelihood of development capacity being built is then considered.

### 5.1 Calculating development capacity

Development capacity is the calculation of how much housing can be achieved under current development provisions. This takes into account factors that determine the location and size of housing including plan zoning, minimum lot sizes, height, and yard setbacks.

The following section provides a summary of the approach and results of assessing residential development capacity across greenfield and infill and redevelopment of existing urban (brownfield) areas. Further information on methodologies used to inform modelling are outlined in the following sections and as part of the regional summary of the HBA.

### 5.2 Theoretical plan enabled development capacity of greenfield areas

For the purposes of this HBA, greenfield areas are defined as any residential zoned area over five hectares in size and any areas that provide for future growth and development. For Kāpiti, this includes a number of parcels of land zoned for Future Urban in Waikanae and Ōtaki, and a number of areas of residential zoned land in Raumati, Waikanae and Ōtaki.

As the development settings for the Future Urban Zone are subject to future structure plan processes, the assessment of development capacity has used a proxy of 600m<sup>2</sup> minimum average lot size with an additional 20% gross area added to account for roading and reserves. This proxy

was also applied to assess the remaining areas of the Ngārara and Waikanae North developments for consistency of approach.

Modelling from the previous HBA was used as the basis of this greenfield update which included updated land values and removing sites that have since been developed. Further information on the greenfield methodology is outlined in the appendices of the 2019 HBA.

The assessment identified 31 greenfield sites with a potential yield of 3,116 plan-enabled sections.

*Table 10: Supply of plan enabled sections from greenfield development*

| Housing Area | Sites     | Developable area in hectares | Dwellings    |
|--------------|-----------|------------------------------|--------------|
| Paekākāriki  | -         | -                            | -            |
| Raumati      | 3         | 12.8                         | 174          |
| Paraparaumu  | -         | -                            | -            |
| Waikanae     | 17        | 127.1                        | 1,536        |
| Ōtaki        | 11        | 99.3                         | 1,406        |
| Other        | -         | -                            | -            |
| <b>Total</b> | <b>31</b> | <b>239.2</b>                 | <b>3,116</b> |

### 5.3 Theoretical plan enabled development capacity for infill and redevelopment of existing urban areas

The assessment of infill and redevelopment capacity includes all residential zoned land less than five hectares in size. This includes assessment of any vacant sites, as well as areas of existing development. The assessment analyses both the ability to infill around existing development and the full redevelopment of sites across a range of potential housing typologies (stand-alone housing, terrace housing or apartments).

## Modelling of development capacity in mixed-use and commercial areas

Modelling also assess residential development capacity in mixed use and commercial areas (including the Metropolitan, Town Centre, Local Centre and Mixed Use zones).

Several assumptions and simplifications have been made to calculate potential residential development capacity across these areas where it is provided for. To account for multiple uses on a site, each site was initially assessed as being redeveloped for medium density housing typologies and then adjusted to account for likely yield given predominate commercial uses in these areas.

A number of these assumptions are simplistic and potentially conservative. With changes underway to enable intensification and higher height limits across a number of these areas, a more refined modelling approach will be explored as part of the next HBA to better account for mixed uses and vertical developments. Further information on assumptions is available in Property Economics' report attached as Appendix 5.1.

Results for the infill/redevelopment model identified a plan-enabled capacity of 14,867 additional dwellings across the district's residential and mixed-use zones.

*Table 11: Theoretical plan enabled capacity from infill/redevelopment development.*

| Housing Area | Theoretical Capacity |
|--------------|----------------------|
| Paekākāriki  | 149                  |
| Raumati      | 2,201                |
| Paraparaumu  | 6,432                |
| Waikanae     | 2,714                |
| Ōtaki        | 3,050                |
| Other        | 320                  |
| <b>Total</b> | <b>14,867</b>        |

In all, a theoretical plan enabled capacity of 17,983 dwellings is identified across both greenfield and brownfield areas.

## 5.4 Levels of historic residential development

As well as looking at development capacity, it is also useful to look at historic development rates, which provides useful context in coming to an overall view of the general ability to meet demand across the district.

Looking back at new build consents from 1991, we can identify a period of building activity that averaged around 300 units a year before the construction boom of the early 2000's. Activity during this period peaked at double this rate but was starting to decline when hit by the Global Financial

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Crisis in 2008. Building activity then continued a downward trend, only starting to increase and recover to an average between 200 - 250 units a year from 2013.

The annual rate of new build development has ranged from 210 to 270 dwelling across the last five years. This equates to an annual average of 240 dwellings a year which can be broken down to 208 houses and 32 terraced houses a year. This rate is considered a sustainable rate of development into the future, however, there is potential for this to increase to higher historic levels as the scale and nature of development changes with increasing intensification in existing urban areas and future greenfield areas. This average development rate is used in the analysis of sufficiency later in this report.

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# 6 Housing Feasibility, Realisation and Sufficiency

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## Key Findings

Kāpiti Coast District has a feasible residential capacity of 10,097 dwellings across all forms of residential development.

7,331 feasible dwellings come from potential infill development, redevelopment, or intensification of existing urban areas and 2,766 come from greenfield land supply.

Applying a further test of the likelihood of development identifies a realisable development capacity of 7,818 dwellings over the 30 years to 2051.

That realisable capacity is insufficient to meet projected demand of 16,185 over the 30 years to 2051, with a shortfall of 8,367 dwellings.

From identifying the amount of theoretical capacity available, the assessment turns to identifying what proportion of that capacity is feasible to develop, and whether that feasible capacity is likely to be developed.

### 6.1 Feasibility of residential development capacity

Both the greenfield and infill models have economic assessments attached to them to determine the feasibility of development. In the case of the infill model, this also identifies the typology that is the most feasible to develop on each site (greenfield assumes standalone housing).

Variables considered include land value; improvement ratio; local sale prices; and development costs, including site preparation, professional services, build costs, and fees including development contributions and profit margin.

### 6.1.1 Greenfield feasibility

When factoring feasibility into the greenfield assessment, the overall number of developable sites reduces from 31 to 24, with an estimated yield of 2,766 additional sections from 212.1 hectares of developable land. This represents approximately 89% of all developable land initially identified.

*Table 12. Supply of feasible greenfield capacity.*

| Housing Area | Number of Sites | Developable area (hectares) | Feasible sections |
|--------------|-----------------|-----------------------------|-------------------|
| Paekākāriki  |                 |                             | -                 |
| Raumati      | 3               | 12.8                        | 174               |
| Paraparaumu  |                 |                             | -                 |
| Waikanae     | 13              | 123                         | 1,488             |
| Ōtaki        | 8               | 76.5                        | 1,104             |
| Other        |                 |                             | -                 |
| <b>Total</b> | <b>24</b>       | <b>212.1</b>                | <b>2,766</b>      |

### 6.1.2 Infill and redevelopment feasibility

The number of feasible dwellings from the infill/redevelopment model drops to 7,331 of the 14,867 theoretical infill development capacity identified. The table below shows feasible infill development by typology. For Kāpiti, this includes stand-alone housing and joined housing. For the purposes of this HBA, apartments are defined as buildings over three storeys in height. Due to this definition, most apartment typologies that we might expect to see in parts of Kāpiti (up to three storeys high), are captured in the “Terraced housing, flats” category.

*Table 13. Supply of feasible infill and redevelopment capacity by typology.*

| Housing area | Stand-alone Housing | Joined housing | Apartments   | Total        |
|--------------|---------------------|----------------|--------------|--------------|
| Paekākāriki  | 46                  | 10             | -            | 56           |
| Raumati      | 1,220               | 232            | 99           | 1,551        |
| Paraparaumu  | 1,352               | 1,623          | 966          | 3,941        |
| Waikanae     | 1,129               | 109            | -            | 1,238        |
| Ōtaki        | 494                 | -              | -            | 494          |
| Other        | 51                  | -              | -            | 51           |
| <b>Total</b> | <b>4,292</b>        | <b>1,974</b>   | <b>1,065</b> | <b>7,331</b> |

### 6.1.3 Total feasible housing

Adding the feasible capacity for greenfield and infill areas together provides a total of 10,097 dwellings across the district. The table below breaks this down by typology by housing area.

Table 14. Total supply of feasible residential development capacity by typology

| Housing area | Stand-alone Housing | Terraced housing, flats | Apartments | Total  |
|--------------|---------------------|-------------------------|------------|--------|
| Paekākāriki  | 46                  | 10                      | -          | 56     |
| Raumati      | 1,394               | 232                     | 99         | 1,725  |
| Paraparaumu  | 1,352               | 1,623                   | 966        | 3,941  |
| Waikanae     | 2,617               | 109                     | -          | 2,726  |
| Ōtaki        | 1,598               | -                       | -          | 1,598  |
| Other        | 51                  | -                       | -          | 51     |
| Total        | 7,058               | 1,974                   | 1,065      | 10,097 |

## 6.2 Realisation of residential development capacity

While land might be feasible to develop, it does not guarantee it will be developed. There are a range of factors that influence landowners decisions on whether to develop their land. Some may not wish to sell to a developer or may not wish to subdivide or redevelop themselves. Others may simply value their property as it currently is.

As such, it is also important to consider the factors affecting the up-take of feasible development. To help understand this better, an additional assessment has been included to test factors seen to affect the realisation, or likelihood of development occurring. More detail is available in Property Economics' assessment of residential feasibility attached as Appendix 5.1.

Testing realisation provides another scenario that takes a different set of market factors into account to try to identify different behaviours and motivations within the market, that ultimately affect whether a development occurs or not.

The overall realisation for greenfield development is considered to be 100% with most greenfield sites typically finding their way to the market as a matter of time.

Infill and redevelopment by its nature is more complex, covering a wider range of potential development sites, development scenarios, individuals and influences. The realisation scenario attempts to account for variables around different options for development typologies (e.g. terraces are more complex and riskier to develop than standalone houses) and profit (there are different motivations and approaches from developers to landowners). Using a matrix to model these factors provides an indication of likelihood of development coming forward.

Taking all these current factors into account, the current realisable capacity for Kāpiti is 7,818. This includes 2,766 from greenfield development and 5,052 from infill/redevelopment. This represents a 43% realisation of the 17,983 theoretical capacity and 77% of the 10,097 feasible capacity.

This is an increase from the last assessment's realisation of 4,035.

Table 15. Total supply of realisable residential development capacity by typology.

| Housing area | Stand-alone Housing | Terraced housing, flats | Apartments | Total |
|--------------|---------------------|-------------------------|------------|-------|
| Paekākāriki  | 39                  | 9                       | -          | 48    |
| Raumati      | 1,399               | 114                     | -          | 1,561 |
| Paraparaumu  | 1,219               | 899                     | -          | 2,856 |
| Waikanae     | 2,441               | 36                      | -          | 2,511 |
| Ōtaki        | 1634                | -                       | -          | 1,634 |
| Other        | 28                  | -                       | -          | 28    |
| Total        | 6,760               | 1,058                   | -          | 7,818 |

### 6.3 Sufficiency of residential development capacity

Having established demand and supply, the two can be compared to identify whether Kāpiti has enough development capacity to meet expected population growth to 2051.

The assessment has so far identified that 17,983 dwellings are enabled under the current District Plan. Taking a range of current economic factors into account, 10,097 of those are considered feasible to develop and 7,818 likely to be realised and built.

Table 15 below provides a district-wide comparison between demand and capacity by dwelling type.

Table 16. Sufficiency of residential development capacity for the Kāpiti Coast District 2021 – 2051

| Dwelling type       | Demand | Capacity | +/-    |
|---------------------|--------|----------|--------|
| Stand-alone housing | 9,189  | 6,760    | -2,429 |
| Joined housing      | 6,993  | 1,058    | -5,935 |
| Total               | 16,185 | 7,818    | -8,367 |

Further detail of assessment for each housing area is also provided in Table 16.

Table 17. Sufficiency of residential development capacity by dwelling type and housing area for the Kāpiti coast District 2021 – 2051

| Housing Area | Demand | Capacity | +/- |
|--------------|--------|----------|-----|
| Paekākāriki  |        |          |     |

| Housing Area        | Demand | Capacity | +/-   |
|---------------------|--------|----------|-------|
| Stand-alone housing | 52     | 39       | -13   |
| Joined housing      | 10     | 9        | -1    |
| Total               | 63     | 48       | -15   |
| <b>Raumati</b>      |        |          |       |
| Stand-alone housing | 1470   | 1,399    | -71   |
| Joined housing      | 268    | 114      | -154  |
| Total               | 1747   | 1,513    | -234  |
| <b>Paraparaumu</b>  |        |          |       |
| Stand-alone housing | 2932   | 1,219    | -1713 |
| Joined housing      | 1667   | 899      | -768  |
| Total               | 4584   | 2118     | -2466 |
| <b>Waikanae</b>     |        |          |       |
| Stand-alone housing | 2350   | 2441     | 91    |
| Joined housing      | 2547   | 36       | -2511 |
| Total               | 4848   | 2477     | -2371 |
| <b>Ōtaki</b>        |        |          |       |
| Stand-alone housing | 1499   | 1634     | 135   |
| Joined housing      | 1798   | 0        | -1798 |
| Total               | 3297   | 1634     | -1663 |
| <b>Other</b>        |        |          |       |
| Stand-alone housing | 888    | 28       | -860  |
| Joined housing      | 756    | 0        | -756  |
| Total               | 1657   | 28       | -1629 |

Based on the parameters of the modelling undertaken for this HBA a shortfall of 8,367 dwellings is identified across the district.

If we were to use realisable capacity to meet current levels of demand forecast it would meet demand to approximately 2033.

Table 17 also provides a district breakdown of realisable development capacity by housing typology, across the short, medium, and long-term periods. Capacity over the first two periods of 2021-2024 and 2024-2031 is based on recent new build development rates (discussed earlier in the report), with the remaining capacity allotted to the 2031-2051 period.

Table 18. Residential supply by housing typology over time

| Housing typology    | 2021-2024 |                 | 2024-2031 |                   | 2031-2051 |                   |
|---------------------|-----------|-----------------|-----------|-------------------|-----------|-------------------|
|                     | Demand    | Realisable      | Demand    | Realisable        | Demand    | Realisable        |
| Stand-alone housing | 1,145     | 624<br>(-521)   | 2,844     | 1,456<br>(-1388)  | 5,200     | 4,680<br>(-520)   |
| Joined housing      | 618       | 96<br>(-522)    | 1,505     | 224<br>(-1,281)   | 4,870     | 738<br>(-4,132)   |
| Total               | 1,756     | 720<br>(-1,043) | 4,367     | 1,680<br>(-2,669) | 10,063    | 4,800<br>(-4,652) |

The above comparisons can be quite simplistic given the use of current market factors and the 30-year timeframes involved so it is helpful to provide a narrative of the district's growth alongside this analysis.

The last HBA identified future development activity focussing on greenfield growth in Waikanae, shifting to Ōtaki over the medium to long-term. This was alongside the development of the last large sites in the Paraparumu/Raumati urban areas over the short-medium term. Medium density development was expected to become more feasible and start to emerge in and around centres as greenfield growth was increasingly used up.

This outlook has changed. Over the last few years, we have seen much stronger development emerge in Ōtaki which is seen to continue alongside activity around Waikanae's greenfield areas.

Expectations for medium density development have also changed with requirements to enable intensification introduced as part of the NPS-UD 2020 and the more recent Medium Density Residential Standards (MDRS). These changes are expected to see more medium density development come forward sooner than previously anticipated.

A key finding from the last HBA was that standalone housing was the only typology likely to be realised across the district. This was due to high levels of greenfield development creating a preference for less risky and lower scale standalone housing. This assessment still highlights a higher realisation of standalone housing; however, a greater number of joined/terraced housing has also been identified, reflecting current activity and interest we are experiencing on the ground.

A key finding from Property Economics this time around was that current plan settings, in particular minimum lot sizes, act to further constrain the potential for medium density development. This is an important consideration looking to future intensification and vertical development over historical greenfield and suburban settings.

The recent adoption of the District Growth Strategy and District Plan change work underway to implement intensification changes under the NPS-UD and MDRS will significantly change development settings and enable more theoretical development capacity from the current District Plan settings used in this assessment. We also expect this to impact local market conditions and the scale and nature of feasible and realisable development across the district.

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This assessment will provide a key baseline to further understand and assess the impacts from changes to development settings and market activity as part of the next HBA.

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# 7 Infrastructure

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## Key Findings

Planning for growth is an on-going challenge for Kāpiti, requiring significant on-going investment.

Most of Kāpiti Coast District Councils' networks have available or planned capacity to meet its short and medium-term growth needs.

Most networks have capacity beyond this period; however, the district is also expecting a significant increase in its growth from the last HBA. The increase in growth presents challenges and opportunities for how longer-term growth is supported.

Council has made a significant increase in its capital funding through its Long-Term Plan 2024 to support this increase in growth.

The balance and impacts between intensification of existing areas and new greenfield areas is a key consideration as part of ongoing planning.

Further assessment and planning to support investment of infrastructure networks will be undertaken alongside the recently completed District Growth Strategy and district plan changes.

The availability and costs of infrastructure to service new development is a significant factor affecting how and where growth and development takes place.

The NPS-UD requires that we consider the availability of infrastructure in our assessment of capacity. Under the NPS-UD, development capacity must be either:

- 
- serviced with infrastructure in the short-term (3 years);
  - serviced or have funding identified in the Council's Long-Term Plan for the medium term (10 years);
  - identified in Council's infrastructure Strategy for the long-term (30 years).

Overall, Kāpiti is well placed to meet short and medium term needs across its range of local infrastructure networks. While most networks have capacity available or planned beyond this, the increase in forecast growth from the last HBA presents challenges and opportunities for how longer-term growth is supported across the district.

The Long Term Plan 2021-41 provided a significant increase in capital funding to support increased growth across the district. Council has also recently adopted its District Growth Strategy which sets out where, how and when the district expects to grow, both 'up and 'out', over the next 30 years.

The Strategy will help shape further assessment of the district's infrastructure requirements and identify investment to support ongoing efficiency and effectiveness of networks and services to meet the district's growing needs. This work might also identify the need to bring some investment forward to keep pace with growth.

An important focus of this work is the changing focus on higher densities and intensification of existing urban areas as well as any future greenfield areas through requirements under the NPS-UD, the recently introduced MDRS and the shape of growth supported through the Wellington Regional Growth Framework, as both have different impacts on network infrastructure.

This section provides a summary of an assessment of Council's water supply, wastewater, stormwater (collectively known as three waters), local transport and open space networks. The full assessment is available in Appendix 5.2 and looks more closely at the ability of each of the district's networks to be able to meet forecast growth for the district, while continuing to meet the needs of existing residents.

Regional assessments have also been provided on the capacity of the State Highway network, public transport, regional open space and schools, across Wellington councils.

## 7.1 Three Waters

Results from recent modelling indicate that Kāpiti has sufficient capacity available across its three waters networks to meet the short- and medium-term growth needs. While there are some areas of current deficiency across Council's networks, these are known and have plans to address them through planned maintenance and upgrades.

The last HBA identified a number of challenges around capacity in the drinking water and wastewater networks in the Ōtaki to meet higher forecasts for growth than were previously forecast. Further assessments of capacity across a number of these areas have been undertaken to identify additional investment and upgrades to ensure sufficient infrastructure is in place to meet longer-term growth in the area.

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The nature and location of future growth also creates a challenge for water and wastewater networks as they are impacted by increasing physical costs to develop and maintain their efficiency and effectiveness as networks grow and expand, but also the costs of meeting higher health standards and environmental controls relating to receiving environments.

A substantial programme of work is already in place to address existing stormwater constraints across the district. Further investment has reduced the programmes timeframes from 45 to 37 years. Impacts of new development on stormwater networks has been assisted by hydraulic neutrality requirements in the District Plan. However, the scale of future growth and shifting balance between greenfield growth and intensification may require different long-term approaches in order to meet future growth outcomes.

Further assessment work will be undertaken alongside the District Growth Strategy to help inform infrastructure planning and investment as part of the next and future Long-Term plans.

## 7.2 Local Road Network

The local roading network is vital to Kāpiti to enable the movement of people, trade and goods. The assessment of the local road network identified a range of on-going challenges, including congestion and parking. Some of these are able to be managed and mitigated through programmes of work and the resource consent process, while others will worsen and effect growth if not managed effectively.

Currently, congestion and parking issues are experienced at both the Paraparaumu Metropolitan Centre and Waikanae Town Centre. In the case of Paraparaumu, greater accessibility to central Paraparaumu has contributed to congestion on Kāpiti Road. Current traffic levels average in excess of 27,000 vehicle movements per day, and this is predicted to increase.

Similarly, the traffic in Waikanae will increase, particularly as a result of the two large development sites at Waikanae North and Ngārara, and some congestion is experienced at the old state Highway One/Elizabeth Street junction, partly as a result of the rail crossing.

Both Paraparaumu and Waikanae also suffer from increasing and competing demand between parking for daily business and commuter parking.

To mitigate these challenges, the District Plan identifies a number of notional roads designed to alleviate current and future congestion and aid future access and connectivity of future areas of development. This includes the East-West connector road to help congestion and movement around Kāpiti Road and Paraparaumu Metropolitan Centre, but also proposed roads connecting and distributing traffic from future greenfield development to the north of Waikanae.

Council has also undertaken parking studies, updated its Sustainable Transport Strategy, and is working with partners to seek public transport improvements and enhance access and transport connectivity around the two centres/stations. The work relating to parking and improved access to rail stations is particularly aimed at commuters and supporting modal shift away from private cars, alongside a greater use of public transport.

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The Mackays to Peka Peka and Peka Peka to Ōtaki Expressways and subsequent revocation of the Old State Highway also provide opportunities to undertake enhancements to the town centres of Paraparaumu, Waikanae and Ōtaki. These include improvements to connectivity, safety and amenity, such as pedestrian crossings and better civic spaces, which can be achieved as a result of significantly lower traffic volumes on Old State Highway One.

### 7.3 State Highway Network

Waka Kotahi have provided an assessment of the State Highway network see Appendix 1.5.

The assessment identifies Waka Kotahi's role in keeping the state highway network safe, resilient and optimised, while also supporting future development with better public transport, walking and cycling connections. An underlying driver of this focus is to reduce travel by single occupancy vehicles and encourage growth in areas where multiple travel options are (or can be) enabled.

While recognising growth in Kāpiti Coast, the assessment identifies ongoing roading projects will improve the network capacity and increase accessibility, safety and connectivity across the district.

As well as deliver of major roading improvements Waka Kotahi will continue to work to support improvements across the district including the Paraparaumu East West Connection, shared paths alongside the expressways to improve multi-modal safety and access and work to improve amenity of town centres a part of the future revocation of the existing state highway.

### 7.4 Public Transport

A public transport assessment has been provided by Metlink at Greater Wellington Regional Council and is provide in full at Appendix 1.4. The assessment identifies ongoing investment in the region's public transport network is a critical factor in responding to population growth and providing opportunity for residents and reducing congestion on the road network.

This is particularly important for Kāpiti Coast where a large portion of growth is expected along the western corridor from Tawa to Levin and where historic development has created a high-level of car dependency. Public transport is identified as a critical factor to achieving accessible and connected communities and emission reduction goals as part of the district's future growth.

Public transport is important to help support accessibility across the district. It is also important for helping connect across the settlements within the district north and south and east and west. Improved public transport is particularly important for Ōtaki, where the need for better rail and bus services has long been advocated to support residents access to jobs, education and services. Addressing this deficiency is also important to support future growth of Ōtaki which borders two regional boundaries and sits at the heart of the northern gateway as part of the Wellington Regional Growth Framework.

Rail is seen as playing a significant role in providing access and linking to growth in the district, both to the north and south to Wellington's CBD. The priority is to improve rail's reliability, capacity and frequency, and over the longer term the aim is to further improve journey times and reach.

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This is reflected in the Regional Land Transport Plan 2021 which includes a focus on implementing the Wellington Regional Rail Strategic Direction investment pathway of regional rail service, rolling stock and infrastructure improvements and procuring and delivering lower north island regional rail trains. This recognises the need for options for better transport across regional council boundaries.

Bus transport is also seen as important in moving people around. While capacity is not considered an issue outside of Wellington, the frequency and connections for large parts of the Kāpiti Coast district lead to ongoing reliance on private cars.

Regional mode shift plans are a key part in supporting the future provision of public transport networks including focussing on nodal development and improved multi-modal access to train stations. This has particular relevance for Kāpiti Coast District with some key challenges identified in Metlink's assessment including:

- The need for public transport to increasingly balance the needs of commuters from the district with a large proportion of retirees with the district.
- Ensure improved access to the district from roading improvements does not encourage further sprawl
- Ōtaki has no regular rail service and increasing population growth.

## 7.5 Open Space

Kāpiti is lucky to be well placed with the number, size and variety of parks and open spaces across the district. Discussion and analysis with the Council's Parks and Open Spaces Team identifies that overall, the district has sufficient open space infrastructure available or planned to meet the needs of forecast growth.

The ability to consider new development on a case-by-case basis at both the local and district scale provides a key mechanism to address any current gaps and future needs and demands. While there are some gaps in services to existing developed areas, this does not constrain new greenfield development, but does present opportunities to fill these gaps through potential future infill developments.

The recently adopted open space strategy sets out Council's strategic priorities for managing the district's open space reserves, including where and how contributions from new development will support the ongoing development of the open space network, including through the intensification of existing urban areas. The anticipated increased density of living in and around town centres increases the need for investing in high quality urban open spaces, noting that there is already a strong foundation for this with existing reserves network.

The Kāpiti Coast District also benefits from Greater Wellington Regional Council's two regional parks (Queen Elizabeth Regional Park and Akatarawa Forest Park) (see Greater Wellington Regional Council's Overview of regional open space at Appendix 1.6) and the management of the Waikanae and Ōtaki river corridors, which are managed for flood protection and recreation purposes. Department of Conservation also has Whareroa Farm and the Tararua Forest Park in the District.

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## 7.6 Education

The Ministry of Education has provided an assessment of school rolls and capacity for the region attached as Appendix 1.7. Current school capacity varies across the district. The following capacity also includes state-integrated schools which are part of the education network but have special characteristics which may not appeal to all families. The information is drawn from the July 2020 rolls for all schools. By way of summary:

### Northern Kāpiti

- This is a key area in Ministry of Education's ten-year growth plan. The Ministry of Education plan to closely monitor this area and invest in additional capacity.
- There are five state primary schools and one state-integrated school in this catchment. There is space for 80 students in the state primary network and 120 students in the state-integrated school.
- There is one secondary school in this catchment. This school is at capacity.
- Waikanae School was allocated funding for two teaching spaces.

### Kāpiti South

- There are seven primary schools and two state-integrated schools in this catchment. There is space for 320 students in the state primary schools and 90 students in the state integrated primary schools.
- There are two secondary schools in this catchment. Both these schools are at or over capacity. Although one College takes around 390 students from outside their enrolment scheme.
- Paraparaumu College was allocated funding for 10 teaching spaces

# 8 Monitoring

Clause 3.23 of the NPS-UD requires analysis of a range of market and price efficiency indicators to inform analysis of HBAs. The following section provides information on resource and building consent activity and indicators from the Ministry of Housing and Urban Development’s (HUD) Urban Development Capacity Dashboard. A summary of analysis is included later in the section.

## 8.1 Historic resource consent activity

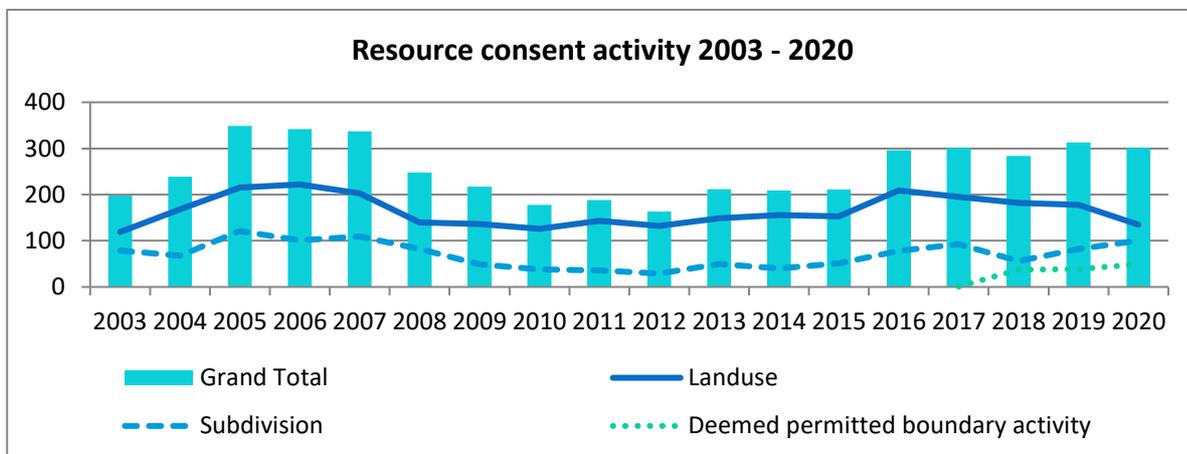


Figure 5. Resource consent activity for Kāpiti Coast District 2003 - 2020. Source: KCDC.

Historic activity shows high levels of consents during the last construction boom in the mid 2000’s which then falls off following the Global Financial Crisis (GFC). Following five years of decline following the GFC, activity starts to recover from 2012 and has been steadily increasing with sustained levels of activity from 2016 to 2020.

Landuse consents make up the greatest percentage of resource consent activity. These levels remained comparatively high during the post GFC period, where overall activity, including subdivision consents, dropped off. More recent drops in landuse consent activity reflects the introduction of “deemed permitted boundary activity” consents. This has effectively substituted a number of previous landuse consents into this new category. Overall, the number of resource consents has consistently remained around 300 per year across the last five-year period.

Subdivision activity has slowly recovered from its low in 2012 post GFC. Current levels now match the peaks experienced during 2005 – 2007.

## 8.2 Potential net additional dwellings

Since 2018, information on potential net additional dwellings has been captured from resource consents issued by Council as part of its quarterly monitoring. This information captures the potential net increase in lots created by each resource consent. While this information is still only indicative, as not all residential development requires a resource consent, it provides a more accurate understanding of the capacity being created from the number of resource consents. The assessment looks at each consent and records potential new net lots created – accounting for the loss of any existing dwellings that may be replaced or remain in-situ alongside any newly created lots, so as not to double count capacity. It also excludes the subdivision of cross-lease sections which don't create new additional residential lots.

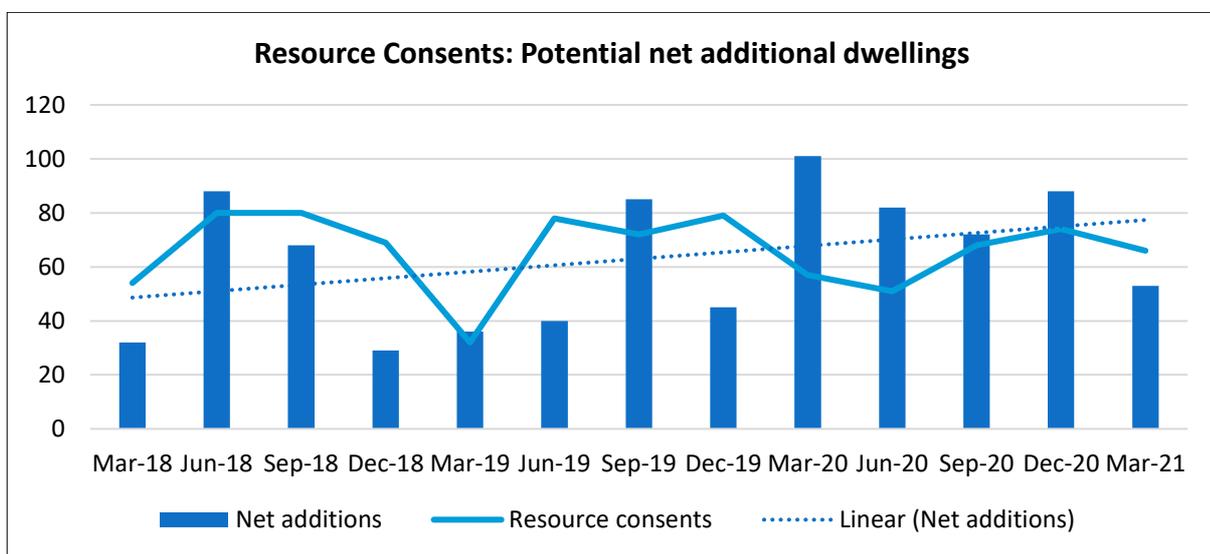


Figure 6. Resource consent: Potential net additional dwellings Kāpiti Coast District March 2018 -2021. Source: KCDC.

Trends for potential net additional dwellings show an increasing level of additional lots being created since the data has been collected. This increase similarly reflects the increase in subdivision numbers experienced since 2018.

### 8.3 Historic building consent activity

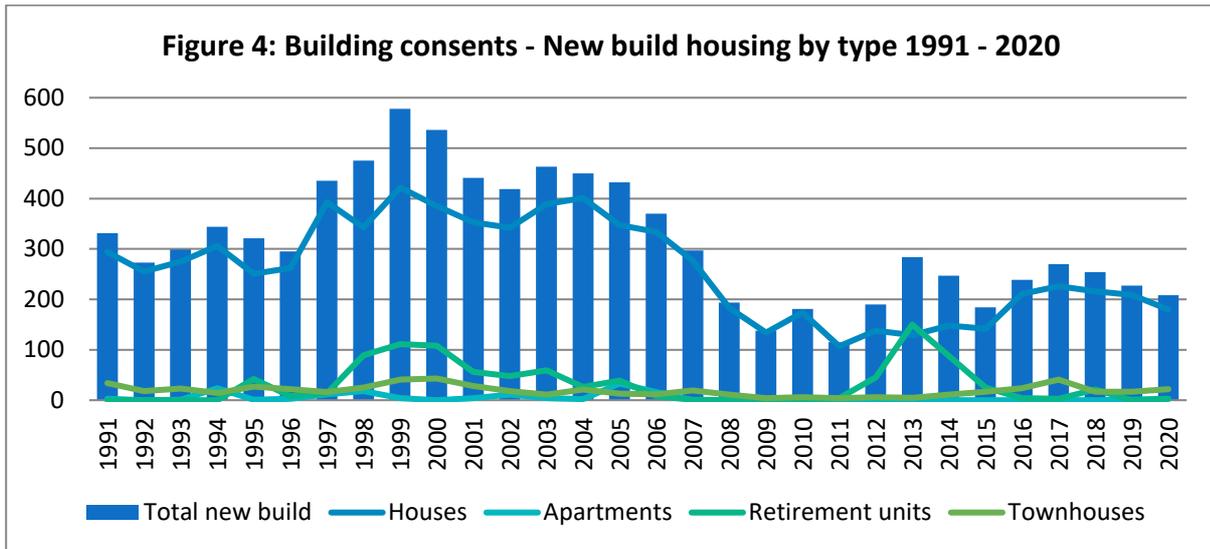


Figure 7. Building consents for new build residential buildings by type for Kāpiti Coast District 1991 - 2020. Source: StatsNZ.

Building consents typically provide the best indicative measure of development activity as they are processed and charged ahead of construction taking place, providing a higher level of certainty of development eventuating. While there is a range of building consent activities, we focus on new build and alterations which form most of the relevant residential construction activity.

Figure 4 above helps provide a clear picture of residential new build activity for the Kāpiti Coast district since the introduction of the Building Act in 1991. Between 1991 to 1996 we can see a consistent level of new build activity of 300 new builds a year before an increase in activity of an average 470 new builds per year from 1997 to 2005 (reaching a high of 578 in 1999). This is followed by a decline from 2005 that, combined with the GFC, continued to 2011 before activity started to increase to current levels (an annual average of 240 over the last five years).

Figure 4 shows a clear dominance of standalone housing over other types of housing built across the district. This averages 84% of all new build housing between 1991 to 2020. Figure 5 below shows a breakdown of other housing types being built. This shows a low but consistent level of townhouses being built. Similarly, the building of apartments was limited to a period of activity between 1996 and 2006.

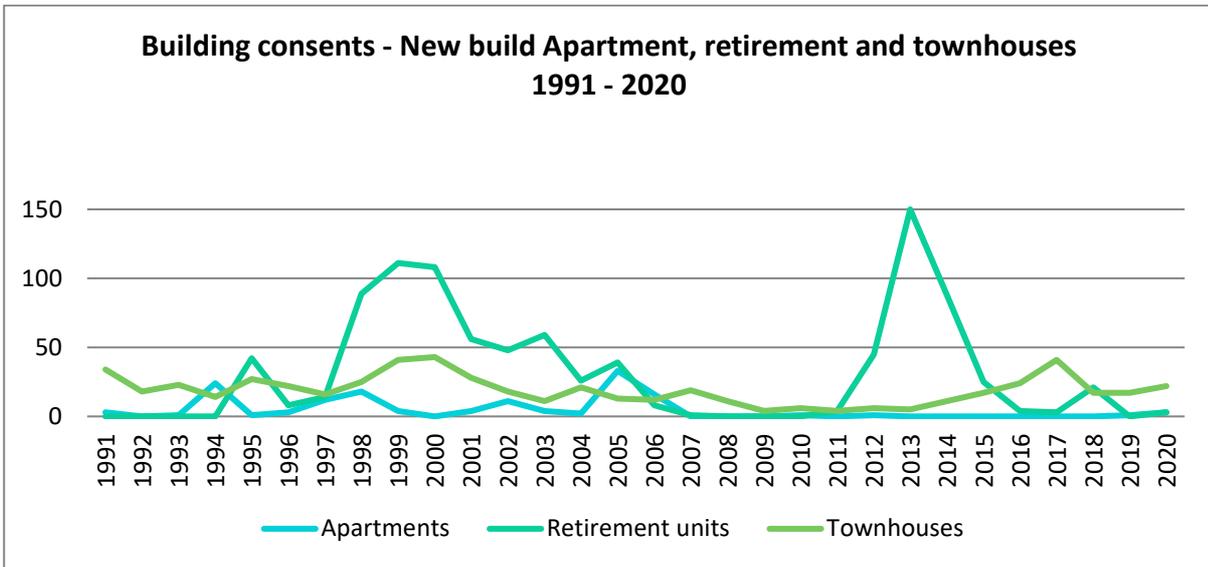


Figure 8. Building consents for new build apartment retirement and townhouses for Kāpiti Coast District 1991 - 2020. Source: StatsNZ.

However, two periods of activity stand out where retirement units were built. This includes a period of activity from 1994 to 2007 which coincides with four retirement villages being built in Paraparaumu. The later peak from 2011 to 2014 corresponds with the development of Charles Fleming retirement village in Waikanae. Both periods of activity help account for the overall increase in activity for these periods reflected in Figure 4, where activity to build retirement units is often in addition to that for building standalone housing.

As well as looking at new build activity it is useful to look at the number, value, and comparison of alterations against new build activity. Figure 6 shows that prior to the GFC in 2008 the level of alterations and new build activity were closely matched. However, in the period following the GFC we can see an increase in the numbers of alterations, but that the level of activity has remained consistently higher than new build numbers.

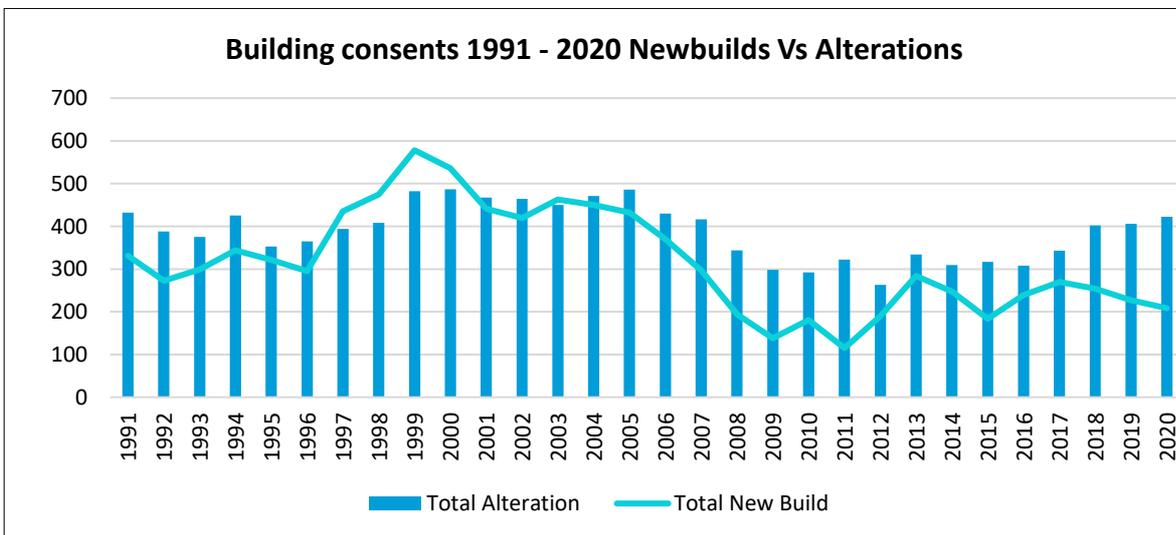


Figure 9. Building consents: new build versus alterations for Kāpiti Coast District 1991 - 2020. Source: StatsNZ

This trend is important, as alongside information on the value of works, it indicates significant investment has been occurring to existing stock alongside new stock being built. Figure 7 below shows this significant increase in the value of alteration work. While recent supply constraints including Covid-19 delays may account for some of this increased costs, our analysis of resource consent information suggest that there has been an increase in the number of more substantive changes and upgrade of existing houses across parts of the district. This increase potentially links to increasing value and equity in properties as well as less options to trade up for existing residents.

This information is also important as it indicates that the total supply of building and construction capacity or labour across the district is higher than just that indicated from new builds.

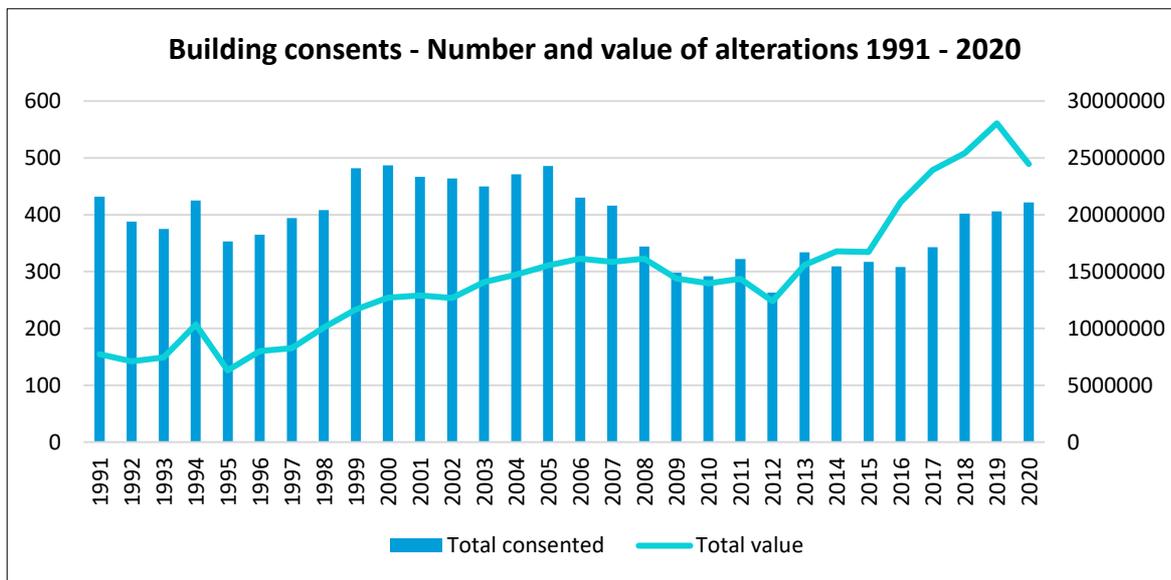


Figure 10. Building consents: number and value of alterations for Kāpiti Coast District 1991 - 2020. Source: StatsNZ

## 8.4 Market indicators

### 8.4.1 Residential Sales: Median sales price and numbers of sales

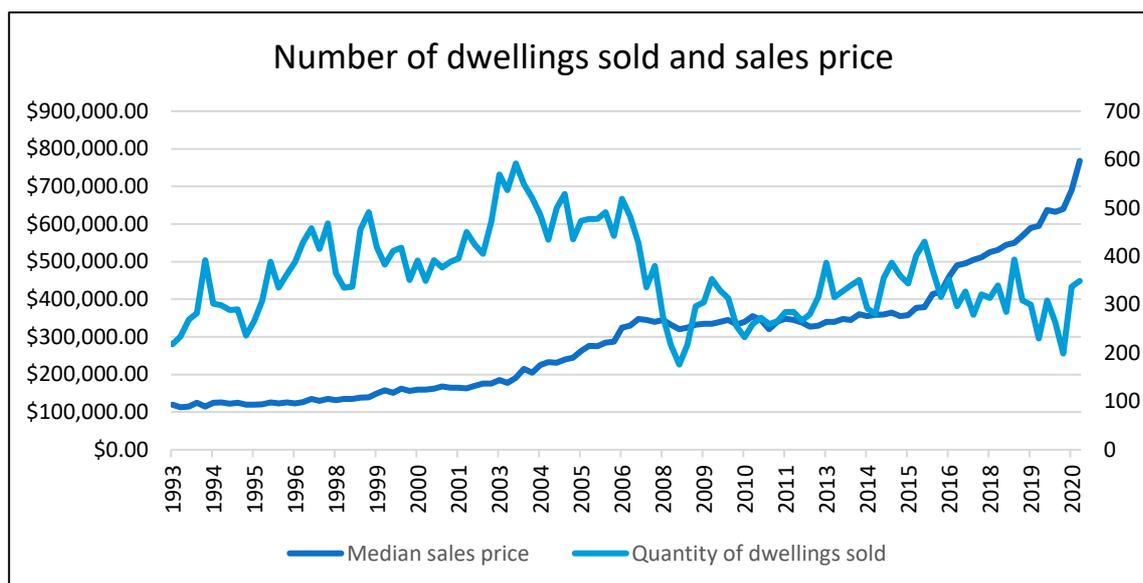


Figure 11. Median residential dwelling sale price and dwellings sold for Kāpiti Coast District. Source: HUD Dashboard July 2021.

The average dwelling sales price indicator reports the prices of residential dwellings sold each quarter (in nominal terms, not adjusted for inflation, size or quality of dwellings).

The average dwelling sales price (actual) in Kāpiti has increased from \$115,856 in 1993 to \$768,000 in December 2020, despite being relatively flat from 2007 to 2015.

The number of dwellings sold per annum dropped sharply between 2006 and 2008 (coinciding with the GFC down from over 500 dwellings sold in 2003), and was steadily increasing to 2016, whereby another period of decline has occurred from 2016 with some recent volatility reflecting the Covid-19 pandemic during 2020.

Both trends in house prices and sales show a level of correlation between activities. Comparing the trends shows that house sales started to increase again post GFC and was looking to reach towards previous high-levels. However, from 2016 we can see a sharp increase in house value and a gradual decline of house sales. Some of this drop in sales activity is a likely result of prices increases making housing unattainable by many, particularly first time home buyers in the area, removing that activity from the market.

During this period, Government also introduced loan to value ratio loan restrictions and required banks to hold more funds in reserve, restricting the extent to which they provided loans to potential property investors and first-time home buyers. More recently these measures were relaxed in response to covid-19, potentially contributing to the volatility in the values, sales and demand.

These trends for Kāpiti reflect similarly across the Wellington region, albeit at a lesser scale of sales numbers and house values.

#### 8.4.2 Residential Sales: Dwelling sales volume as a percentage of total residential stock

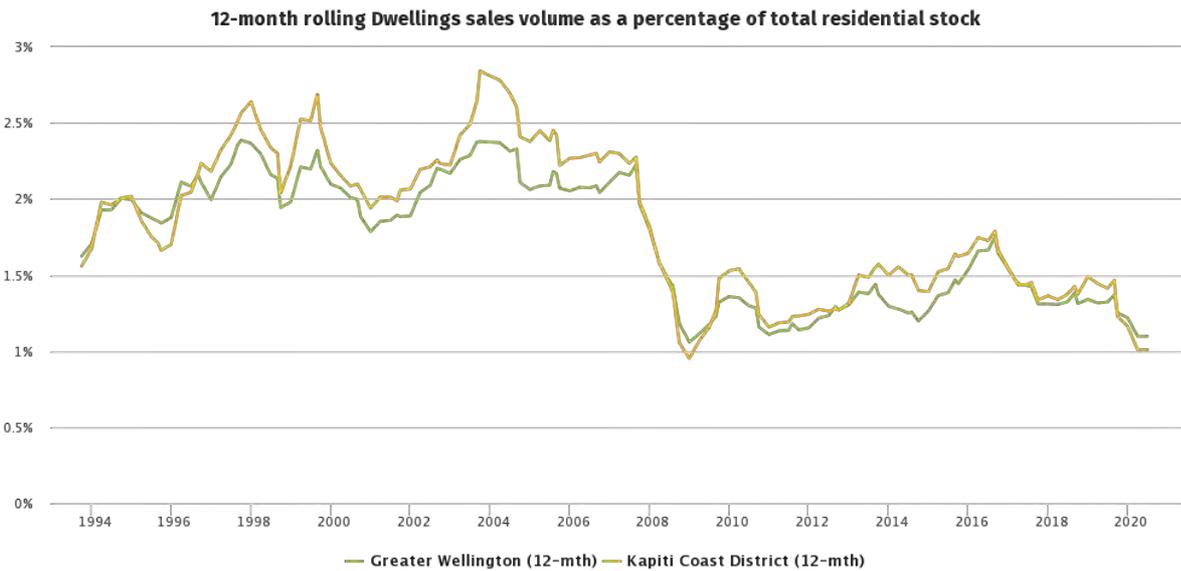


Figure 12. Residential sales volumes as percentage of total residential stock for Kāpiti Coast District and Greater Wellington. Source: HUD Dashboard July 2021.

This indicator measures the quantity of all dwellings being bought and sold relative to the total stock. It is a measure of activity in the local housing market.

Like the previous indicators, 1996 – 2006 saw high levels of proportional sales to stock activity which has since dropped by around 1.5%. This shows that lots more sales of stock were occurring that has since dropped off. This corresponds with the GFC and then subsequent increases in house prices.

### 8.4.3 New Dwellings versus household growth

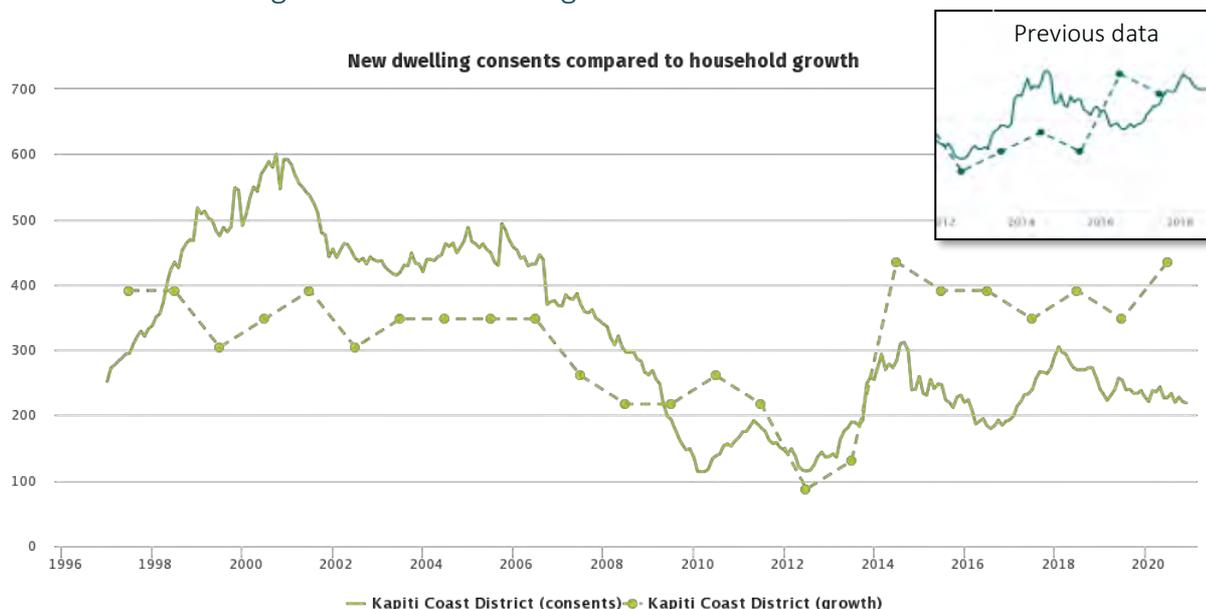


Figure 13. New dwelling consents compared to household growth for Kāpiti Coast District. Source: HUD Dashboard July 2021.

This indicator approximates the demand for, and supply of, new dwellings. It measures changes in demand and how responsive supply is.

The number of new dwelling building consents is lagged by six months (presented as a 12-month rolling average), to account for the time taken from consenting to completion. It is not adjusted for non-completions, or for demolitions. It is used as a proxy for supply.

The most recent resident population, divided by the local average housing size, is used as a proxy for demand. Both sets of data are sourced from Statistics New Zealand.

The data indicates that between 1998 and 2008 there was a sustained period and trend of consent numbers remaining higher than population growth levels. This indicates a level of responsiveness. However, this changes post GFC, where previous reporting of information (see inset above) showed consent activity drops off but continues to respond following peaks in population growth from 2012. Based on this data our previous conclusion was that more recent activity shows a level of responsiveness between consent and population growth in Kāpiti. However, there has been a recent update and correction of growth data by HUD which now shows the district growth outstripping consents activity. This reflects consistently with the higher level of growth experienced between 2013 – 2018 census and the continuing high levels of demand – fuelling higher house prices. This latest data continues to indicate a correlation between growth and new dwelling consent numbers but does identify an increasing gap between the two.

#### 8.4.4 Land value as percentage of capital value/ Land value of dwelling average

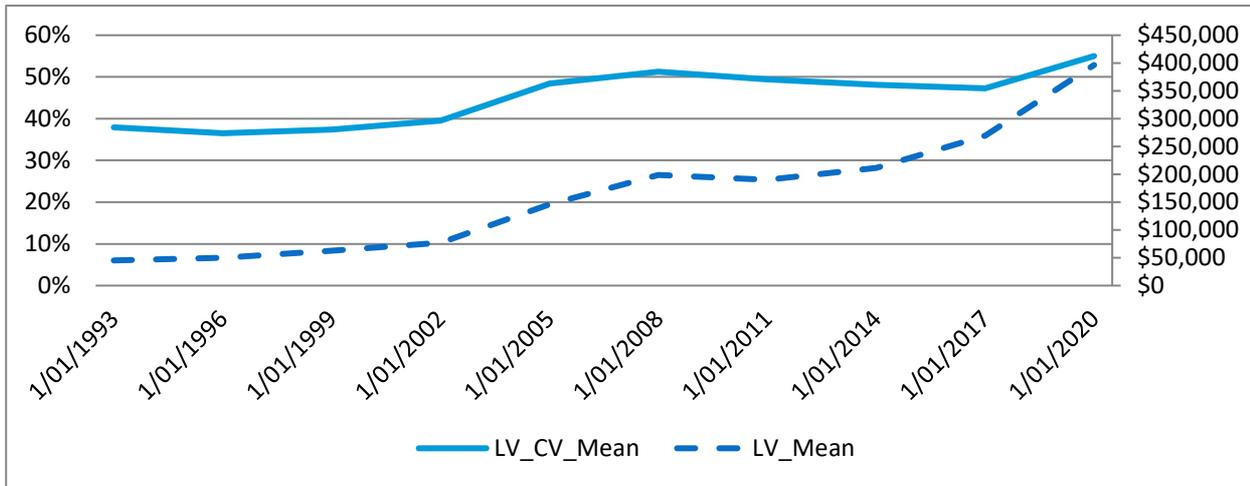


Figure 14. Comparison of land value against capital value and average dwelling value. Source: HUD/KCDC.

The indicator showing the LV\_mean (dashed line) shows the mean land prices at each valuation period. The mean is weighted by the number of dwellings in each component meshblock. This shows an overall mean increase in land prices from \$50,000 to \$396,000 between 2014 and 2020.

The LV\_CV\_mean (solid line) shows the share of house values that are accounted for by land prices at each valuation period. A higher ratio indicates that land is more valuable relative to the buildings that occupy it. This indicates that between 1994 to 2000, the mean land value across the district was approximately 30% of a properties overall value. This increases significantly from 2002 to 2008, increasing to 55% of a property’s value. Using some simplified analysis, this means that over 50% of urban residential housing assessed, the land was worth more than 50 percent of the capital value of the property. A quarter had land value 60% or more of the capital value. This reflects factors such as the age size and location of housing which were factors identified in the assessment of infill/redevelopment feasibility and will play an increasingly important factor influencing future changes around intensification across sparts of the district.

## 8.4.5 Residential Rents



Figure 15. Mean rent data for Kāpiti Coast District and Greater Wellington. Source: HUD Dashboard July 2021.

This indicator reflects nominal mean rents as reported in new rental bonds lodged with Tenancy Services. The mean used is a geometric mean. The reason for using this mean is that rents cluster around round numbers and tend to plateau for months at a time (spiking up by say \$10 or \$20 at a time). This makes analysis of time series difficult and using the geometric mean is a way of removing this clustering effect.

Prices are presented in nominal terms; they have not been adjusted for general price inflation. The data is for private bonds only and so excludes social housing.

Mean rent changes from \$148 in 1993 to \$464 by Dec 2020. Rental rates continue to increase to historic highs. This increase in weekly rental rates reflects similar trends experienced by the wider Wellington Region, but at a lower level. This identifies similar pressure on the demand and availability of rentals across the district and region.

#### 8.4.6 HAM Buy: Share of first home buyer households with below-average income after housing costs

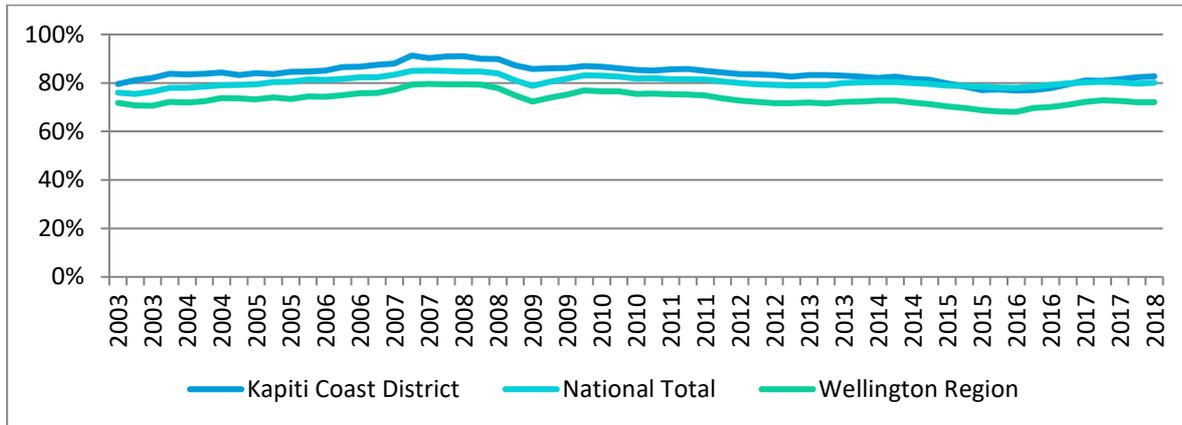


Figure 16. Housing Affordability Measure (Buy) for Kāpiti Coast District, Wellington City Council and Greater Wellington. Source: MBIE.

The Housing Affordability Measure (HAM) measures trends in housing affordability for the first home buyer household.

For potential home-owning households, HAM Buy calculates what their residual income would be after housing costs if they were to buy a modest first home in the area in which they currently live. Affordability is affected by dwelling prices, mortgage interest rates and the incomes of rental households.

Average income is determined using the average New Zealand household, both homeowners and renters, nation-wide, in June 2013. A higher number on the chart indicates more households are below the average and a lower level of affordability.

Affordability for housing is consistently higher (worse) in Kāpiti than both the national and regional average. The dynamics between increasing prices of housing coupled with lower medium income levels are likely contributors to the higher impact of affordability on Kāpiti.

### 8.4.7 HAM Rent: Share of renting households with below-average income after housing costs

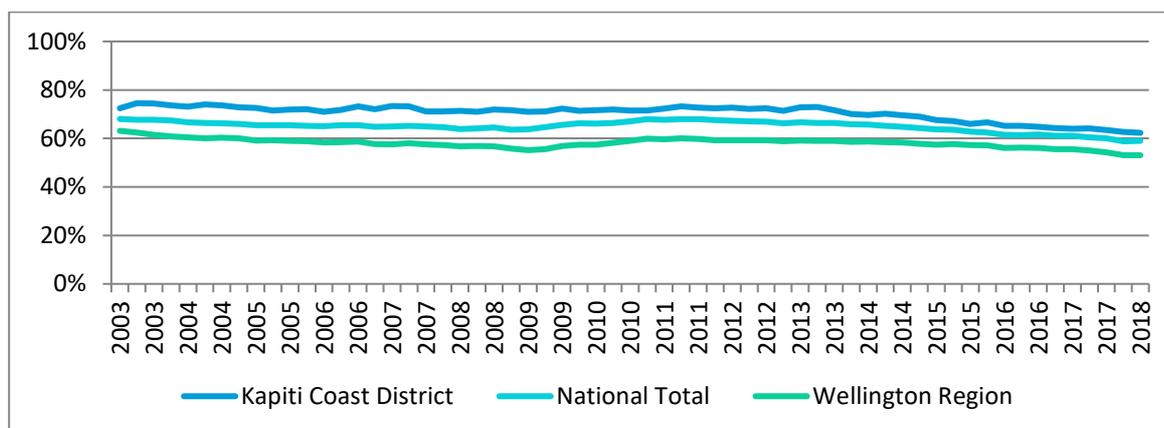


Figure 17. Housing Affordability Measure (Rent) for Kāpiti Coast District, Wellington City Council and Greater Wellington. Source: MBIE.

The Housing Affordability Measure for renters (HAM Rent) compares the income after housing costs of renters in different parts of New Zealand to the national median income after housing costs for all households.

For renting households, HAM Rent identifies the percentage of households who income after housing costs sit under average income after housing costs for that area.

Average income is determined using the average New Zealand household, both homeowners and renters, nation-wide, in June 2013. A higher number on the chart indicates more households are below the average and a lower level of affordability.

Similar to HAM Buy, affordability to rent in Kāpiti is higher (worse) than both the national and regional average and has been relatively static from 2003 to 2019. This has a slight improvement from 2013 to 2018.

### 8.4.8 Corelogic Housing Affordability measures

Corelogic’s NZ Housing Affordability Report February 2021 provides a similar, but alternative set of data to help understand housing affordability pressures. The table compares a range of affordability measures across the Wellington urban councils. This includes; the ratio of property value against income, the cost to service a mortgage payments based on averages, years to save a deposit (based on 15% of weekly income to save 20% deposit) and amount of weekly income to service rent. The following information was for Q4 2020. This shows that Kāpiti has the worst affordability across the Wellington councils below and some of the worst in the country (within the top 5-7 worst councils across each of the measures below).

Table 19. The NZ Housing Affordability Report February 2021 (Data as at Q4 2020) Corelogic

| Territorial Authority | Avg property value | Avg annual income | Value to income ratio |               | Mortgage servicing |               | Years to save deposit |               | Rent affordability |               |
|-----------------------|--------------------|-------------------|-----------------------|---------------|--------------------|---------------|-----------------------|---------------|--------------------|---------------|
|                       |                    |                   | Lates t (Q4 2020)     | Avg 2004-2020 | Lates t (Q4 2020)  | Avg 2004-2020 | Lates t (Q4 2020)     | Avg 2004-2020 | Lates t (Q4 2020)  | Avg 2004-2020 |
| Kāpiti Coast District | \$746,081          | \$97,389          | 7.7                   | 6             | 37%                | 38%           | 10.2                  | 8             | 24%                | 24%           |
| Porirua City          | \$788,104          | \$139,323         | 5.7                   | 4.3           | 27%                | 27%           | 7.5                   | 5.7           | 20%                | 18%           |
| Upper Hutt City       | \$707,138          | \$117,296         | 6                     | 4.6           | 29%                | 29%           | 8                     | 6.2           | 20%                | 19%           |
| Lower Hutt City       | \$750,542          | \$117,188         | 6.4                   | 4.5           | 31%                | 28%           | 8.5                   | 6             | 21%                | 18%           |
| Wellington            | \$970,669          | \$151,520         | 6.4                   | 5.1           | 31%                | 33%           | 8.5                   | 6.8           | 18%                | 18%           |
| New Zealand           | \$788,967          | \$116,361         | 6.8                   | 5.6           | 33%                | 36%           | 9.0                   | 7.5           | 21%                | 20%           |

#### 8.4.9 Summary

- Over the last five years resource consent activity has remained around 300 consents annually. However, information on potential net additional capacity (captured since 2018) has shown an increasing level of residential capacity coming forward, particularly during 2020.
- House prices and land values have continued to increase to record highs across the district. This similarly reflects increasing demand seen across the Wellington region and nationally. The Covid-19 pandemic has also contributed to this increasing demand, with residents returning to New Zealand to live and flexible working providing opportunities for better work life balance attracting people to live in the district.
- While recent market activity indicates a level of responsiveness of development activity to the increasing growth, an increasing gap and record high house prices and rents indicates supply is not keeping up with demand.
- There continues to be a mismatch of the type of housing being supplied against increasing growth in smaller households and demand for different typologies. While there are recent examples of medium density housing emerging, larger standalone homes have continued to dominate developments over the last few years.
- House sales activity has fluctuated over the last few years. Demand driven by Covid-19 increased a period of higher activity during 2020, but overall, house sale numbers continue to trend lower than recent historical levels. The increase in costs and fewer sales is a likely sign that more groups of people are becoming priced out of the local housing market. Increasing house prices nationally may also be a factor limiting people's choices to relocate elsewhere.

- 
- Increasing demand and costs are exacerbating the ability for people to afford to live in the district. Affordability to buy and rent in Kāpiti were previously identified as higher than the national and regional averages, but are now some of the worst in New Zealand.
  - Information on demand by price point shows that bands of house sales and new build values are consistently higher than the last assessment. Data shows that better values are available the further north you go in the district, however, the overall increase in prices is also more disproportionate to annual household incomes the further north you go.

## 8.5 Price Efficiency Indicators

Four price efficiency indicators have been developed to provide a deeper insight into the operation of the land market and planning interventions within it. Indicators include:

- housing price to cost ratio
- rural/urban differential
- industrial zone differential
- land concentration control.

Since the last HBA was completed in 2019, only information on the price-to-cost ratio has been updated. This report provides updated information on this indicator and summarises findings from the previous assessment for the other indicators.

### 8.5.1 Housing price to cost ratio

The price cost ratio indicator provides an insight into the responsiveness of the land market, relative to construction activity. In short, it monitors the proportion of land cost to the cost of a home.

The price-cost indicator identifies the cost of land against the construction costs to build a dwelling. Typically, the cost of land should be around a third of the cost of a house with construction cost being the other two thirds. When there is a shortage of serviced sections, land prices can push up the cost of housing. So, the gap between the house price and construction costs – the price-cost ratio – can be used as a general indicator of the flexibility of land markets to accommodate new homes.

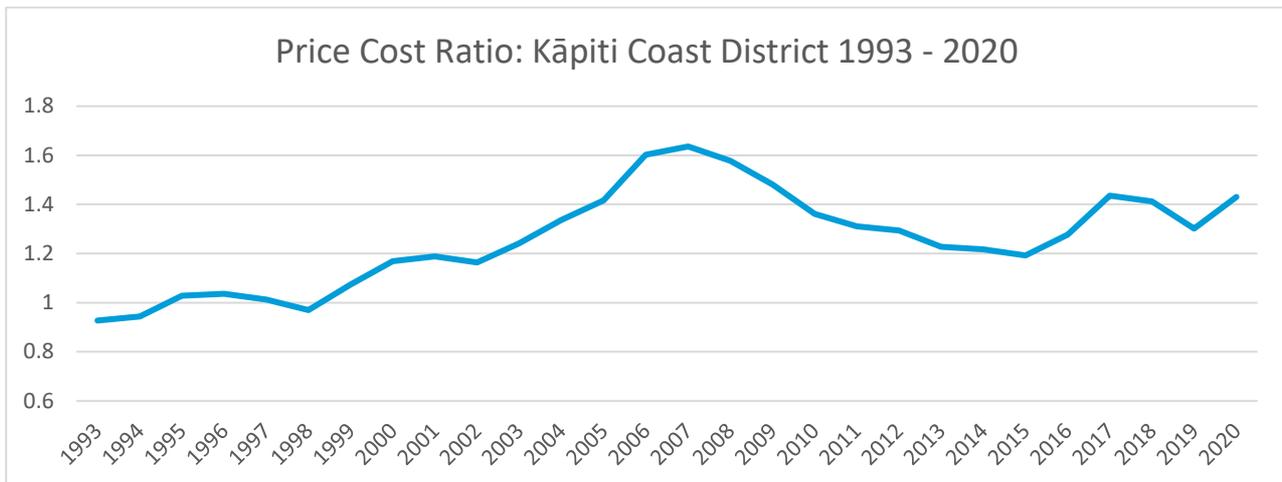


Figure 18. Price-cost ratio for Kāpiti Coast District Council. Source: HUD.

Ratios between 1 and 1.5 (that is, where the cost of an infrastructure serviced section comprises up to one-third of the price of a home) are common where the supply of land and development opportunities are relatively responsive to demand. All New Zealand urban areas had price-cost ratios of between 1 and 1.5 about 20 years ago when land and housing markets delivered more affordable housing, and these ratios are still common in places where homes are cheaper. Ratios above 1.5 suggest that the supply of sections and development opportunities is not keeping pace with demand and land prices are materially increasing house prices.

The price-cost ratio for Kāpiti has mostly fluctuated between 1 and 1.5 since 1999, with a peak outside of this between 2006-2008 followed by gradual decline. More recently there has been an increase from the recent low in 2015 of 1.192 to 1.43 in 2020. This latest peak corresponds with an increase in national, regional and local demand which has driven prices up. Similar patterns of growth and response have also occurred in the neighbouring Porirua and Horowhenua districts.

### 8.5.2 Rural/urban differentials for residential land

The rural/urban differential indicator identifies the cost difference between comparable parcels of land that sit on either side of an urban boundary. The indicator accounts for all tangible differences and costs leaving the remaining value difference largely attributable to underlying regulatory land use settings (plan zoning). This indicator is targeted at whether sufficient capacity is provided, because if sufficient zoned and serviced land is available for development, then the cost of urban peripheral land should be closer to rural prices.

The table below shows the ratios for rural/urban differential in Wellington is 2.30, with a difference cost difference of \$201m2 and \$120,371 per section (using a 600m section as a comparator across areas). This is well below Auckland's ratio and costs and, the costs for Hamilton and Tauranga (which are high growth areas), but above Christchurch's ratio and cost differentials which have been focused heavily on the rebuild.

Table 20. Rural -urban differential ratios for key centres HUD.

| Urban area   | Ratio | Difference (\$/m2) | Difference (\$/600m section) |
|--------------|-------|--------------------|------------------------------|
| Auckland     | 3.15  | \$345              | \$206,722                    |
| Christchurch | 2.23  | \$150              | \$90,136                     |
| Hamilton     | 2.42  | \$227              | \$136,213                    |
| Tauranga     | 2.02  | \$232              | \$139,135                    |
| Wellington   | 2.30  | \$201              | \$120,371                    |

The indicator does not provide specific data for the Kāpiti District.

### 8.5.3 Industrial zone differentials

This measure indicates how provision for industrial land matches relative demand to other competing land uses in a location. This includes whether industrial land is worth more (positive) or less (negative) than neighbouring commercial, residential, and rural and if the differences are of statistical significance.

Analysis for industrial zone differentials for Wellington shows that:

- Industrial land is worth less than adjacent residential land in 44% of cases in Wellington compared to 59% of cases in Auckland, but only 35% of cases in Christchurch.
- Industrial land is worth more than adjacent rural land in 47% of cases in Wellington compared to 25% of cases in Hamilton, 50% of cases in Tauranga, and two out of three cases in Queenstown
- There are no cases in Wellington where industrial land is valued more highly than adjacent commercial land.

In general, there is a tendency for industrial land to have a lower value than commercial or residential land, and a higher value than rural land, rather than vice versa.

The indicator also provides more detailed data on specific industrial sites within Kāpiti. This identifies that most of the industrial sites do have a lower land value (more than a 15% significance level) than their neighbouring uses. Two sites provided noticeable differences, where industrial land values were higher than neighbouring uses. This reflected consistently with the previous assessment of business land feasibility and market attractiveness, where these areas both scored highly given their relative qualities.

### 8.5.4 Land concentration control indicator

Unlike the other three price efficiency indicators that show potential impacts of land regulations on the use and value of land, the land concentration control indicator identifies the extent of land ownership for undeveloped residential land. The indicator shows land ownership as a percentage of that available, and by location, which can help understand how competitively land is held. For example, a situation where there are larger tracts of land but only a handful of owners would have

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a lower index score as opposed to an area with a higher ratio of properties and landowners which would have a higher index score. A higher index score generally indicates better competitiveness of land holdings. However, the score and impacts on the availability and costs of land in each location is also subject to local knowledge and interpretation as the measure shows the conditions for competitiveness, but not the actual behaviour of landowners.

Kāpiti is identified as having a market-land concentration index score of 539. Auckland has the lowest on 57, with Upper Hutt the highest at 1476. Kāpiti has a higher index score than Wellington, closer to Lower Hutt's, but well below Porirua's and Upper Hutt's.

### 8.5.5 Summary

- The price cost ratio for Kāpiti has been sitting at the high end of the responsive market range (at 1.4) since 2017. This period of higher ratio corresponds with the most recent period of sustained demand and house price increases from 2016 and the findings for more development capacity from the last HBA assessment. It is unclear what impacts Covid-19 will be on this indicator driving both higher levels of demand but also increasing costs of materials through supply side constraints. There is also a need to better understand how this indicator relates to medium density development alongside historic greenfield development as future development looks to support intensification and requirements under the NPS-UD.
- Urban/rural differentials for the Wellington area indicate that Wellington has lower than areas with higher pressures but are higher than differentials in Christchurch. While there is no specific information for Kāpiti we would expect to see similar differences between land zoned for urban development over that zoned rural on the periphery.
- While there is no updated information for industrial land differences for Kāpiti, the availability and location of industrial land is of strategic importance as the district is set to grow. The last HBA's modelling of future growth scenarios identified an increase in longer-term demand for industrial land following declining demand in the short to medium term. An updated analysis of demand and locations of business land will be undertaken as part of the next full HBA assessment and support work to implement the District Growth Strategy.
- Land concentration control shows there are a larger number of landowners across Kāpiti, which suggests there should be a good level of competition for undeveloped urban sites for development. However, this indicator does not account for individual outcomes and drivers of landowners and developers. As future growth focuses on intensification of existing areas as well as new greenfield growth it will be increasingly important to overcome issues of fragmentation and supporting scale opportunities to achieve development and redevelopment that can deliver good long-term outcomes for the district.

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## 9 Conclusion and next steps

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This is the second HBA undertaken by the Kāpiti Coast District Council as part of the Wellington urban area.

This assessment identifies a significant increase in housing demand with 13,850 additional houses (16,185 inflated) forecast across the district for the next 30 years. This includes a significant increase in medium density development as part of that future demand.

The assessment of the current District Plan identified enough realisable capacity to meet this demand over the short and medium-term but fell short by 8,367 dwellings over the longer-term.

The assessment of local infrastructure identified a number of on-going challenges affecting local infrastructure networks, but none that pose an immediate constraint on growth in the district. While the extent of future growth and future funding has been recognised and provided for as part of Long-Term Plan 2021, further planning and investment is required to identify the specific requirements of infrastructure networks to support longer term growth across the district.

Council has recently adopted a new District Growth Strategy that sets out a vision for how where and when the district grows across the next 30 years. Council is also preparing an Urban Development Plan Change in response to the NPS-UD and MDRS requirements to be notified by 20 August 2022.

Council is also currently undertaking work to explore a bigger role in housing and better support housing provision across the district. This initial work includes undertaking research into housing needs in Kāpiti District and developing a housing strategy to articulate the actions the Council will be focussing on. The housing needs assessment will combine a quantitative assessment with qualitative work including work in partnership with iwi to better understand Māori housing needs, perspectives and challenges. This Strategy will look at the role of council to support affordable housing and housing needs across the district relating to both social housing needs and market housing.

Undertaking a Housing Needs and Social Impact Assessment is a key underpinning of this work and is currently underway. This will provide Council, Iwi, Government Agencies, Community Housing Providers, Developers, and others data on needs across the housing continuum and the social infrastructure that is required for people to live well and thrive in Kapiti. This document is due to be completed in early to mid 2022 and is a shared resource with iwi to help inform the approach to housing and social needs in the district.

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Together these processes will also provide a strategic and evidence-based approach to help identify and support housing to meet a range of needs across the housing continuum.

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- Appendix 1.4 Metlink public transport network overview and the role of public transport in responding to population growth
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- Appendix 1.7 Ministry of Education school roll information capture 2021
  
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# Appendix 5.1

## Kāpiti Coast Property Economics Assessment of Residential Capacity

# PROPERTY **E**ECONOMICS



**KAPITI COAST**

**COMMERCIALLY FEASIBLE**

**RESIDENTIAL CAPACITY**

**ASSESSMENT**

Client: Kapiti Coast DC

Project No: 51985

Date: December 2021



## SCHEDULE

| Code  | Date          | Information / Comments | Project Leader           |
|-------|---------------|------------------------|--------------------------|
| 51985 | December 2021 | Report                 | Tim Heath / Phil Osborne |

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## 1. INTRODUCTION

Property Economics has been engaged by Kapiti Coast District Council (KCDC) as part of a wider region residential capacity project team, to undertake an assessment of the commercially feasible residential capacity (supply) of the Kapiti Coast District 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 KCDC with robust market intelligence to assist in making more informed and economically justified decisions in regard to the design and implementation of a residential policy framework for the District Plan and other long-term planning documents.

This report discusses the work undertaken by, Property Economics and KCDC in analysing the existing theoretical residential capacity of Kapiti Coast and developing a capacity model for calculating the level of feasible development within the District. This will inform policy makers on the feasible level of housing supply, and which areas are able to accommodate future residential development based on current zonings, policy settings and market parameters.

## 2. THEORETICAL CAPACITY

Property Economics have been provided with outputs from GIS modelling of sites within Kapiti Coast that provided for infill, or comprehensive redevelopment. Theoretical residential capacity was calculated utilising current theoretical District Plan policy settings and algorithmic, GIS and 3D modelling. The information contained several different scenarios, based on housing typology and quantum, that were identified as theoretically viable to develop. There were a total of 18 possible scenarios tested for each site including three different sizes (small, medium and large), three different typologies (standalone, terraced and apartment) and two development options (infill and comprehensive).

**TABLE 1 – KAPITI COAST THEORETICAL RESIDENTIAL DEVELOPMENT CAPACITY BY SUBURB**

| Maximum Theoretical Yield            |                          |                   |               |
|--------------------------------------|--------------------------|-------------------|---------------|
| Suburbs                              | Centre / Mixed Use Zones | Residential Zones | Total*        |
| Forest Lakes (Kapiti Coast District) |                          | 1                 | 1             |
| Maungakotukutuku                     | 250                      | 46                | 96            |
| Otaihanga                            |                          | 439               | 439           |
| Otaki                                | 3,349                    | 2,001             | 2,671         |
| Otaki Beach                          |                          | 142               | 142           |
| Paekakariki                          | 366                      | 76                | 149           |
| Paraparaumu Beach East               |                          | 234               | 234           |
| Paraparaumu Beach North              | 281                      | 289               | 345           |
| Paraparaumu Beach West               | 1,105                    | 224               | 445           |
| Paraparaumu Central                  | 11,449                   | 1,070             | 3,360         |
| Paraparaumu East                     | 343                      | 611               | 680           |
| Paraparaumu North                    | 774                      | 774               | 929           |
| Peka Peka                            |                          | 223               | 223           |
| Raumati Beach East                   |                          | 807               | 807           |
| Raumati Beach West                   | 591                      | 439               | 557           |
| Raumati South                        | 81                       | 822               | 838           |
| Te Horo                              |                          | 1                 | 1             |
| Waikanae Beach                       | 28                       | 463               | 469           |
| Waikanae East                        | 102                      | 646               | 666           |
| Waikanae Park                        |                          | 850               | 850           |
| Waikanae West                        | 1,386                    | 452               | 729           |
| Waitohu                              |                          | 236               | 236           |
| <b>Grand Total</b>                   | <b>20,105</b>            | <b>10,846</b>     | <b>14,867</b> |

Source: Property Economics, KCDC

\* Total includes 100% of Residential Capacity and 20% of Centre / Mixed Use Capacity

Table 1 shows the sum of maximum attainable net yield<sup>1</sup> on an individual site basis. The Theoretical Model outputs 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.

Given the complexities of modelling being able to account for mixed uses, KCDC has assumed that only 20% of the Commercial / Mixed Use Zones will be / could be used for residential purposes to account for the competing commercial activities. This is due to the competition from other land uses, and the district plan requirement to provide retail or commercial activity at the ground floor road frontage. For the sake of simplicity, it was decided to estimate the theoretical capacity on the basis that each site could be entirely developed for residential, and then reduce the total theoretical capacity down to 20% of the total. This is reflected in the calculation for the Total column in Table 1.

It should be noted that this type of development would incur a restricted discretionary consent, which is different to the theoretical capacity in the Residential Zones which is based on a permitted activity.

Property Economics has worked alongside KCDC in adjusting the Theoretical Capacity Model results provided to better suit the Kapiti Coast market and district plan. Some of the adjustments made to the modelled results are as follows:

- Removed the infill and standalone typology options from the Centre / Mixed Use Zones (thereby leaving only comprehensive terraced or apartment development options). Infill was removed as in most instances the dwelling would end up being built on the parking lot or other land that is 'empty', but not unused. Although there may be some instances where infill is appropriate, there is no way of identifying this at a high level.
- The standalone typology options have been removed from the Centre / Mixed Use Zones on the basis that only terraced or apartments would provide a suitable level of intensity.
- The capacity yield in the Residential Zones is based on both the maximum buildable floorspace and the minimum site size ranging from 250sqm in the Medium Density Housing Precinct to 10,000sqm in the Rural Lifestyle Zone.
- In the Mixed-Use and Commercial Zones, there is no minimum site size. However, a practical limitation of 80sqm has been applied to the terraced dwelling. Apartments have no minimum site size and are therefore based entirely on the buildable floorspace.

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<sup>1</sup> The Net Yield represents the net additional dwellings. For Comprehensive redevelopment, this means the number of dwellings built, less the number of existing dwellings. This is different from how theoretical capacity was reported in Kapiti's previous HBA which showed the total yield, and hence a significantly higher capacity.

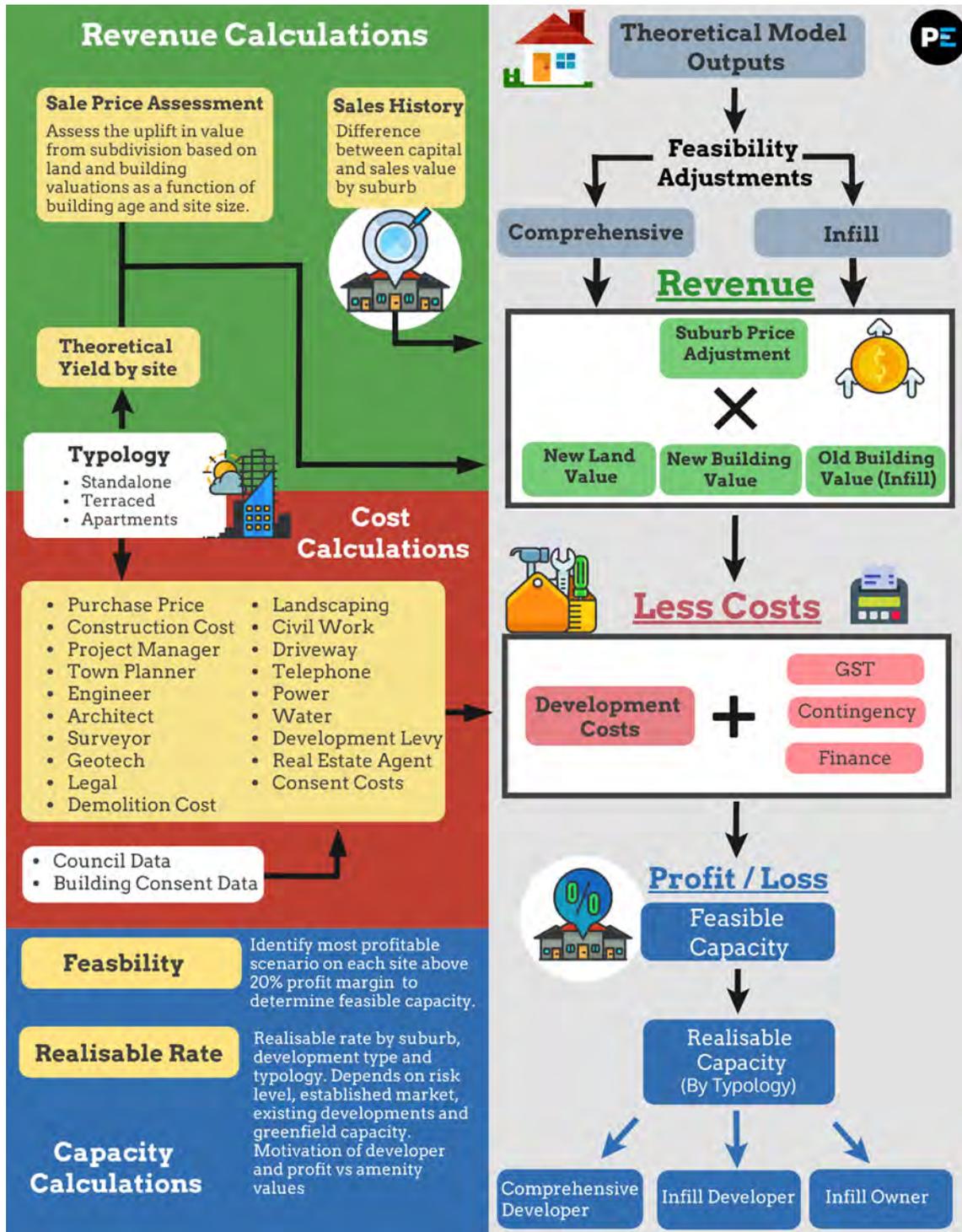


- In the Commercial Zones, the total potential floorspace is calculated based on developing the entire site up to the maximum height. Property Economics has reduced the buildable floorspace (and by extension yield) based on the site coverage assumptions provided by KCDC (i.e. 60% - 80%).
- In the Metropolitan Zone where the maximum heights allow for four or five stories, the buildable floorspace has been reduced for the terraced options based on a maximum of three stories.

### 3. RESIDENTIAL FEASIBILITY MODELLING

A high-level overview of the model utilised by Property Economics in determining the feasible residential capacity for Kapiti Coast is outlined in the flow chart in Figure 1 below, with detailed descriptions of each stage of the process given following.

**FIGURE 1: PROPERTY ECONOMICS RESIDENTIAL FEASIBILITY MODEL OVERVIEW**



Source: Property Economics

## Land and Improvement Value per SQM

Using the rating database provided by KCDC, 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, 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.

It was also found that in modern residential developments, terraced dwellings do not have a statistically different improvement value to that of standalone dwellings. Although they typically cost slightly more on average due to the noise mitigation, this does not translate into additional value to the consumer over the standalone typologies. Therefore, the resulting build values is assumed to be the same between terraced and standalone.

A different approach has been taken to assessing the appropriate apartment building values as the data defined only one set of apartments in Kapiti Coast. Property Economics has assumed that this location has the potential for more luxurious apartments than what is likely to be built elsewhere.

Apartment build values and construction costs have been split into the two areas and are based on the similar values obtained from Property Economics feasibility modelling for Wellington City.

Tables 3-4 below show the build value per sqm utilised in the commercially feasible capacity modelling for varying building sizes for standalone, terraced and apartment typologies.

**TABLE 2 – KAPITI STANDALONE / TERRACED BUILD VALUE / SQM BY SUBURB**

| <b>Standalone / Terraced</b> | <b>50</b> | <b>100</b> | <b>150</b> | <b>200</b> | <b>250</b> | <b>280</b> |
|------------------------------|-----------|------------|------------|------------|------------|------------|
| Forest Lakes                 | \$ 3,970  | \$ 3,585   | \$ 3,275   | \$ 3,018   | \$ 2,865   | \$ 2,760   |
| Maungakotukutuku             | \$ 3,970  | \$ 3,585   | \$ 3,275   | \$ 3,018   | \$ 2,865   | \$ 2,760   |
| Otaihanga                    | \$ 3,734  | \$ 3,372   | \$ 3,080   | \$ 2,839   | \$ 2,695   | \$ 2,596   |
| Otaki                        | \$ 3,278  | \$ 2,960   | \$ 2,704   | \$ 2,492   | \$ 2,365   | \$ 2,279   |
| Otaki Beach                  | \$ 3,353  | \$ 3,027   | \$ 2,766   | \$ 2,549   | \$ 2,420   | \$ 2,331   |
| Paekakariki                  | \$ 4,142  | \$ 3,740   | \$ 3,417   | \$ 3,149   | \$ 2,989   | \$ 2,880   |
| Paraparaumu Beach East       | \$ 3,965  | \$ 3,580   | \$ 3,271   | \$ 3,014   | \$ 2,861   | \$ 2,757   |
| Paraparaumu Beach North      | \$ 4,066  | \$ 3,671   | \$ 3,354   | \$ 3,091   | \$ 2,934   | \$ 2,827   |
| Paraparaumu Beach West       | \$ 4,662  | \$ 4,210   | \$ 3,846   | \$ 3,544   | \$ 3,364   | \$ 3,242   |
| Paraparaumu Central          | \$ 3,893  | \$ 3,515   | \$ 3,211   | \$ 2,959   | \$ 2,809   | \$ 2,707   |
| Paraparaumu East             | \$ 3,794  | \$ 3,426   | \$ 3,130   | \$ 2,884   | \$ 2,738   | \$ 2,638   |
| Paraparaumu North            | \$ 3,931  | \$ 3,549   | \$ 3,242   | \$ 2,988   | \$ 2,837   | \$ 2,733   |
| Peka Peka                    | \$ 3,664  | \$ 3,308   | \$ 3,022   | \$ 2,785   | \$ 2,644   | \$ 2,548   |
| Raumati Beach East           | \$ 4,006  | \$ 3,617   | \$ 3,304   | \$ 3,045   | \$ 2,891   | \$ 2,785   |
| Raumati Beach West           | \$ 4,125  | \$ 3,725   | \$ 3,403   | \$ 3,136   | \$ 2,977   | \$ 2,868   |
| Raumati South                | \$ 3,985  | \$ 3,598   | \$ 3,288   | \$ 3,030   | \$ 2,876   | \$ 2,771   |
| Te Horo                      | \$ 3,334  | \$ 3,010   | \$ 2,750   | \$ 2,535   | \$ 2,406   | \$ 2,318   |
| Waikanae Beach               | \$ 4,129  | \$ 3,728   | \$ 3,406   | \$ 3,139   | \$ 2,980   | \$ 2,871   |
| Waikanae East                | \$ 3,660  | \$ 3,305   | \$ 3,020   | \$ 2,783   | \$ 2,642   | \$ 2,545   |
| Waikanae Park                | \$ 3,753  | \$ 3,389   | \$ 3,096   | \$ 2,853   | \$ 2,708   | \$ 2,609   |
| Waikanae West                | \$ 4,033  | \$ 3,642   | \$ 3,327   | \$ 3,066   | \$ 2,911   | \$ 2,804   |
| Waitohu                      | \$ 3,353  | \$ 3,027   | \$ 2,766   | \$ 2,549   | \$ 2,420   | \$ 2,331   |

Source: Property Economics,

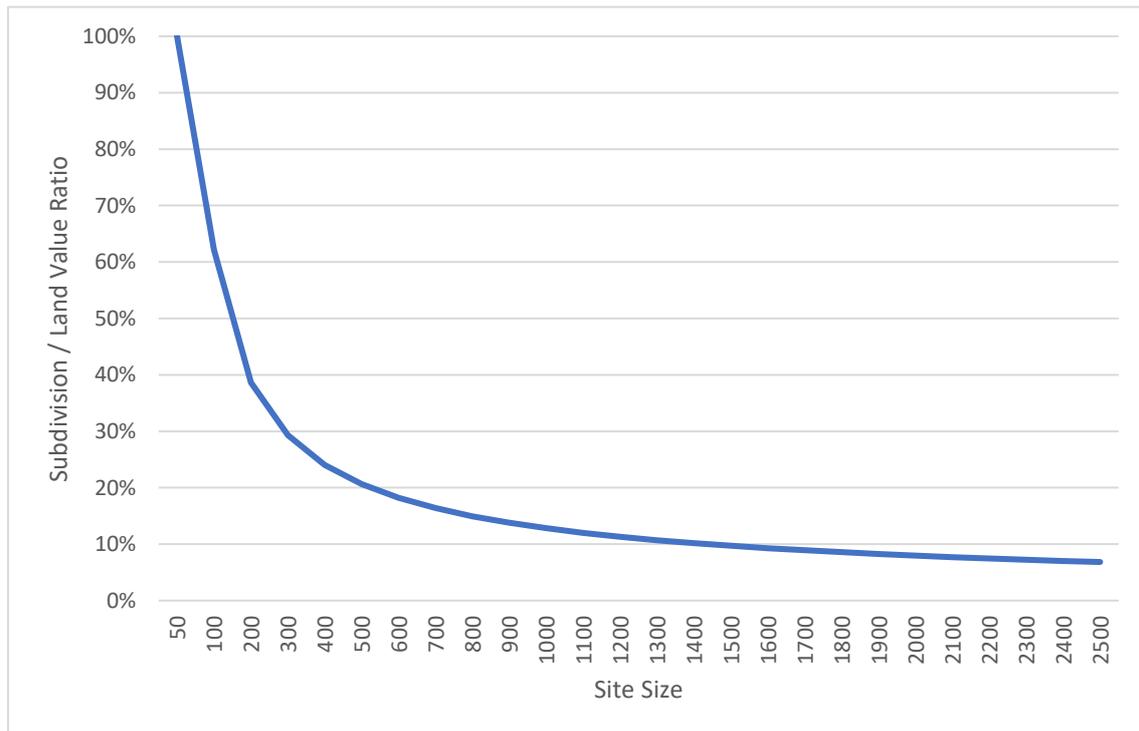
**TABLE 3 – KAPITI APARTMENT BUILD VALUE / SQM BY SUBURB**

| <b>Apartments</b> | <b>50</b> | <b>100</b> | <b>150</b> | <b>200</b> | <b>250</b> | <b>280</b> |
|-------------------|-----------|------------|------------|------------|------------|------------|
| Paraparaumu Beach | \$ 6,450  | \$ 5,750   | \$ 5,422   | \$ 5,713   | \$ 6,153   | \$ 6,123   |
| Elsewhere         | \$ 6,093  | \$ 5,141   | \$ 4,719   | \$ 4,686   | \$ 4,595   | \$ 4,572   |

Source: Property Economics,

Figure 2 below shows the land value per sqm subdivision scale utilised in the commercially feasible capacity modelling for varying land sizes. This was utilised for all typologies. Figure 2 is indexed against a site size of 50sqm (representing a scale of 100%). At 1300sqm the index is 10%, indicating that the average 1300sqm site has a land value per sqm around 1/10<sup>th</sup> of that of a 50sqm site.

**FIGURE 2 – KAPITI COAST LAND VALUE / SQM SCALE**



Source: Property Economics,

A limitation identified during the modelling process was that by applying a percentage increase on the site-specific land value through the process of subdivision, meant that sites with a proportionally high underlying land value resulted in an impractical subdivided land value on a per sqm basis. This was identified as a specific problem for sites with underlying commercial land values.

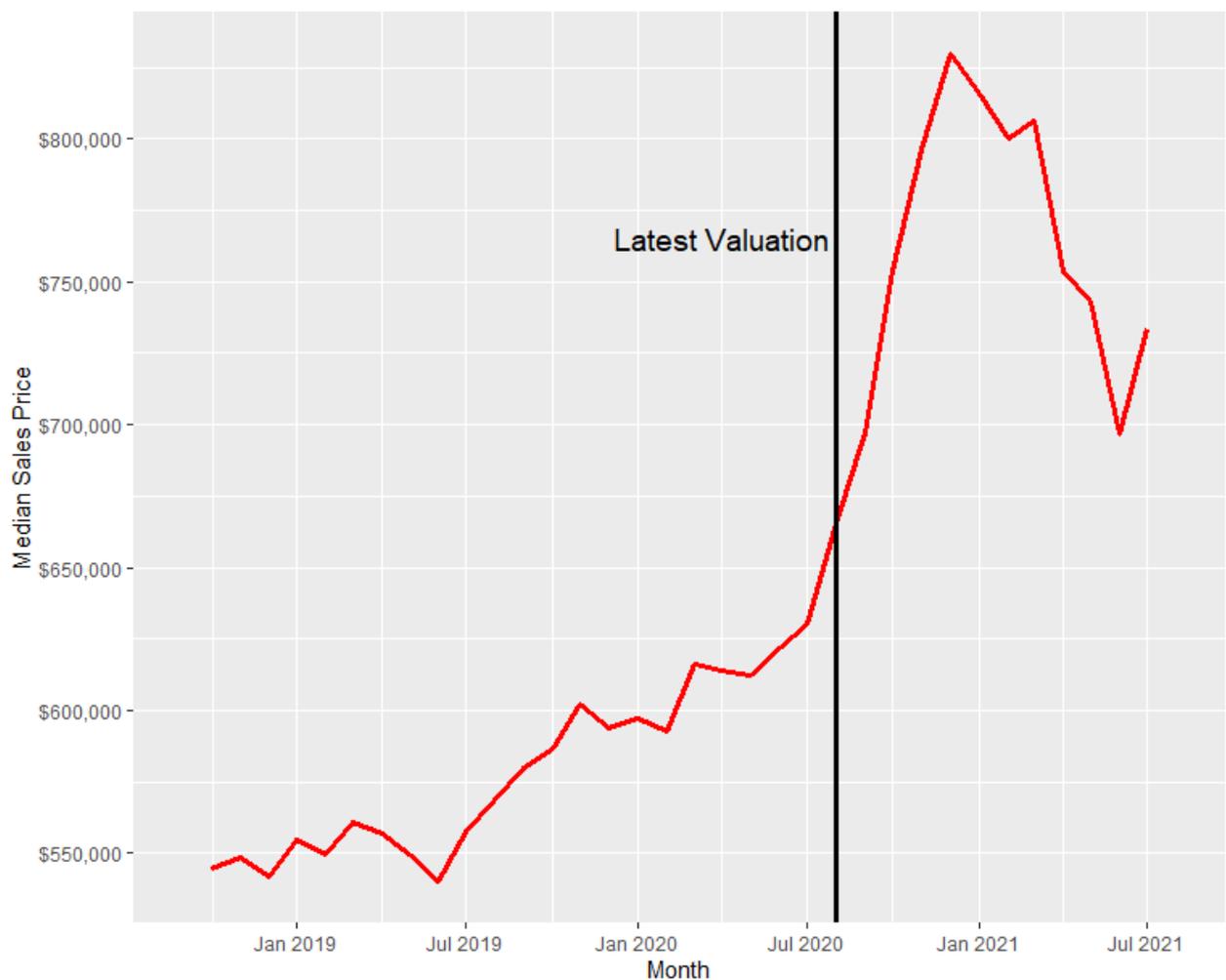
As a solution, the maximum residentially zoned land value per sqm identified within the rating database was used as a maximum limit for the land value per sqm after subdivision. This removed the impact of sites with underlying commercial land values resulting in impractically high profitability, and thus feasible yield.

### Sales vs Capital Value (CV)

A statistically significant sample dataset of recent sales in Kapiti was used to find the difference between the average sales price and the most recent valuation. This is to ensure the capacity modelling utilises the most up to date values data critical to the determination of current day feasible capacity.

Figure 3 shows the median sales price over the last three years between September 2018 and August 2021 based on a three-month rolling average. When Property Economics last ran the feasibility model in 2019 the median sales price in Kapiti was approximately \$550,000. When the latest valuation was run, the Kapiti property market had just started seeing an upturn and had reached \$650,000. By the end of the year, however, properties on the Kapiti market were selling for an average of around \$850,000. This is a marked increase that is reflected in the feasible capacity outputs.

**FIGURE 3: MEDIAN SALES PRICE SEPTEMBER 2018 – AUGUST 2021**



Source: Property Economics, Core Logic

## Construction Costs

Constructions costs for new dwellings were found by analysing the value of recent building consents granted within Kapiti Coast. The historical building consent data shows that the average value of building consents varies across suburb within Kapiti Coast, indicating the variety of product quality that is built.

Because of this, a table of average building consent per sqm by suburb was extracted from the building consent data in order to represent the average construction costs in a suburb. This is then used in the model as the construction costs of building a new dwelling.

Tables 4 below show the average build cost by suburb for standalone typologies. The build cost for terraced typologies is valued at 8% higher across the board.

**TABLE 4 – KAPITI STANDALONE BUILD COST BY SUBURB**

| <b>Standalone</b>       | <b>50</b> | <b>100</b> | <b>150</b> | <b>200</b> | <b>250</b> | <b>280</b> |
|-------------------------|-----------|------------|------------|------------|------------|------------|
| Forest Lakes            | \$ 4,047  | \$ 2,840   | \$ 2,373   | \$ 2,208   | \$ 2,022   | \$ 1,938   |
| Maungakotukutuku        | \$ 4,047  | \$ 2,840   | \$ 2,373   | \$ 2,208   | \$ 2,022   | \$ 1,938   |
| Otaihanga               | \$ 3,806  | \$ 2,671   | \$ 2,232   | \$ 2,077   | \$ 1,901   | \$ 1,823   |
| Otaki                   | \$ 3,341  | \$ 2,345   | \$ 1,959   | \$ 1,823   | \$ 1,669   | \$ 1,600   |
| Otaki Beach             | \$ 3,418  | \$ 2,399   | \$ 2,004   | \$ 1,865   | \$ 1,707   | \$ 1,637   |
| Paekakariki             | \$ 4,223  | \$ 2,964   | \$ 2,476   | \$ 2,304   | \$ 2,109   | \$ 2,022   |
| Paraparaumu Beach East  | \$ 4,041  | \$ 2,836   | \$ 2,370   | \$ 2,205   | \$ 2,019   | \$ 1,935   |
| Paraparaumu Beach North | \$ 4,144  | \$ 2,909   | \$ 2,430   | \$ 2,262   | \$ 2,070   | \$ 1,985   |
| Paraparaumu Beach West  | \$ 4,752  | \$ 3,335   | \$ 2,787   | \$ 2,593   | \$ 2,374   | \$ 2,276   |
| Paraparaumu Central     | \$ 3,968  | \$ 2,785   | \$ 2,327   | \$ 2,165   | \$ 1,982   | \$ 1,900   |
| Paraparaumu East        | \$ 3,867  | \$ 2,714   | \$ 2,268   | \$ 2,110   | \$ 1,932   | \$ 1,852   |
| Paraparaumu North       | \$ 4,007  | \$ 2,812   | \$ 2,350   | \$ 2,186   | \$ 2,002   | \$ 1,919   |
| Peka Peka               | \$ 3,735  | \$ 2,621   | \$ 2,190   | \$ 2,038   | \$ 1,866   | \$ 1,789   |
| Raumati Beach East      | \$ 4,083  | \$ 2,866   | \$ 2,395   | \$ 2,228   | \$ 2,040   | \$ 1,955   |
| Raumati Beach West      | \$ 4,205  | \$ 2,951   | \$ 2,466   | \$ 2,295   | \$ 2,101   | \$ 2,014   |
| Raumati South           | \$ 4,062  | \$ 2,851   | \$ 2,382   | \$ 2,217   | \$ 2,029   | \$ 1,945   |
| Te Horo                 | \$ 3,399  | \$ 2,385   | \$ 1,993   | \$ 1,855   | \$ 1,698   | \$ 1,627   |
| Waikanae Beach          | \$ 4,209  | \$ 2,954   | \$ 2,468   | \$ 2,297   | \$ 2,102   | \$ 2,015   |
| Waikanae East           | \$ 3,731  | \$ 2,619   | \$ 2,188   | \$ 2,036   | \$ 1,864   | \$ 1,787   |
| Waikanae Park           | \$ 3,825  | \$ 2,685   | \$ 2,243   | \$ 2,088   | \$ 1,911   | \$ 1,832   |
| Waikanae West           | \$ 4,111  | \$ 2,885   | \$ 2,411   | \$ 2,243   | \$ 2,054   | \$ 1,969   |
| Waitohu                 | \$ 3,418  | \$ 2,399   | \$ 2,004   | \$ 1,865   | \$ 1,707   | \$ 1,637   |

Source: Property Economics

**TABLE 5 – KAPITI APARTMENT BUILD COST BY SUBURB**

| <b>Apartments</b> | <b>50</b> | <b>100</b> | <b>150</b> | <b>200</b> | <b>250</b> | <b>280</b> |
|-------------------|-----------|------------|------------|------------|------------|------------|
| Paraparaumu Beach | \$ 5,864  | \$ 5,000   | \$ 4,518   | \$ 4,571   | \$ 4,733   | \$ 4,603   |
| Elsewhere         | \$ 5,539  | \$ 4,470   | \$ 3,932   | \$ 3,749   | \$ 3,534   | \$ 3,438   |

Source: Property Economics

### Other Development Costs

As well as construction costs, a number of other costs have been incorporated into the feasibility model on a per dwelling basis. Some of the key costs are outlined below in Table 6. In addition to these costs, a commercial interest rate of 8% p.a. and a 10% contingency on total costs (risk) has been applied.

**TABLE 6 – KAPITI PER DWELLING DEVELOPMENT COSTS**

| COMPREHENSIVE COSTS  | Standalone Terraced Apartment |           |           | INFILL COSTS         | Standalone Terraced Apartment |           |           |
|----------------------|-------------------------------|-----------|-----------|----------------------|-------------------------------|-----------|-----------|
|                      | Standalone                    | Terraced  | Apartment |                      | Standalone                    | Terraced  | Apartment |
| Demo Cost (per sqm)  | \$ 100                        | \$ 100    | \$ 100    | Demo Cost (per sqm)  | \$ -                          | \$ -      | \$ -      |
| Landscaping          | \$ 3,125                      | \$ 3,750  | \$ 750    | Landscaping          | \$ 3,125                      | \$ 3,750  | \$ 750    |
| Civil Work           | \$ 20,000                     | \$ 15,000 | \$ 5,000  | Civil Work           | \$ 20,000                     | \$ 15,000 | \$ 5,000  |
| Driveway             | \$ 20,000                     | \$ 6,600  | \$ 3,300  | Driveway             | \$ 20,000                     | \$ 6,600  | \$ 3,300  |
| Telephone            | \$ 4,500                      | \$ 2,500  | \$ 2,000  | Telephone            | \$ 4,500                      | \$ 2,500  | \$ 2,000  |
| Power                | \$ 6,000                      | \$ 6,000  | \$ 2,250  | Power                | \$ 6,000                      | \$ 6,000  | \$ 2,250  |
| Water and Wastewater | \$ 16,500                     | \$ 7,500  | \$ 7,500  | Water and Wastewater | \$ 16,500                     | \$ 7,500  | \$ 7,500  |

Source: Property Economics,

### 3.1. FEASIBLE CAPACITY OUTPUTS

Property Economics has assessed the variables outlined above in the Kapiti Coast market 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.

Table 7 below outlines a summary of the feasible capacity in the Kapiti Coast District according to the Property Economics model. Feasible capacity is defined where the ratios meet a profit level suitable to meet market expectations (20% for this analysis).

These figures have removed all 'double ups' i.e. where multiple instances were tested on a specific site and are feasible/realisable, then the most profitable scenario for that site is chosen. It is important to note that this does not discount the fact that alternative typologies and dwelling quantum may be profitable (and in fact may be realised by the market), but simply that the modelled results illustrate the most profitable given the current market variables.

**TABLE 7: KAPITI COAST FEASIBLE CAPACITY**

| Feasible Capacity (Max Profit) | Theoretical   | Standalone   | Terraced     | Apartment    | Total        | % of Theoretical |
|--------------------------------|---------------|--------------|--------------|--------------|--------------|------------------|
| Residential Zones              | 10,846        | 4,292        | 374          |              | 4,666        | 43%              |
| Commercial Zones               | 20,105        |              | 1,600        | 1,065        | 2,665        | 13%              |
| <b>Total</b>                   | <b>30,951</b> | <b>4,292</b> | <b>1,974</b> | <b>1,065</b> | <b>7,331</b> | <b>24%</b>       |

Source: Property Economics, KDCCD

The full potential of the Commercial Zone has been assessed without any restrictions on the extent of the zone that can be used for residential purposes. Hence the Total, in this case, includes 100% of the theoretical capacity in the Commercial Zone. The aforementioned 20% of commercial assumption is used in calculating the appropriate realisable capacity in the following chapter.

Table 7 shows that the Kapiti Coast District has 7,331 dwellings that could be feasibility developed within Kapiti's urban area based on the most profitable outcome for each site. The vast majority of these in the Residential Zones are Standalone as the minimum site size restrictions limit the benefits of terraced. In the Commercial Zone, there is a more even mix of terraced and apartment typologies.

The following Tables 8 and 9 break down these feasible capacity estimates by suburb for both Residential and Centre Zones.

**TABLE 8 – KAPITI FEASIBLE RESIDENTIAL DEVELOPMENT CAPACITY BY SUBURB – OWNER AND DEVELOPER – RESIDENTIAL ZONES**

| Residential - Feasible Capacity      |                      |                    |                     |                   |                         |                  |
|--------------------------------------|----------------------|--------------------|---------------------|-------------------|-------------------------|------------------|
| Suburbs                              | Theoretical Capacity | Feasible Apartment | Feasible Standalone | Feasible Terraced | Total Feasible Capacity | Feasibility Rate |
| Forest Lakes (Kapiti Coast District) | 1                    |                    |                     |                   | -                       | 0%               |
| Maungakotukutuku                     | 46                   |                    |                     |                   | -                       | 0%               |
| Otaihanga                            | 439                  |                    | 124                 | 4                 | 128                     | 29%              |
| Otaki                                | 2001                 |                    | 371                 | -                 | 371                     | 19%              |
| Otaki Beach                          | 142                  |                    | 37                  | -                 | 37                      | 26%              |
| Paekakariki                          | 76                   |                    | 46                  | 1                 | 47                      | 62%              |
| Paraparaumu Beach East               | 234                  |                    | 85                  | 17                | 102                     | 44%              |
| Paraparaumu Beach North              | 289                  |                    | 152                 | 14                | 166                     | 57%              |
| Paraparaumu Beach West               | 224                  |                    | 101                 | 34                | 135                     | 60%              |
| Paraparaumu Central                  | 1070                 |                    | 387                 | 7                 | 394                     | 37%              |
| Paraparaumu East                     | 611                  |                    | 191                 | -                 | 191                     | 31%              |
| Paraparaumu North                    | 774                  |                    | 312                 | 84                | 396                     | 51%              |
| Peka Peka                            | 223                  |                    | 50                  | -                 | 50                      | 22%              |
| Raumati Beach East                   | 807                  |                    | 544                 | 45                | 589                     | 73%              |
| Raumati Beach West                   | 439                  |                    | 250                 | 50                | 300                     | 68%              |
| Raumati South                        | 822                  |                    | 426                 | 67                | 493                     | 60%              |
| Te Horo                              | 1                    |                    | 1                   | -                 | 1                       | 100%             |
| Waikanae Beach                       | 463                  |                    | 235                 | 32                | 267                     | 58%              |
| Waikanae East                        | 646                  |                    | 300                 | 2                 | 302                     | 47%              |
| Waikanae Park                        | 850                  |                    | 325                 | 5                 | 330                     | 39%              |
| Waikanae West                        | 452                  | -                  | 269                 | 12                | 281                     | 62%              |
| Waitohu                              | 236                  |                    | 86                  | -                 | 86                      | 36%              |
| <b>Total</b>                         | <b>10,846</b>        | <b>-</b>           | <b>4,292</b>        | <b>374</b>        | <b>4,666</b>            | <b>43%</b>       |

**TABLE 9 – KAPITI FEASIBLE RESIDENTIAL DEVELOPMENT CAPACITY BY SUBURB – OWNER AND DEVELOPER – CENTRE ZONES**

| Centre - Feasible Capacity |                      |                    |                     |                   |                         |                  |
|----------------------------|----------------------|--------------------|---------------------|-------------------|-------------------------|------------------|
| Suburbs                    | Theoretical Capacity | Feasible Apartment | Feasible Standalone | Feasible Terraced | Total Feasible Capacity | Feasibility Rate |
| Maungakotukutuku           | 250                  |                    |                     |                   | -                       | 0%               |
| Otaki                      | 3349                 |                    |                     |                   | -                       | 0%               |
| Paekakariki                | 366                  | -                  | -                   | 9                 | 9                       | 2%               |
| Paraparaumu Beach North    | 281                  | -                  | -                   | 49                | 49                      | 17%              |
| Paraparaumu Beach West     | 1105                 | 96                 | -                   | 57                | 153                     | 14%              |
| Paraparaumu Central        | 11449                | 857                | -                   | 1,279             | 2,136                   | 19%              |
| Paraparaumu East           | 343                  | 13                 | -                   | 78                | 91                      | 27%              |
| Paraparaumu North          | 774                  |                    |                     |                   | -                       | 0%               |
| Raumati Beach West         | 591                  | 99                 | -                   | 62                | 161                     | 27%              |
| Raumati South              | 81                   | -                  | -                   | 8                 | 8                       | 10%              |
| Waikanae Beach             | 28                   |                    |                     |                   | -                       | 0%               |
| Waikanae East              | 102                  |                    |                     |                   | -                       | 0%               |
| Waikanae West              | 1386                 | -                  | -                   | 58                | 58                      | 4%               |
| <b>Total</b>               | <b>20,105</b>        | <b>1,065</b>       | <b>5,934</b>        | <b>2,092</b>      | <b>2,665</b>            | <b>13%</b>       |

Source: Property Economics

## 4. REALISABLE CAPACITY OUTPUTS

### 4.1. METHODOLOGY

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. While this section is separated from the sensitivities above 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. The assessment below endeavours to consider these risks and motivation differentials.

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 10 below shows the profit levels required for each combination of typology and development option to be considered realisable by the model. Note that these proportions have been kept consistent with those used in the previous feasible capacity reports. It has not, therefore, taken into account any changes to the greenfield capacity.

**TABLE 10 – 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 to terraced products, and finally apartments.

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.

Although the feasibility rate of the commercial zone is below 20%, the number of sites used exceeds 20% of the total land area. This is because the theoretical capacity maximum is based on the apartment potential, while roughly 60% of the feasible capacity is terraced (which take up proportionally more land).

Practically, the sites that are feasible to be developed for residential, are likely to also be feasible to develop for commercial. The balance of activities that make up Kapiti's commercial zone will ultimately depend on the relative demand for commercial and residential activities, and the leniency (or lack thereof) of the council in allowing any ground-floor residential units.

Based on the KCDC assumption of only 20% of the commercial land being used for residential, the realisable profit margins for the commercial zone have been increased over and above those shown in Table 10 by between 4-19%. This has been done to ensure that the total land area of each site used in the realisable capacity does not exceed 20% of an individual centre's total zone. Appendix 1 shows the realisable capacity in the Commercial Zone with and without this 20% adjustment

## 4.2. REALISABLE CAPACITY RESULTS

Taking these market practicalities into consideration, Table 11 shows a summary of the realisable capacity across both the Residential and Commercial Zones, totalling 5,052 dwellings. The realisable capacity in the Commercial Zone is around one-third of the feasible capacity. This accounts for the loss of residential capacity due to competing land uses.

**TABLE 11: SUMMARY OF REALISABLE CAPACITY BY TYPOLOGY**

| Realisable Capacity | Theoretical | Apartment Standalone | Terraced | Total | % of Theoretical |
|---------------------|-------------|----------------------|----------|-------|------------------|
| Residential Zones   | 10,846      | 3,994                | 158      | 4,822 | 44%              |
| Commercial Zones    | 4,021       |                      | 900      | 900   | 22%              |
| Total               | 14,867      | 3,994                | 1,058    | 5,052 | 34%              |

Source: Property Economics

Table 11 shows that although apartment typologies are typically more profitable than terraced, very few if any are likely to be realised in the market. This is due to a combination of the underlying land values compared to the cost of building apartments, and the height limitations which makes the relative profit margins of terraced dwellings more attractive. However, this assumes that terraced developments can be built across the entire development, which may not be the case where retail/commercial is required along the road front. This requirement may force developers wanting to build residential dwellings, to provide a mix of at grade retail and above grade residential apartments, thereby delivering apartments to the Kapiti market.

Tables 12 and 13 break down the realisable capacity by suburb for the Residential and Centre Zones.

**TABLE 12: KAPITI REALISABLE RESIDENTIAL DEVELOPMENT CAPACITY BY SUBURB – OWNER AND DEVELOPER – RESIDENTIAL ZONES**

| Residential - Realisable Capacity    |                      |                      |                       |                     |                           |                  |
|--------------------------------------|----------------------|----------------------|-----------------------|---------------------|---------------------------|------------------|
| Suburbs                              | Theoretical Capacity | Realisable Apartment | Realisable Standalone | Realisable Terraced | Total Realisable Capacity | Realisation Rate |
| Forest Lakes (Kapiti Coast District) | 1                    |                      |                       |                     | -                         | 0%               |
| Maungakotukutuku                     | 46                   |                      |                       |                     | -                         | 0%               |
| Otaihanga                            | 439                  |                      | 97                    | -                   | 97                        | 22%              |
| Otaki                                | 2001                 |                      | 445                   | -                   | 445                       | 22%              |
| Otaki Beach                          | 142                  |                      | 29                    | -                   | 29                        | 20%              |
| Paekakariki                          | 76                   |                      | 39                    | -                   | 39                        | 51%              |
| Paraparaumu Beach East               | 234                  |                      | 80                    | 7                   | 87                        | 37%              |
| Paraparaumu Beach North              | 289                  |                      | 124                   | 5                   | 129                       | 45%              |
| Paraparaumu Beach West               | 224                  |                      | 93                    | 14                  | 107                       | 48%              |
| Paraparaumu Central                  | 1070                 |                      | 356                   | -                   | 356                       | 33%              |
| Paraparaumu East                     | 611                  |                      | 163                   | -                   | 163                       | 27%              |
| Paraparaumu North                    | 774                  |                      | 306                   | 43                  | 349                       | 45%              |
| Peka Peka                            | 223                  |                      | 28                    | -                   | 28                        | 13%              |
| Raumati Beach East                   | 807                  |                      | 534                   | 18                  | 552                       | 68%              |
| Raumati Beach West                   | 439                  |                      | 250                   | 25                  | 275                       | 63%              |
| Raumati South                        | 822                  |                      | 441                   | 34                  | 475                       | 58%              |
| Te Horo                              | 1                    |                      |                       |                     | -                         | 0%               |
| Waikanae Beach                       | 463                  |                      | 238                   | 10                  | 248                       | 54%              |
| Waikanae East                        | 646                  |                      | 197                   | -                   | 197                       | 30%              |
| Waikanae Park                        | 850                  |                      | 279                   | -                   | 279                       | 33%              |
| Waikanae West                        | 452                  | -                    | 239                   | 2                   | 241                       | 53%              |
| Waitohu                              | 236                  |                      | 56                    | -                   | 56                        | 24%              |
| <b>Total</b>                         | <b>10,846</b>        | <b>-</b>             | <b>3,994</b>          | <b>158</b>          | <b>4,152</b>              | <b>38%</b>       |

**TABLE 13: KAPITI REALISABLE RESIDENTIAL DEVELOPMENT CAPACITY BY SUBURB – OWNER AND DEVELOPER – RESIDENTIAL ZONES**

| <b>Centre - Realisable Capacity</b> |                      |                      |                       |                     |                           |                  |
|-------------------------------------|----------------------|----------------------|-----------------------|---------------------|---------------------------|------------------|
| Suburbs                             | Theoretical Capacity | Realisable Apartment | Realisable Standalone | Realisable Terraced | Total Realisable Capacity | Realisation Rate |
| Maungakotukutuku                    | 50                   |                      |                       |                     | -                         | 0%               |
| Otaki                               | 670                  |                      |                       |                     | -                         | 0%               |
| Paekakariki                         | 73                   |                      |                       | 9                   | 9                         | 12%              |
| Paraparaumu Beach North             | 56                   |                      |                       |                     | -                         | 0%               |
| Paraparaumu Beach West              | 221                  |                      |                       | 63                  | 63                        | 29%              |
| Paraparaumu Central                 | 2290                 |                      |                       | 741                 | 741                       | 32%              |
| Paraparaumu East                    | 69                   |                      |                       | 26                  | 26                        | 38%              |
| Paraparaumu North                   | 155                  |                      |                       |                     | -                         | 0%               |
| Raumati Beach West                  | 118                  |                      |                       | 37                  | 37                        | 31%              |
| Raumati South                       | 16                   |                      |                       |                     | -                         | 0%               |
| Waikanae Beach                      | 6                    |                      |                       |                     | -                         | 0%               |
| Waikanae East                       | 20                   |                      |                       |                     | -                         | 0%               |
| Waikanae West                       | 277                  |                      |                       | 24                  | 24                        | 9%               |
| <b>Total</b>                        | <b>4,021</b>         |                      |                       | <b>900</b>          | <b>900</b>                | <b>22%</b>       |

Source: Property Economics

## 5. DEMAND / SUPPLY RECONCILIATION

Table 14 shows the projected dwelling demand under the Sense Partners 50<sup>th</sup> percentile forecast and the NPS-UD uplift requirement for Kapiti Coast District. This shows that over the next 30 years, Kapiti is projected to require an additional 16,185 dwellings including the appropriate NPS margin.

**TABLE 14: KAPITI COAST DWELLING PROJECTIONS OVER SHORT, MEDIUM, AND LONG TERM**

|                 | Short Term<br>(2021 -<br>2024) | Medium<br>Term (2024<br>- 2031) | Long Term<br>(2031 -<br>2051) | Total<br>Increase |
|-----------------|--------------------------------|---------------------------------|-------------------------------|-------------------|
| Dwellings       | 1,463                          | 3,639                           | 8,750                         | 13,852            |
| Margin          | 20%                            | 20%                             | 15%                           | -                 |
| Adjusted Demand | 293                            | 727.8                           | 1,313                         | 2,333             |
| <b>Total</b>    | <b>1,756</b>                   | <b>4,367</b>                    | <b>10,063</b>                 | <b>16,185</b>     |

Source: Property Economics, PCC

Table 15 shows how this total demand including the NPS required margins, compares to the realisable infill and greenfield capacity. Based on the high level of growth projected by Sense Partners, this shows that household growth well exceeds the anticipated level of supply in Kapiti Coast.

**TABLE 15: DEMAND AND SUPPLY COMPARISON**

|                         | Total          |
|-------------------------|----------------|
| Demand (+ NPS Margin)   | 16,185         |
| Latent Capacity         |                |
| Greenfield Capacity     | 2,766          |
| Realisable Capacity     | 5,052          |
| Total Capacity (Supply) | 7,818          |
| <b>Difference</b>       | <b>(8,367)</b> |

Source: Property Economics, PCC

## APPENDIX 1 - IMPACT OF LIMITING COMMERCIAL ZONE REALISATION

### KAPITI COAST REALISABLE CAPACITY WITH STANDARD REALISATION PROFIT MARGINS

| Centre - Realisable Capacity |                      |                      |                       |                     |                           |                  |
|------------------------------|----------------------|----------------------|-----------------------|---------------------|---------------------------|------------------|
| Suburbs                      | Theoretical Capacity | Realisable Apartment | Realisable Standalone | Realisable Terraced | Total Realisable Capacity | Realisation Rate |
| Maungakotukutuku             | 250                  |                      |                       |                     | -                         | 0%               |
| Otaki                        | 3349                 |                      |                       |                     | -                         | 0%               |
| Paekakariki                  | 366                  |                      |                       | 9                   | 9                         | 2%               |
| Paraparaumu Beach North      | 281                  |                      |                       |                     | -                         | 0%               |
| Paraparaumu Beach West       | 1105                 |                      |                       | 76                  | 76                        | 7%               |
| Paraparaumu Central          | 11449                |                      |                       | 1,407               | 1,407                     | 12%              |
| Paraparaumu East             | 343                  |                      |                       | 85                  | 85                        | 25%              |
| Paraparaumu North            | 774                  |                      |                       |                     | -                         | 0%               |
| Raumati Beach West           | 591                  |                      |                       | 85                  | 85                        | 14%              |
| Raumati South                | 81                   |                      |                       |                     | -                         | 0%               |
| Waikanae Beach               | 28                   |                      |                       |                     | -                         | 0%               |
| Waikanae East                | 102                  |                      |                       |                     | -                         | 0%               |
| Waikanae West                | 1386                 |                      |                       | 58                  | 58                        | 4%               |
| <b>Total</b>                 | <b>20,105</b>        |                      |                       | <b>1,720</b>        | <b>1,720</b>              | <b>9%</b>        |

### KAPITI COAST REALISABLE CAPACITY WITH 20% LIMIT ON COMMERCIAL LAND FOR AN INDIVIDUAL CENTRE

| Centre - Realisable Capacity |                      |                      |                       |                     |                           |                  |
|------------------------------|----------------------|----------------------|-----------------------|---------------------|---------------------------|------------------|
| Suburbs                      | Theoretical Capacity | Realisable Apartment | Realisable Standalone | Realisable Terraced | Total Realisable Capacity | Realisation Rate |
| Maungakotukutuku             | 50                   |                      |                       |                     | -                         | 0%               |
| Otaki                        | 670                  |                      |                       |                     | -                         | 0%               |
| Paekakariki                  | 73                   |                      |                       | 9                   | 9                         | 12%              |
| Paraparaumu Beach North      | 56                   |                      |                       |                     | -                         | 0%               |
| Paraparaumu Beach West       | 221                  |                      |                       | 63                  | 63                        | 29%              |
| Paraparaumu Central          | 2290                 |                      |                       | 741                 | 741                       | 32%              |
| Paraparaumu East             | 69                   |                      |                       | 26                  | 26                        | 38%              |
| Paraparaumu North            | 155                  |                      |                       |                     | -                         | 0%               |
| Raumati Beach West           | 118                  |                      |                       | 37                  | 37                        | 31%              |
| Raumati South                | 16                   |                      |                       |                     | -                         | 0%               |
| Waikanae Beach               | 6                    |                      |                       |                     | -                         | 0%               |
| Waikanae East                | 20                   |                      |                       |                     | -                         | 0%               |
| Waikanae West                | 277                  |                      |                       | 24                  | 24                        | 9%               |
| <b>Total</b>                 | <b>4,021</b>         |                      |                       | <b>900</b>          | <b>900</b>                | <b>22%</b>       |

# Appendix 5.2

Kāpiti Coast District Council assessment of infrastructure availability to support future growth

**Kāpiti Coast District Council:  
NPS-UDC assessment of infrastructure  
availability to support future growth**

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## Executive summary

The Kāpiti Coast District is projected to grow by more than 30,000 people by 2051. The ability to provide infrastructure services is a significant factor affecting how and where growth and development takes place across the district and creating healthy, resilient, and connected communities.

This report provides an assessment of Kāpiti Coast District's key infrastructure networks for water supply, wastewater, stormwater, open space, and local transport, and their ability to meet future growth forecast for the District, while continuing to also meet the needs of existing residents.

The completion of the first HBA (Housing Business Assessment) in 2019 identified that most of Councils' infrastructure networks generally had sufficient capacity available or planned to meet current and future growth needs. Ōtaki was an exception, where unforeseen growth in the area would see available capacity taken up much sooner than anticipated.

Since the last HBA it has also become apparent that the District is growing much faster than previously projected, at twice the rate of growth identified in the 2019 assessment. This higher level of growth is expected to continue across the next 30 years, driven by increasing demand for housing, improved connectivity of the district north and south, and the ongoing appeal of its lifestyle choices.

The extent of this change presents significant challenges and opportunities for how future growth is managed; including the shape and nature of infrastructure networks required to support and enable good outcomes for the District.

A number of infrastructure networks such as open space and stormwater have previously met growth needs on a case-by-case basis as development has emerged. This has been assisted by hydraulic neutrality requirements in the District Plan. However, the scale of future growth and shifting balance between greenfield growth and intensification may require different long-term approaches in order to meet future growth outcomes.

This shift poses a particular challenge for fixed water supply and wastewater networks impacted by increasing physical costs to develop and maintain their efficiency and effectiveness, but also the costs of meeting higher health standards and environmental controls relating to receiving environments.

A benefit of this assessment is that it helps identify potential limits and constraints early in the decision making and investment of future infrastructure networks to ensure they continue to meet future needs and levels of service for the communities they serve.

The Council has recently adopted a new District Growth Strategy. The Strategy outlines the shape and location of future growth, both 'up' through intensification and 'out' through greenfield development. The Strategy will help support further assessment and planning of the scale and nature of infrastructure needed to support and enable this longer-term vision of growth for the district.

## **Introduction**

The NPS-UDC requires high and medium growth councils to assess whether there is sufficient development capacity to meet future residential and business demand across the short, medium, and long-term (3, 10, and 30 year periods).

A prerequisite for assessing sufficient development capacity is that land is serviced or planned to be serviced by Council infrastructure. Drinking water, wastewater, stormwater (three waters), and roading infrastructure are all critical to servicing urban development. Parks and open space also form an important part of supporting green infrastructure, providing amenity and recreational services to current and future development. The need and availability (or planned provision) of these services is a key factor influencing the sequence, scale, location, cost, and overall feasibility of development. Provision of other non-Council infrastructure including public transport, schools and national roading is assessed separately by the responsible bodies and included in the housing assessment of development capacity.

There are also practical constraints on providing infrastructure. The ability to service and expand infrastructure networks, both with regards to physical capacity, topography, natural hazards and efficient network operation, are all factors that can influence the cost, provision, and sequencing of infrastructure to service future growth and development.

This report provides an assessment of the capacity of Kāpiti's three waters, roading and open space networks to meet forecast urban growth across Kāpiti. Better understanding the nature and demands around future growth alongside infrastructure capacity and provision will help inform councils planning and investment decisions.

## **Approach to assessing infrastructure capacity**

Assessing the availability or ability for infrastructure to support future development needs requires comparing forecast numbers and locations of future growth against currently known and available capacity across Council's key infrastructure networks.

The following report provides a description of each of the three waters, roading, and open space networks and assesses their ability to accommodate anticipated growth to 2051.

The assessment identifies key performance measures to help identify and test whether capacity and the required levels of service can be met alongside future anticipated development. The assessment also identifies any known and planned works that will help networks meet their future capacity and service levels.

To complete an assessment across infrastructure networks is complex and requires a number of assumptions to be made to enable modelling of current and future conditions. Some assumptions are addressed within the report itself, with more general assumptions made across modelling outlined at the end of the report.

## **Forecast population and dwelling growth for Kāpiti**

The Kāpiti Coast population and household forecasts were updated in 2021 to support this HBA. The forecasts shows anticipated changes in population and the type and location of households

across the district from 2018 to 2048. Over this period, Kāpiti Coast's population is expected to grow to increase by 31,814, with an additional 13,852 dwellings required.

The table below summarises the forecast population growth across the Kāpiti Coast from 2021 – 2051, across 3, 10, and 30-year periods. The population forecast is also used to forecast dwellings across the district. This takes into account factors influencing household formation including changes to the size and type of households from changing population demographics and the likely form of residential development that might occur in each location. This also takes into account factors for housing including the development of new greenfield sites, subdivision, and infill within existing residential area, rezoned land for residential development, and densification of housing development.

### Forecast population projections and net growth from 2021 – 2051

| Area                                 | Population projections |               |               |               |               | Net population change |               |               |
|--------------------------------------|------------------------|---------------|---------------|---------------|---------------|-----------------------|---------------|---------------|
|                                      | 2021                   | 2024          | 2031          | 2050          | 2051          | 3 Year                | 10 Year       | 30 Year       |
| Forest Lakes (Kapiti Coast District) | 789                    | 921           | 1,427         | 2,733         | 2,757         | 132                   | 638           | 1,968         |
| Kapiti Island                        | 0                      | 0             | 0             | 0             | 0             | 0                     | 0             | 0             |
| Maungakotukutuku                     | 1,457                  | 1,561         | 1,908         | 2,417         | 2,438         | 104                   | 451           | 981           |
| Otaihanga                            | 894                    | 958           | 1,107         | 1,479         | 1,500         | 64                    | 213           | 606           |
| Otaki                                | 3,911                  | 4,213         | 5,015         | 7,315         | 7,422         | 302                   | 1,104         | 3,511         |
| Otaki Beach                          | 1,964                  | 2,061         | 2,334         | 2,827         | 2,852         | 97                    | 370           | 888           |
| Otaki Forks                          | 820                    | 855           | 969           | 1,195         | 1,207         | 35                    | 149           | 387           |
| Paekākāriki                          | 1,800                  | 1,803         | 1,820         | 1,895         | 1,898         | 3                     | 20            | 98            |
| Paraparaumu Beach East               | 2,732                  | 2,783         | 2,976         | 3,177         | 3,191         | 51                    | 244           | 459           |
| Paraparaumu Beach North              | 4,186                  | 4,208         | 4,308         | 4,582         | 4,601         | 22                    | 122           | 415           |
| Paraparaumu Beach West               | 2,462                  | 2,505         | 2,689         | 3,034         | 3,056         | 43                    | 227           | 594           |
| Paraparaumu Central                  | 4,337                  | 4,572         | 5,224         | 6,480         | 6,525         | 235                   | 887           | 2,188         |
| Paraparaumu East                     | 2,766                  | 3,203         | 3,838         | 6,037         | 6,253         | 437                   | 1,072         | 3,487         |
| Paraparaumu North                    | 3,780                  | 3,938         | 4,416         | 4,920         | 4,937         | 158                   | 636           | 1,157         |
| Peka Peka                            | 695                    | 760           | 1,009         | 1,783         | 1,816         | 65                    | 314           | 1,121         |
| Raumati Beach East                   | 2,518                  | 2,631         | 2,949         | 3,410         | 3,426         | 113                   | 431           | 908           |
| Raumati Beach West                   | 3,001                  | 3,092         | 3,367         | 3,696         | 3,718         | 91                    | 366           | 717           |
| Raumati South                        | 4,056                  | 4,258         | 4,749         | 5,709         | 5,751         | 202                   | 693           | 1,695         |
| Tararua Forest Park                  | 0                      | 0             | 0             | 0             | 0             | 0                     | 0             | 0             |
| Te Horo                              | 1,521                  | 1,620         | 1,910         | 2,355         | 2,380         | 99                    | 389           | 859           |
| Waikanae Beach                       | 3,470                  | 3,609         | 4,003         | 4,608         | 4,640         | 139                   | 533           | 1,170         |
| Waikanae East                        | 2,888                  | 3,291         | 3,717         | 5,442         | 5,525         | 403                   | 829           | 2,637         |
| Waikanae Park                        | 2,381                  | 2,708         | 3,691         | 5,795         | 5,903         | 327                   | 1,310         | 3,522         |
| Waikanae West                        | 4,745                  | 5,028         | 5,621         | 6,866         | 6,916         | 283                   | 876           | 2,171         |
| Waitohu                              | 1,037                  | 1,039         | 1,088         | 1,340         | 1,357         | 2                     | 51            | 320           |
| <b>Total</b>                         | <b>58,255</b>          | <b>61,632</b> | <b>70,176</b> | <b>89,095</b> | <b>90,069</b> | <b>3,377</b>          | <b>11,921</b> | <b>31,814</b> |

## Forecast dwelling growth and net change from 2021 - 2051

| Area                                 | Population projections |              |               |              |              | Net population change |              |               |
|--------------------------------------|------------------------|--------------|---------------|--------------|--------------|-----------------------|--------------|---------------|
|                                      | 2021                   | 2024         | 2031          | 2050         | 2051         | 3 Year                | 10 Year      | 30 Year       |
| Forest Lakes (Kapiti Coast District) | 44                     | 274          | 787           | 44           | 274          | 44                    | 274          | <b>787</b>    |
| Kapiti Island                        | 0                      | 0            | 0             | 0            | 0            | 0                     | 0            | <b>0</b>      |
| Maungakotukutuku                     | 40                     | 161          | 396           | 40           | 161          | 40                    | 161          | <b>396</b>    |
| Otaihanga                            | 30                     | 97           | 284           | 30           | 97           | 30                    | 97           | <b>284</b>    |
| Otaki                                | 152                    | 501          | 1,518         | 152          | 501          | 152                   | 501          | <b>1,518</b>  |
| Otaki Beach                          | 34                     | 143          | 344           | 34           | 143          | 34                    | 143          | <b>344</b>    |
| Otaki Forks                          | 9                      | 45           | 124           | 9            | 45           | 9                     | 45           | <b>124</b>    |
| Paekākāriki                          | 4                      | 14           | 54            | 4            | 14           | 4                     | 14           | <b>54</b>     |
| Paraparaumu Beach East               | 38                     | 147          | 308           | 38           | 147          | 38                    | 147          | <b>308</b>    |
| Paraparaumu Beach North              | 14                     | 60           | 222           | 14           | 60           | 14                    | 60           | <b>222</b>    |
| Paraparaumu Beach West               | 23                     | 97           | 263           | 23           | 97           | 23                    | 97           | <b>263</b>    |
| Paraparaumu Central                  | 141                    | 437          | 1,067         | 141          | 437          | 141                   | 437          | <b>1,067</b>  |
| Paraparaumu East                     | 151                    | 408          | 1,212         | 151          | 408          | 151                   | 408          | <b>1,212</b>  |
| Paraparaumu North                    | 77                     | 301          | 563           | 77           | 301          | 77                    | 301          | <b>563</b>    |
| Peka Peka                            | 26                     | 187          | 641           | 26           | 187          | 26                    | 187          | <b>641</b>    |
| Raumati Beach East                   | 51                     | 198          | 446           | 51           | 198          | 51                    | 198          | <b>446</b>    |
| Raumati Beach West                   | 44                     | 165          | 330           | 44           | 165          | 44                    | 165          | <b>330</b>    |
| Raumati South                        | 95                     | 289          | 715           | 95           | 289          | 95                    | 289          | <b>715</b>    |
| Tararua Forest Park                  | 0                      | 0            | 0             | 0            | 0            | 0                     | 0            | <b>0</b>      |
| Te Horo                              | 25                     | 118          | 258           | 25           | 118          | 25                    | 118          | <b>258</b>    |
| Waikanae Beach                       | 34                     | 143          | 288           | 34           | 143          | 34                    | 143          | <b>288</b>    |
| Waikanae East                        | 130                    | 311          | 1,225         | 130          | 311          | 130                   | 311          | <b>1,225</b>  |
| Waikanae Park                        | 153                    | 501          | 1,518         | 153          | 501          | 153                   | 501          | <b>1,518</b>  |
| Waikanae West                        | 148                    | 463          | 1,123         | 148          | 463          | 148                   | 463          | <b>1,123</b>  |
| Waitohu                              | 6                      | 31           | 177           | 6            | 31           | 6                     | 31           | <b>177</b>    |
| <b>Total</b>                         | <b>1,463</b>           | <b>5,102</b> | <b>13,852</b> | <b>1,463</b> | <b>5,102</b> | <b>1,463</b>          | <b>5,102</b> | <b>13,852</b> |

The greatest amount of forecast growth is expected to occur across the Waikanae area, with Paraparaumu not far behind and Ōtaki also expecting strong growth. Further details on changes to residential demand are available in the assessment itself.

To understand and assess infrastructure capacity, the above levels of forecast growth are compared against recent modelling and assessments of infrastructure capacity. This helps us better understand current capacity, constraints and mitigating factors determining whether infrastructure servicing is available to meet on-going and additional needs from growth.

### Capacity of Kāpiti Coast's water supply

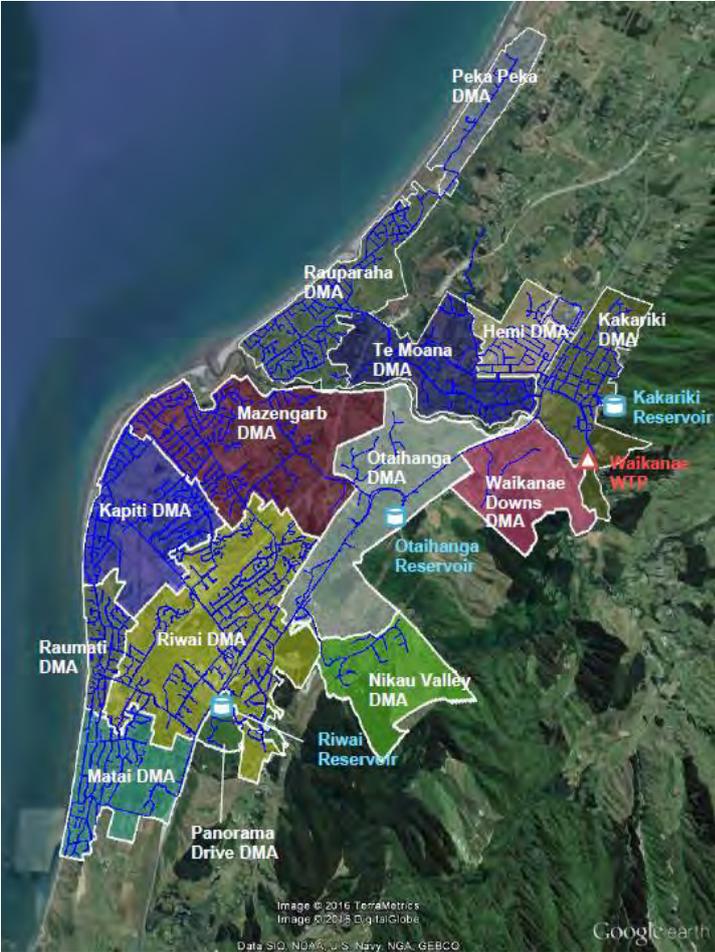
#### Description of schemes

The Council is responsible for the provision and management of four water supply schemes at Waikanae/Paraparaumu/Raumati, Ōtaki, Te Horo/Hautere, and Paekākāriki. The four schemes service approximately 22,000 properties and 47,000 people (93% of the District population), with the remaining relying on private rainwater tank water and bores.

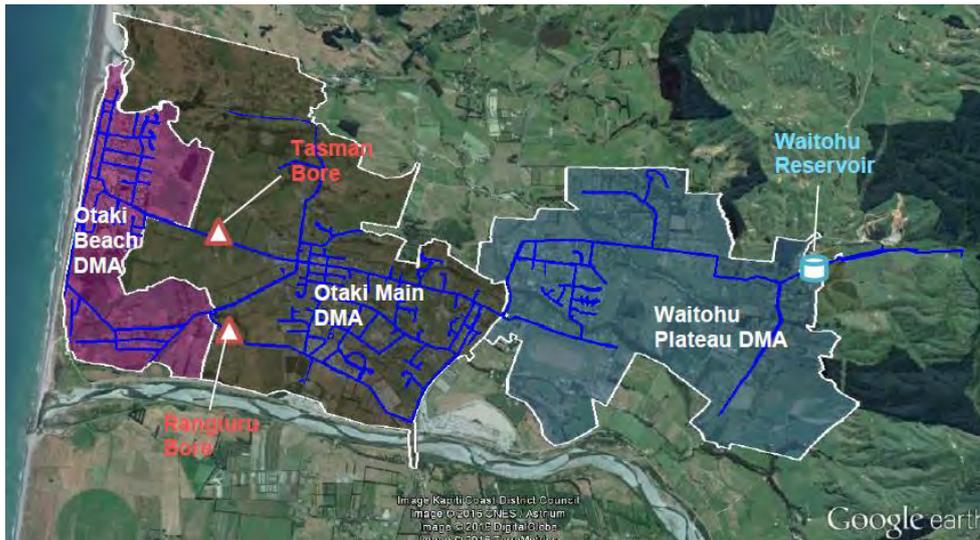
The overall water supply network for the District consists of 571km of water pipes, five water treatment plants, seven pump stations, and 15 groundwater bores. Based on the Council's most recent assessments, 73% of its water supply pipes are in moderate to very good condition. This assessment is based on industry expected base life knowledge, results of pipe sampling and risk profiling.

Works have been planned to maintain and improve the supply of drinking water to meet Kāpiti's future needs. This includes works to increase capacity for both the supply and treatment of water. An example is work planned on the largest Waikanae/Paraparaumu/Raumati scheme to undertake groundwater recharge and enable long term supply to service a 30,700m<sup>3</sup> per day peak demand for a population of 52,000 expected in 2060 during a once in fifty-year drought. Other measures include purchasing land for a future dam to further future-proof the water supply for Kāpiti and provide security of supply for the next 100 years.

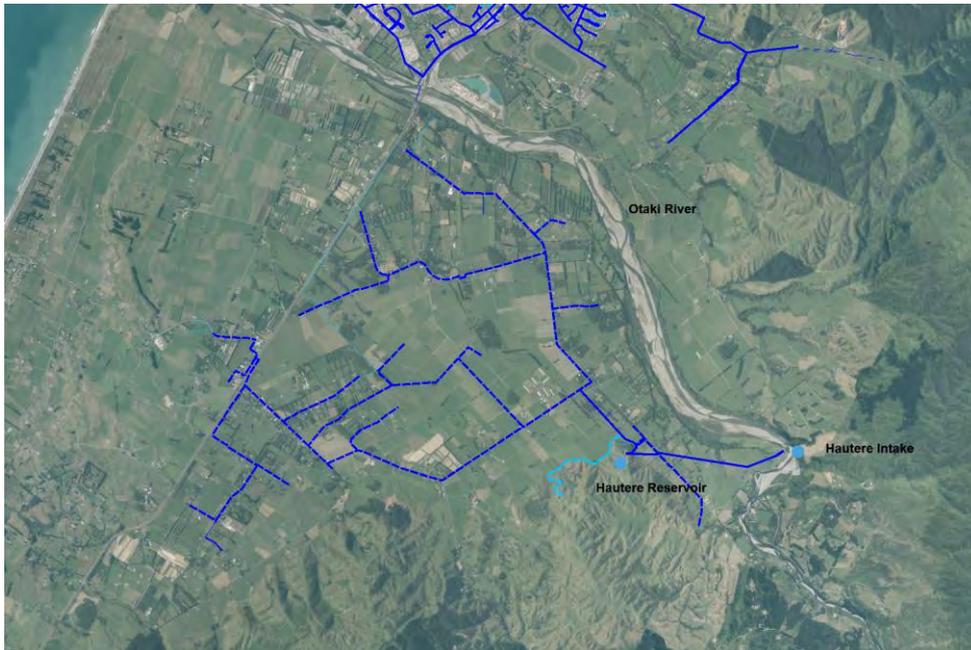
**Picture 1: Waikanae/Paraparaumu/Raumati water supply scheme**



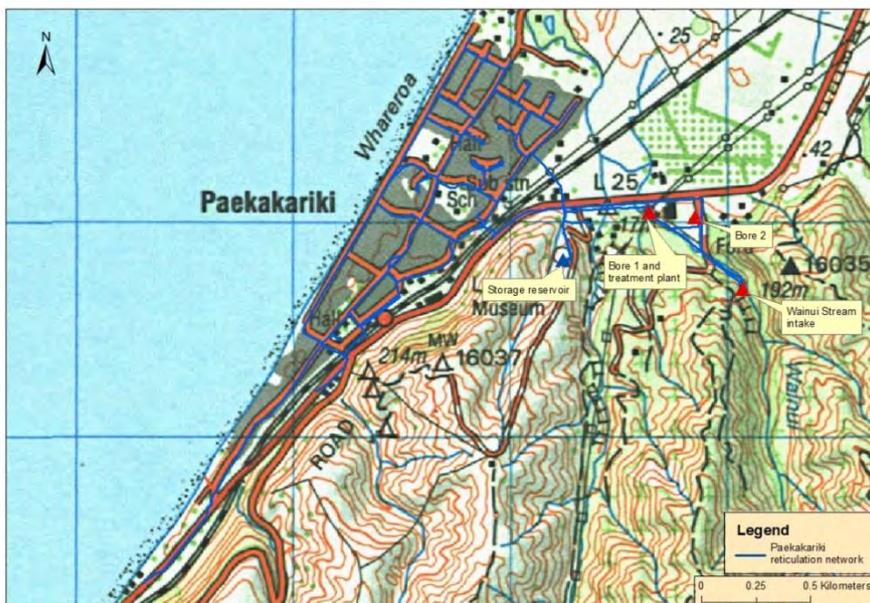
Picture 2: Ōtaki water supply scheme



Picture 3: Te Horo/Hautere water supply scheme



Picture 4: Paekakariki water supply scheme



### Measuring network performance

Modelling of the water supply network uses three sets of performance criteria for storage, minimum and maximum pressures, and fire flows. These three sets of criteria provide a baseline level of service across the four schemes.

Storage – that reservoirs have sufficient storage for 24 hours of average demand in the area they service, plus storage sufficient for fire fighting according to the New Zealand Fire Service Fire Fighting Water Supplies Code of Practice SNZ: PAS 4509:2008 (known as the Fire Code).

Pressures – that pressures at the point of supply of properties connected to the Kāpiti Coast District Council water network should be above 25m or 10m during firefighting events.

Fire code – That fire code requirements will be met, and that specified fire water flows should be available at 2/3 of peak demand (peak demand is at 8 pm for the Kāpiti network).

### Summary of Assessment

#### Waikanae/Paraparaumu/Raumati and Ōtaki

Kāpiti's two largest water schemes were last modelled in 2017<sup>1</sup>. Population projections and a target peak demand of 490 l/person/day were used to calculate the design future demand for the total system. This includes a total demand for residential, commercial/industrial, and network water loss.

The modelling was based on projected population growth from 2016 to 2046, as shown in the table below.

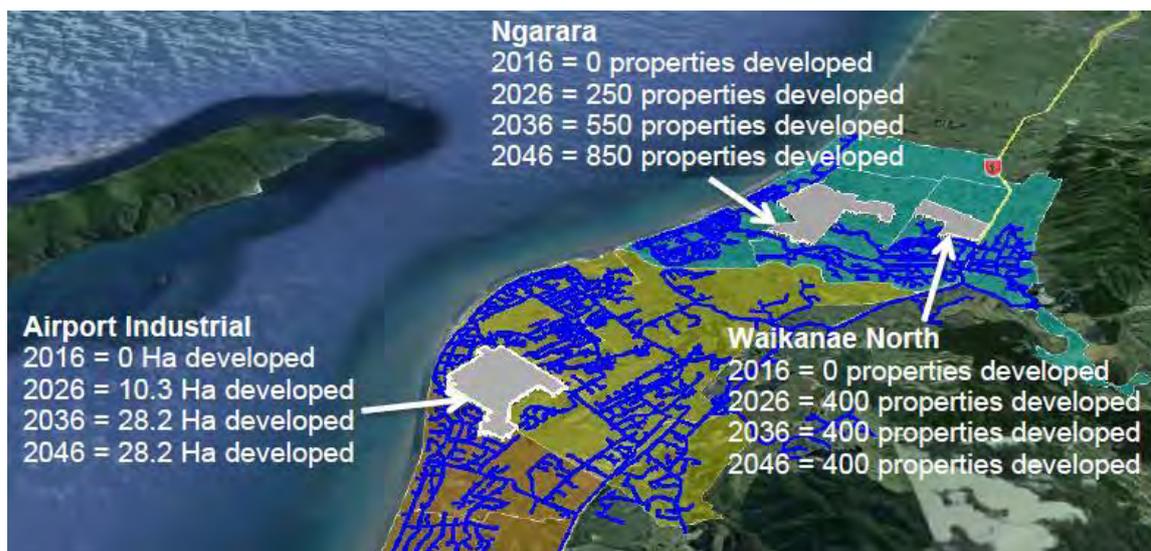
#### Population projections 2016 - 2046

| Water supply zone   | 2016          | 2026          | 2036          | 2046          |
|---------------------|---------------|---------------|---------------|---------------|
| Waikanae            | 11,426        | 13,056        | 14,669        | 16,207        |
| Paraparaumu/Raumati | 27,249        | 28,636        | 29,458        | 29,954        |
| Ōtaki               | 5,883         | 5,912         | 5,771         | 5,547         |
| <b>Total</b>        | <b>44,558</b> | <b>47,603</b> | <b>49,898</b> | <b>51,708</b> |

The population figures were then combined with household size and usage to project future demand across each supply zone. Modelling also considered the quantum and timing of key areas of anticipated greenfield development around Ngarara, Waikanae North, and around the airport in Paraparaumu to help identify and phase likely additional demand created from these areas. It also factored in the potential upgrading of water supply to Peka Peka from the current restricted system to on-demand supply, which would increase maximum peak demand.

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<sup>1</sup> Kāpiti Coast water modelling phases 4+5 - Water Network Development Plan, Stantec, 2017



### Summary of demand

| Supply Zone / Category        | 2016 (m3/day) | 2026 (m3/day) | 2036 (m3/day) | 2046 (m3/day) |
|-------------------------------|---------------|---------------|---------------|---------------|
| <b>Waikanae</b>               | <b>5,698</b>  | <b>6,708</b>  | <b>7,499</b>  | <b>8,253</b>  |
| Existing commercial           | 599           | 599           | 599           | 599           |
| Existing leakage              | 1,877         | 1,877         | 1,877         | 1,877         |
| Existing residential + infill | 3,123         | 3,125         | 3,548         | 3,935         |
| Greenfields                   | 99            | 1,107         | 1,475         | 1,842         |
| <b>Paraparaumu/Raumati</b>    | <b>13,352</b> | <b>14,031</b> | <b>14,434</b> | <b>14,677</b> |
| Existing commercial           | 1,277         | 1,277         | 1,277         | 1,277         |
| Existing leakage              | 1,672         | 1,672         | 1,672         | 1,672         |
| Existing residential + infill | 10,403        | 10,637        | 10,267        | 10,510        |
| Greenfields                   | 0             | 445           | 1,218         | 1,218         |
| <b>Ōtaki</b>                  | <b>2,883</b>  | <b>2,897</b>  | <b>2,897</b>  | <b>2,897</b>  |
| Existing commercial           | 395           | 395           | 395           | 395           |
| Existing leakage              | 732           | 732           | 732           | 732           |
| Existing residential + infill | 1,756         | 1,770         | 1,770         | 1,770         |
| Greenfields                   | 0             | 0             | 0             | 0             |
| <b>Total</b>                  | <b>21,933</b> | <b>23,636</b> | <b>24,830</b> | <b>25,827</b> |

Modelling for peak future flows out to 2046 identified a number of upgrades to address deficiencies. A summary is provided below, but the full assessment is available in the Water 2017 Network Development Plan.

- Pressure deficiencies – five areas affected: four moderate, one severe
- Fire flow deficiencies – 12 areas affected: five severe, four moderate, and three minor
- Storage deficiencies – Ōtaki lacking 2500m3

These deficiencies have been used to identify and prioritise a programme of work to mitigate and manage impacts on the networks ongoing delivery, while not affecting the ability to service

growth expected in key locations (inline with projections). The work programme also identifies a number of strategic projects, which have been programmed to provide services and necessary capacity to current/known greenfield areas expected to develop over the short-medium term.

A key finding of the previous assessment was the impacts for Otaki, where new growth projected in the area identified impacts on the infrastructure planning, which was previously based on static growth. A key impact was a lack of water storage, with 10 years worth of growth capacity within the current system.

In light of this finding, a subsequent assessment<sup>2</sup> of the Otaki system was undertaken in 2019 which used the previous HBA's growth figures while accounting for additional growth of two significant greenfield sites. This identified a future population of 14,294 by 2047. Using this increased projection identified two pressure deficiencies and six firefighting deficiencies. Both pressure deficiencies were severe in nature, while three of the firefighting deficiencies were severe, two moderate and one minor.

12 upgrades were identified to address these issues. This included increasing the capacity of main trunks, constructing new Otaki and Waitohu reservoirs, and upgrading a range of other mains and pump station capacity to address fire fighting deficiencies.

This updated modelling will update assumptions around growth in the area and help inform the nature and scale of investment required to enable the network to service future needs. This includes the provision of an additional reservoir for the security of the water supply.

#### Hautere Rural water supply scheme

The Hautere scheme services part of the Te Horo and Hautere plains area. The scheme currently has 803 water units allocated, with each water unit equating to 1 m<sup>3</sup>/day (+/- 15%). Consented allocation is a maximum of 16L/s (1,382.4 m<sup>3</sup>/day), with the difference allowing the scheme to have operational flexibility. The scheme is now closed, which means that no new allocation is allowed from the scheme, but existing allocations can be divided across additional development to support the addition of new development within the cap.

Operational flexibility, especially for small public water schemes such as Hautere, is needed to account for such things as:

- Managing leakage control activities: for example, should two sizable (180-200 m<sup>3</sup>/day) leaks progressively develop concurrently, such as with tapping bands or lateral failures, it may take time to locate them for repair; and
- Maintenance activities: for example, refilling reservoirs following inspections or operational shut downs will draw additional short term flows.

While a small amount of uptake of existing allocation might be able to be accommodated within the existing capacity and servicing of the scheme (cap), new development in the area is otherwise required to be self-servicing, with onsite options for water supply (e.g. rainwater).

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<sup>2</sup> Otaki Master Plan Update – Stantec - July 2019

The current consent for the Hautere network expires in 2031. Work is currently underway to identify upgrades to the Hautere network as part of drinking water safety improvements, including exploring new bores sites at the Hautere site.

#### Paekākāriki water supply scheme

The Paekākāriki drinking water supply is a small urban supply providing water to a population of approximately 1,746 people in the town of Paekākāriki.

Filters were recently renewed alongside works preparing for construction of Transmission Gully. The scheme abstracts water from two bores before it undergoes treatment at the Paekākāriki water treatment plant. A third water source is available from Wainui Stream as an emergency backup.

Water from the treatment plant is then pumped from the treatment plant to a storage reservoir and gravity fed to the towns' reticulation.

The recently reviewed Paekākāriki Drinking Water Supply Water Safety Plan identified the average daily volume of water supplied by the scheme was 643 m<sup>3</sup>/day with a peak daily volume at 850 m<sup>3</sup>/day. The maximum consented take for the scheme is 2,160 m<sup>3</sup>/day, more than double the current maximum usage. The Paekākāriki area is currently forecast for modest growth with an increase of 98 people by 2051, and 54 additional dwellings. Based on this limited forecast for growth, there is enough capacity within the water supply scheme to cater for need to 2051 and beyond.

#### Network improvements

The last HBA identified that modelling figures across the main water networks had not accounted for the efficiencies created with the introduction of water metering in 2014, with a subsequent 26% saving from previous peak day usage. This savings in water demand provided headroom capacity to meet servicing needs across at least 10 years, without the need for significant upgrades in that timeframe.

Additional planned infrastructure investments to support increasing capacity needs across all networks for the next 30 years include:

|  |         |         |
|--|---------|---------|
| Waikanae Water treatment plant renewal stage 2 (capacity and seismic)  | \$12.3M | 2021-23 |
| Waikanae Water treatment plant renewal stage 3                         | \$6.0M  | 2023-27 |
| Drinking water safety improvement upgrades (Otaki and Hautere/Te Horo) | \$6.6M  | 2021-23 |
| Ōtaki Water Supply Storage – new reservoir                             | \$7.5M  | 2021-26 |
| Resilient water supply- network renewals                               | \$264M  | 2021-51 |
| River recharge bore upgrades   | \$3.3M  | 2032-34 |
|  | \$9.7M  | 2040-42 |
| Network upgrades for pressure, firefighting, storage and LOS           | \$10.1M | 2021-27 |
|  | \$14.6M | 2028-37 |

Other sustainability measures include purchasing land for a future dam to further future-proof the water supply for Kāpiti and provide security of supply for the next 100 years.

**Summary of the capacity of water schemes to meet forecast growth levels**

While there are some areas of current deficiency within and across Kāpiti's water supply schemes, discussion with the Infrastructure Services team and analysis of recent modelling identifies that Council's water supply schemes have sufficient capacity available, or planned to be available, to support forecast development needs across at least the next ten years.

While capacity is available beyond this period, long-term requirements will be assessed alongside the District Growth Strategy and Urban Development plan changes. These processes will not only help identify the location, shape and nature of future growth (greenfield or brownfield intensification) and be informed by current network planning, but also the scale and nature of future infrastructure requirements needed to meet long-term growth outcomes.

Further modelling of infrastructure networks is planned as part of the implementation of the District Growth Strategy and to inform the next Long-Term Plan 2024.

|                               | 3 years | 10 Years | 30 years | Comments   |
|-------------------------------|---------|----------|----------|--|
| Waikanae/Paraparaumu /Raumati | Yes     | Yes      | Yes**    | Upgrades are planned in the years 2026 to the Waikanae Trunk and Peka Peka Main in 2031 to provide additional capacity in key growth areas.  |
| Ōtaki                         | Yes+    | Yes*+    | Yes**    | *Capacity in the delivery network is available on the basis of efficiencies from water metering and smaller upgrades<br>** Further work will be undertaken as part of the development and implementation of the District Growth Strategy and District Plan changes to identify how long term growth for the district is best met. This will help inform the Long term plan 2024.<br>+ There are existing storage deficiencies that are proposed to be addressed around 2024/25 to meet the future growth in the community. |
| Te Horo/Hautere               | Yes     | Yes      | Yes**    | The Te Horo/Hautere Scheme is in a rural area and is a closed scheme with limited capacity for new connections. The new development will provide its own water supply. The Council is currently investigating more reliable water sources to improve the source water quality and implement cost-effective treatment to achieve compliance.  |
| Paekākāriki                   | Yes     | Yes      | Yes      | Capacity from the scheme is sufficient to meet the current and future population forecast for the village.   |

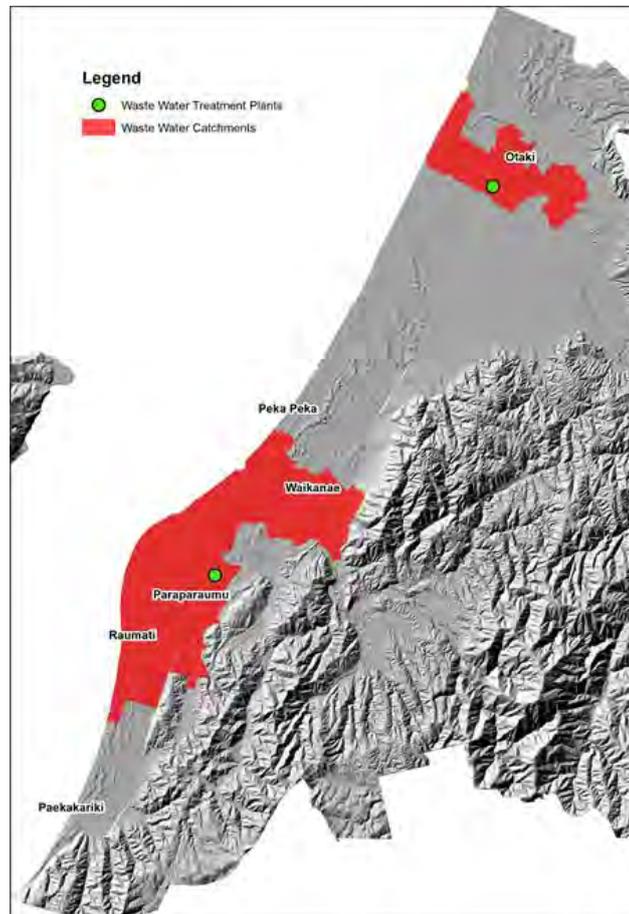
## Capacity of Kāpiti Coasts wastewater schemes

### Description of schemes

Council has two wastewater treatment schemes, one in Ōtaki and one in Paraparaumu serving Waikanae, Paraparaumu, and Raumati. These collectively serve approximately 21,000 properties and 42,000 people (92% of the Districts population).

Kāpiti Coasts wastewater network has more than 475km of wastewater pipes and 155 wastewater pumping stations. Many of the wastewater pipes were installed in the 1970s and 80s, with several now reaching middle age because the pumping stations are of varying ages and conditions.

Areas not serviced by the two wastewater schemes have onsite treatment (septic tanks). Paekākāriki, Peka Peka, and Te Horo Beach are all urban residential areas that do not have reticulated wastewater schemes. A number of private wastewater schemes also exist to service Waikanae Downs and Nikau Valley.



Picture 6: Waikanae/Paraparaumu/Raumati wastewater scheme

### Measuring network performance

The previous modelling was undertaken to assess network performance and network containment during 1, 2, 5, and 10-year average recurrence interval (ARI) storms. The level of inflow and infiltration (I/I) of stormwater into the wastewater system was a key consideration of

this assessment as wet weather reduces the available capacity of pipes and contributes to potential system overflows.

### Summary of Assessment

Following the last HBA, additional modelling was undertaken in 2020<sup>3</sup> to better understand the capacity available within the Paraparaumu/Raumati/Waikanae and Ōtaki wastewater networks to assess ongoing performance in light of higher levels of projected population growth.

Overall, this assessment identified that the wastewater network is performing well compared to other networks throughout New Zealand, with the main concerns being wet weather overflows largely caused by predicted growth and increased I/I as the networks age and become susceptible to climate change. This modelling looked at the use of storage to help maintain network capacity and address impacts from additional growth and wet weather events. An overview of the state of capacity for each of the two wastewater networks is outlined below. Stormwater improvements will also help reduce I/I.

#### Paraparaumu (including Raumati) and Waikanae

The assessment of capacity for the Paraparaumu/Raumati/Waikanae wastewater network in the previous HBA was based on modelling from 2015 and 2016, which looked at growth at that time up to test the condition and capacity of the network.

Table X below sets out the projected population for the Paraparaumu/Raumati/Waikanae modelled as part of previous assessments.

|                       | Previous population used in modelling |
|-----------------------|---------------------------------------|
| Waikanae              | 18,256 (2061)                         |
| Paraparaumu (Raumati) | 31,051 (2046)                         |

Modelling for Paraparaumu/Raumati identified one manhole (located just upstream of the Hinemoa pump station) was predicted to overflow in a one-year ARI design storm and above, and another (also located just upstream of the Hinemoa pump station) was predicted to overflow in a five-year ARI design storm.

Modelling for Waikane in both a two and 10-year ARI showed that while existing piped conveyance capacity was exceeded for storm events modelled, this was able to be contained within allocated network storage facilities. Modelling identified increased use of the ponds wastewater pump station storage with the additional growth anticipated out to 2061.

A programme of renewals and upgrades was developed as part of LTP 2018 to meet the future growth across the Paraparaumu/Raumati network at that time. This included the hydraulic capacity of the inlet works and reconfiguration of the process units to accommodate the additional population expected. Works for Waikanae included upgrades to the terminal pump station and associated completion of the rising main in 2020-21 to help reduce the need to use the storage to the same levels/extent, reducing the risk of discharge to the environment. In

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<sup>3</sup> Setting a containment standard based on a cost benefit analyses and confirming the 10 year work programme

addition, work to address I/I impacts in the area impacting stormwater spikes is a priority under the current programme of work.

The more recent modelling completed in 2020 assessed the sewerage network's capacity against the population identified for the Paraparaumu/Raumati and Waikanae areas at the time of the last HBA. This is higher than that previously modelled in 2015/16, with a population of 32,269 for Paraparaumu/Raumati and 21,845 for Waikanae by 2043. The modelling identified a number of issue areas where overflows were predicted based on future impacts of growth, I/I and climate change factors.

|         | Number of issue areas |        |
|---------|-----------------------|--------|
|         | Existing              | Future |
| 1 Year  | 0                     | 0      |
| 2 Year  | 0                     | 1      |
| 5 Year  | 1                     | 1      |
| 10 Year | 1                     | 4      |

A number of additional capital works and upgrades were identified to address these issue areas, including additional capacity connections and storage capacity along with the network. Key projects and works are summarised further under network improvements.

#### Ōtaki

A key finding of HBA 2019 was the increasing impact projected growth posed for the Otaki wastewater network capacity. This finding reflected the fact that Otaki has had a reversal in its growth predictions, with the area previously seen as static or declining. In contrast, Otaki is now projected for significant long-term growth.

At that time, Otaki was projected to grow a population of 6,520 by 2035. While this level of growth was seen to erode the available network capacity, there was considered to be sufficient storage identified within the secondary lagoons and the storm buffer ponds to store excess flow during extended periods of wet weather (e.g. a typical wet month). Further work was acknowledged to identify the exact locations and extent of any overflows from the network with the projected growth and also to review the Ōtaki wastewater treatment plant process capacity and that of the associated discharge consent.

That further modelling of the network and overflows was recently completed. This modelling used a higher population projection of 10,426 by 2043. Modelling of this additional growth identified a number of additional overflows across the system with a number of additional areas being affected more frequently with lower sized ARI events as the capacity of the system is filled. The study identified a number of pipe upgrades and additional storage capacity to be included on the network to address these future capacity issues.

|         | Number of issue areas |        |
|---------|-----------------------|--------|
|         | Existing              | Future |
| 1 Year  | 0                     | 1      |
| 2 Year  | 1                     | 5      |
| 5 Year  | 1                     | 7      |
| 10 Year | 5                     | 8      |

A condition and capacity report<sup>4</sup> has also been completed for the Otaki Wastewater Treatment Plan (WWTP) following the last HBA. This was to understand how the plant would perform over 30 years to 2047 to meet current consent conditions and to cope with the expected population growth.

The Otaki WWTP is designed to serve a population equivalent of 12,600 at an average dry flow of up to 25000m<sup>3</sup>/day. The updated capacity used a population of 7,549 by 2047 as its baseline. It also included a lower (0.2%) and higher (2%) growth projection as a comparison to inform capacity modelling.

The Otaki WWTP provides screening, primary treatment in an aerated lagoon, clarification and secondary treatment via two oxidation ponds. Effluent from the oxidation ponds is discharged onto the Land Disposal Treatment Area for final disposal.

The study identified that the increase in growth would have a range of impacts across these component parts of the plant. The most pressing was the need for new inlet screens and aeration equipment to be upgraded in the short term, using two of the three current effluent pumps able to support capacity until at least 2029. The need for extra storage to meet wet weather flows and the effectiveness of clarifiers were longer-term issues identified to be addressed through the next consent renewal in 2036.

A number of improvements and upgrades were identified to address potential issues for both the Otaki wastewater network and the treatment plant. These are summarised further below. After completing the proposed upgrade works, a further study for the Otaki WWTP is also due in 2022, including a review of effluent field performance. These studies are also intended to assist in developing upgrade works as per growth projected and future resource consent renewal.

#### Network improvements

The assessment of higher levels of growth has identified a range of works to improve the performance and capacity of the wastewater network. As well as a districtwide programme of work to understand and address inflow and infiltration ( I/I) impacts on network capacity, a number of projects have been identified to support and expand the ongoing capacity of the district wastewater networks and WWTPs. These works include those identified through previous modelling studies and includes:

|  |         |         |
|--|---------|---------|
| Wastewater pump station upgrades                   | \$19.4M | 2031-51 |
| Network upgrades                                   | \$1.6M  | 2024-28 |
| Waikanae duplicate rising main                     | \$1.6M  | 2021-23 |
| Network renewals                                   | \$131M  | 2021-51 |
| Paraparaumu Wastewater Treatment Plant Inlet Works | \$2.6M  | 2021-25 |
| WWTP renewals                                      | \$37.3M | 2021-51 |
| Ōtaki WWTP renewals                                | \$17.0M | 2021-51 |
| Ponds desludging                                   | \$1.2M  | 2021-22 |

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<sup>4</sup> Ōtaki Wastewater Treatment Plant Condition and Capacity Report – Cardno - June 2020

### Summary of the capacity of wastewater schemes to meet forecast growth levels

Discussion with the Infrastructure Services team and analysis of the recent modelling identifies that Council's wastewater schemes have sufficient capacity available, or planned to be available, to support projected growth and development needs over the short and medium-term.

While capacity is available beyond this period, long-term requirements will be assessed alongside the District Growth Strategy and Urban Development plan changes. These review processes will help identify the location, shape and nature of future growth (greenfield or brownfield intensification) and be informed by current network planning and the scale and nature of future infrastructure requirements needed to meet long-term growth outcomes.

Further modelling of infrastructure networks is planned as part of the implementation of the District Growth Strategy and to inform the next Long-Term Plan 2024.

|                               | 3 years | 10 Years | 30 years | Comments  |
|-------------------------------|---------|----------|----------|---|
| Paraparaumu/Waikanae /Raumati | Yes     | Yes*     | Yes**    | *Key renewals and upgrades are planned to the Paraparaumu and Otaki wastewater treatment plant and networks that will ensure and expand its ongoing capacity to meet medium term needs/growth.<br><br>**Further work will be undertaken as part of the development and implementation of the District Growth Strategy and District Plan changes to identify how long term growth for the district is best met. This will help inform the Long term plan 2024. |
| Ōtaki                         | Yes     | Yes*     | Yes**    |   |

### Capacity of Kāpiti Coasts Stormwater network

#### Description of network

The Council provides stormwater services in the urban areas of the District (Ōtaki, Waikanae, Paraparaumu/Raumati and Paekākāriki) to protect property from flooding and improve the quality of waterways . Most of the urban areas in the district receive stormwater protection through a variety of means, including reticulated system (pipes), kerb discharge, a system of soak pits, retention ponds, and overland flow paths. Overall 22,784 properties are serviced by public stormwater systems.

The main characteristics of the urban systems are:

- coastal areas where stormwater is generally discharged to the sea;

- southern peat and dune areas that do not drain to any water course and are served by pump stations;
- Paraparaumu and Waikanae open water courses with smaller branches that are piped and/or open;
- varying design levels across the District depending on when the stormwater infrastructure was installed;
- significant barriers to east/west flow;
- vulnerability to key climate change factors (for example, sea-level rise and storm surges, increasing rainfall and storm events);
- Nearly 50% of the piped reticulation system is exceeded in a one in 10-year event;
- 110km of open waterways forming part of the drainage network;
- Nearly 250 ponds form part of, or discharge into, the stormwater network
- 30% of urban properties contributing to stormwater rates have a flood designation registered on the property in the District Plan for a 1:100-year event.

In the past, stormwater asset condition and capacity assessments were typically undertaken on an ad-hoc basis following a flooding event. This limited the Council's understanding of the condition of assets across the network.

Subsequent to the May 2015 flood event, Council has undertaken more comprehensive condition and capacity assessments across the network. These assessments are staged over several years.

| Area        | Length of piped network  | Length of open waterways maintained by Council | Number of stormwater pump stations |
|-------------|--------------------------|--|------------------------------------|
| Paraparaumu | 130km                    | 31km   | 11                                 |
| Waikanae    | 48km                     | 8km  | 4                                  |
| Ōtaki       | 28km                     | 0.9km  | 2                                  |
| Paekākāriki | 5.4km                    | 0.65km   | 0                                  |
| Te Horo     | 0.18km (sump leads only) | 0km  | 0                                  |

**Picture X: Ōtaki stormwater system**



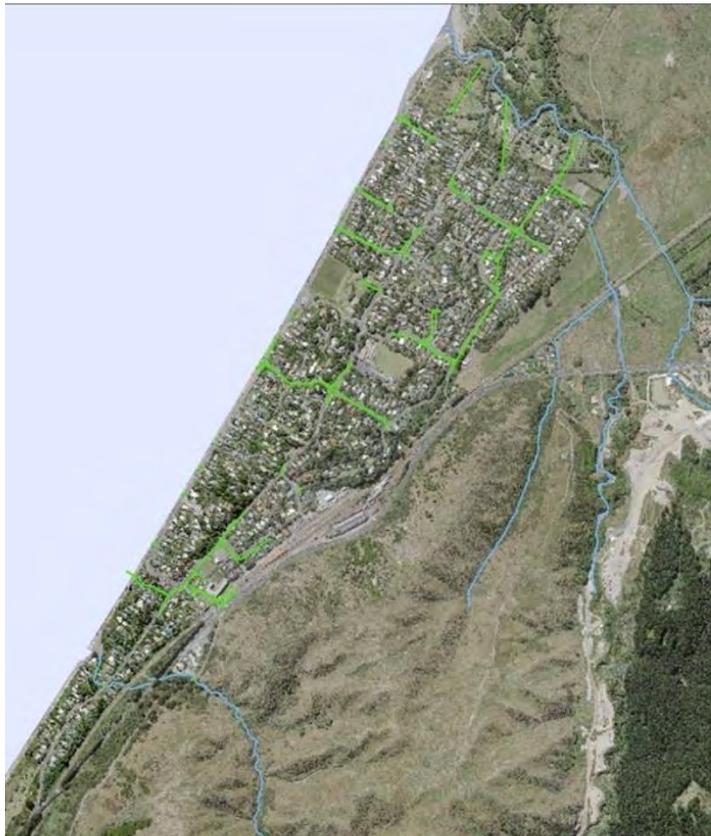
**Picture X: Waikanae stormwater system**



**Picture X: Paraparaumu/Raumati stormwater system**



**Picture X: Paekākāriki stormwater system**



### **Measuring network performance**

For existing dwellings, the main performance measure used for measuring provision and capacity for stormwater is the prevention of flooding of habitable floor space up to a one in 50-year event. All new developments are required to prevent flooding of habitable floor space up to a one in 100-year event, including the predicted impacts of climate change.

For this assessment, the water quality effects from stormwater are not considered in the level of service. Current practice is to manage the stormwater quality in accordance with the KCDC's stormwater discharge Consent granted by the Regional Council.

However, in future, the management of stormwater to achieve improved water quality will be needed to meet the new requirements in the Proposed Natural Resource Management Plan for the Wellington Region.

### **Summary of Assessment**

Out of the 22,784 urban properties contributing stormwater rates, nearly 6,500 (This figure is based on the modelling work completed 10 years ago. Once the current modelling work is completed we will have an updated number) have a flood designation identified on the property in the District Plan's flood hazard maps for a one in 100 year rain event. Nearly 50% of the current infrastructure exceeds capacity in events smaller than a one in 10 year event.

In the 2018 Long Term Plan, Council committed \$250M (In 2017 dollars and the inflated figure was \$489M) to a programme of stormwater works [240 projects over 45 years], including

upgrades to the stormwater network to a level that reduces dwelling inundation in events up to the one in 50 year event. The initial focus is on properties that are susceptible to habitable floor flooding. Most of the 2018 Long Term Plan projects (other than projects which have been completed) are continued in the 2021 Long Term Plan. One of the major changes is the duration of the programme which has been shortened from 45 years to 37 years under the 2021 Long Term Plan.

Climate change is also a key consideration in stormwater management. The main impacts of climate change include increases in the frequency of storm events, extremes in weather including droughts, coupled with sea level and river level rise. These impacts are taken into account in a number of ways, but predominantly through design and construction standards, identification of hazards, redundancy and mitigation (such as insurance) over the life of the Long Term Plan and Infrastructure Strategy.

A key consideration in preventing adverse effects of climate change and natural hazards on the storm water network is through careful planning of future development areas so that new communities and supporting infrastructure are not located in areas at significant risk from hazards.

To ensure future flooding issues are not exacerbated, all new development within the District is required to mimic its predevelopment flow regime in the range of design storm events, from one in two-year event, up to the one in 100 year event. This involves using a range of measures to ensure new development remains hydraulically neutral; including, but not limited to: detention or disposal areas, tanks, and limits to if or how areas susceptible to flooding and overland flows are developed (including earthworks).

New development is also required to ensure any loss of flood storage is mitigated on the subject site and that such loss does not adversely impact another property.

These requirements are key determinants of where and how land is appropriately developed, and as they vary by location can often only be considered on a site-by-site basis. Where a site is large enough it may be easy to accommodate stormwater requirements onsite. Smaller sites, including infill sites, may have more limited options. The feasibility of some sites to be developed are, therefore, influenced by site-specific considerations such as location, size, and the viability of the options available.

#### Network improvements

To address capacity and condition issues Council established a work programme under the 2018 Long Term Plan with 240 physical works projects. This programme has been updated for the 2021 Long Term Plan to reflect the completion of 45 projects and the introduction and removal of a number of projects. This now sees a programme of 227 projects being delivered over a 37 year period (rather than 45 years as outlined in the 2018 LTP).

The work program identified in the LTP provides capacity to address existing deficiencies in the storm water network, as well as providing additional capacity to meet future anticipated development and capacity to help offset situations where ground conditions prevent complete water neutrality from being achieved.

A summary of projects by the category of works, investment amount and timing is provided in the table below.

| Category                     | No of projects | Total investment for 37 years (in 2020 dollars) | Years of implementation                |
|------------------------------|----------------|---|--|
| Habitable floor flooding     | 23             | \$59.5M   | Year 1-20                              |
| Commercial Building flooding | 03             | \$8.5M  | Year 1-17                              |
| Garage flooding              | 18             | \$36.2M   | Year 1-27                              |
| Street and Section flooding  | 60             | \$35M   | Year1-37                               |
| Asset Renewals               | 68             | \$25M   | Year 1-30                              |
| Minor capital works          | 34             | \$13.6M   | Year 1-30                              |
| Downstream constraints       | 21             | \$52.8M   | Year 1-37                              |
| <b>Total</b>                 | <b>227</b>     | <b>\$230.6M</b>                                 | <b>Year 1-6 investment<br/>\$36.8M</b> |

In addition to the work programme for capital works, Council is undertaking a range of supporting tasks. These include:

- Open drain/stream maintenance
- Updating Stormwater management strategy and introducing a stormwater bylaw
- Rebuild Council's flood hazard models to reflect recent development which has occurred within the District and taking the opportunity to improve models through access to updated software and information
- Community education on maintaining private stormwater assets.

The Council's hazard maps combine the model results from both Greater Wellington Regional Council and Kāpiti Coast District Council. Greater Wellington Regional Council is responsible for the modelling and maintenance associated with several of the major river systems in the District (principally the Waikanae and Ōtaki Rivers).

#### **Summary of stormwater network capacity to meet forecast growth levels**

Analysis and modelling from the Council's Stormwater team has indicated that areas of existing development are currently affected by flooding due to the current capacity of infrastructure being exceeded. Council has committed budget to undertake works to redress this issue. This work will not eliminate flooding in the one in 100-year event.

Once all the proposed stormwater upgrade and renewal projects are completed, it is considered that there is sufficient capacity available to meet foreseeable future growth for the district based on the requirements for all new development to meet and or mitigate stormwater requirements as part of requirements for hydraulic neutrality. This includes improving the quality of waterways and providing compensatory storage for any displaced flood water. However, this report does not model the overall feasibility or impact of this requirement on development.

However, while a general increase in population across the district is expected to have only a minor effect on the demand for stormwater services, more intensive developments in existing

residential centres, commercial and industrial areas are more likely to create heavier demands for stormwater services – many of which are already affected by a flood designation.

In light of recent higher growth projections and NPS-UD requirements to enable intensification of key areas, there is a need to better understand the extent to which more intensive population growth (above that previously anticipated) can be accommodated around existing urban centres, especially those currently affected by flooding.

Further work to understand the potential to meet increased growth, including any physical or environmental constraints and network solutions, will be undertaken to support the Urban Development Plan Change and to inform the next HBA and LTP.

| Location                | 3 years | 10 years | 37years | Comments  |
|-------------------------|---------|----------|---------|---|
| Paekākāriki             | Yes     | Yes*     | Yes*    | Key renewals and under capacity network upgrades are planned, including town centre pipe upgrades, asset upgrades, Tilley Road upgrade and enhancement of Wainui Stream   |
| Paraparaumu and Raumati | Yes     | Yes*     | Yes*    | Key renewals and upgrades are planned, including Kena Kena catchment upgrade and pump station, Moa Road flood wall, several bridge upgrades on Wharemauku and Mazengarb Stream, Wharemauku stream day lighting, Amohia upgrade, under capacity network upgrades in various locations. |
| Waikanae                | Yes     | Yes*     | Yes*    | Key renewals and upgrades are planned, including Charmwood pump station and Richmond Avenue upgrade, Karariki Stream network upgrade, Waikanae lagoon and undercapacity network upgrades in various locations.  |
| Ōtaki                   | Yes     | Yes*     | Yes*    | Key renewals and upgrades including Moana stage 2, Mangapouri culvert upgrade (joint project with GWRC), undercapacity network upgrades in various locations.   |

\*subject to further work to understand the impact and scale of solutions available o meet NPS-UD requirements for intensification.

## Assessing the capacity of Kāpiti Coast's transport network

### Description of network

Transport plays a key role in connecting communities, businesses, and markets. It is important that land transport enables housing and economic development within the District and that efficient links between production and communities are strengthened.

The wider transport network for Kāpiti is defined by a number of key elements. This includes

- State Highway 1, which runs through the middle of the District, joining key settlements to one another, but also to Wellington to the south and Levin to the north. The new expressway improves connectivity within communities. While the Old State Highway 1

provided transport linkages within and outside Kāpiti it bi-sected our town centres, the Expressway now provides opportunities to improve connectivity at these locations;

- The completion of Transmission Gully and the Peka Peka to Ōtaki Expressway projects are expected to further increase accessibility across the District in the short term, whilst the Ōtaki to North Levin project will provide increased connectivity to the North of the District in future;
- Commuter rail, which supports connectivity across Waikanae, Paraparaumu, and Paekākāriki, south to Wellington and the Capital Connect service from Levin, through Ōtaki to Wellington;
- Bus services connecting communities and to the railway stations, primarily in Paraparaumu and Waikanae which supports mode shift and can reduce pressure on commuter parking;
- Park and Ride at the railway stations;
- The Stride and Ride initiative has made it easier to walk and cycle around the District using the cycle, walkways, and bridleway network. These include shared path improvements between Paekākāriki and Waikanae, enhanced connections to and from our town centres and the Mackays to Peka Peka shared pathway, and links along the Peka Peka to Ōtaki Expressway.

The local roading network provides an important layer to the District's transport network, providing access and connecting locations in and across the District. Kāpiti Coast's local roading network is made up of 414 kilometres of sealed roads. 245 kilometres of this is in urban areas and 169 kilometres is in rural areas. As well as roads, Kāpiti has a wide array of supporting roading infrastructure, including footpaths, shared paths, kerb and channel, bridges, and streetlights. The table below provides an overview of current roading assets.

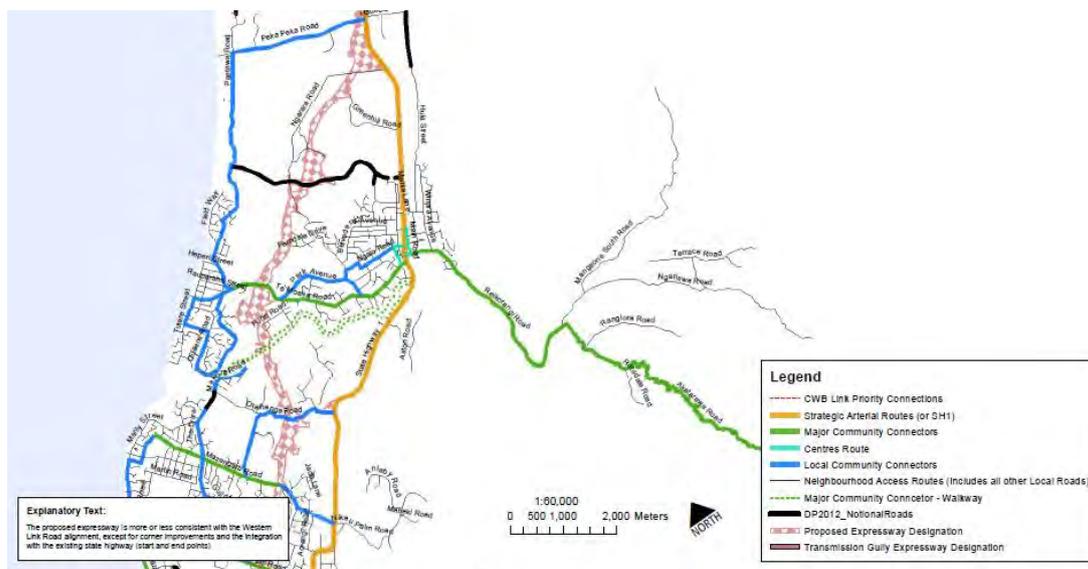
#### Summary of Kāpiti Coast's local roading assets

| Asset              | Asset component  |
|--------------------|--|
| Pedestrian network | 490 kilometres of footpaths and shared paths   |
|                    | 379.26 kilometres of berms   |
|                    | 17 pedestrian islands  |
|                    | 11 raised pedestrian crossings   |
| Safety             | 190 railings equating to 8,080 metres (including guard rails, hand rails, and sight rails) |
|                    | 22 speed humps   |
| Water management   | 954 culverts equating to 14814.5 metres  |
|                    | 8,438 drainage elements (including manholes, soakpits, sumps, etc).                        |
|                    | Surface water channels (including kerb and channel, dish channel, and mountable kerb)      |
|                    | 5,347 sump leads equal to 46,237 metres  |
| Vehicle network    | 13.3 kilometres of unsealed roads (all rural)  |
|                    | 414 kilometres sealed roads (245 kilometres urban and 169 kilometres rural)                |
|                    | 278 retaining walls equating to 7.14 kilometres  |
|                    | 55 bridges and bridge culverts   |
| Traffic service    | 16 sets of traffic signals (some of which are owned/managed by Waka Kotahi)                |
|                    | 4,025 line/sign markings equating to 482.4 kilometres                                      |

|                  |  |
|------------------|--|
|                  | 312 traffic islands (including kerb extension, median, raised platform, splitter, and other) |
|                  | 35 traffic islands (rotary)  |
|                  | 5,825 signs  |
|                  | 5,382 street lights  |
| Parking          | 54,038 square metres of formed car parks   |
| Street furniture | 154 benches  |

The Operative District Plan (ODP) contains a hierarchy for planning purposes. The ODP hierarchy can be seen in the map below and includes strategic arterial routes (such as State Highway 1), major community connectors (such as Te Moana Road and Kāpiti Road), and local community connectors such as Otaihangā Road and local roads. The hierarchy is described in the Sustainable Transport Strategy but has been developed based on function and the level of traffic using these routes. The One Road Network Classification (ONRC) also identifies a hierarchy of roads based on national standards. The ONRC is being replaced by the One Network Framework (ONF). The ONF looks beyond traffic numbers and considers people and movement of all modes in determining a classification. The transport network in Kapiti serves to help support the movement and connectivity of people and goods, and the ONF is important as it supports funding for transport schemes.

Map of Kapiti Coast's central existing network hierarchy below includes Notional Roads that have been identified as connections that support growth and future development in Kāpiti.



This report provides an assessment of the local transport network and its ability to support forecast growth. The map above, while identifying the existing network hierarchy, also shows notional roads that are identified in the ODP as being necessary to support growth. While aspects and connectivity to the State Highway and Public Transport Networks are mentioned where relevant, they are assessed separately as part of regional assessments undertaken by Waka Kotahi (NZTA) and Greater Wellington Regional Council.

### Measuring network performance

The Kāpiti Coast District Council uses a range of indicators to monitor the performance of the roading network. This includes indicators on access and transport activity required under the

Local Government Act 2002. When fully implemented, the One Network Framework will also provide for a consistent performance measures. So far, work has focussed on categorising our network as it currently operates, but as this work continues, it will focus more on how places and spaces can operate in the future. This will help achieve better integration between transport and land use and can be used to shape future development.

In considering how our network performs, the following provides an overview of some of the key challenges in Kāpiti:

- Travel time and reliability are issues on some of our local road networks, such as on our major community connectors, which form an important part of our network in moving people and goods. Our performance measures have identified that in 2019/20, 80% of our residents considered that the existing transport system allows easy movement around the District, which increased from 73% in 2018/19. However, reliance on the private car and poor connectivity, combined with population growth and economic development, is placing pressure on our network and causing congestion. Congestion is a problem in areas such as Kāpiti Road, which experiences traffic levels in excess of 27,000 vehicles per day, and at Elizabeth Street/Old State Highway 1 in Waikanae. More detail on how we intend to address this is identified in the Paraparaumu and Waikanae sections below.
- With regards to network resilience, increasing occurrences of severe weather events are damaging local road infrastructure, and our coastal roads are vulnerable to sea-level rise and erosion. Climate change is also increasing flooding and groundwater levels as well as creating greater storm intensity and warmer temperatures. In setting our funding priorities, we need to ensure that we plan for a more resilient network that prevents damage to the environment, addresses climate changes, and can adapt to the effects of these events.
- With regards to accessibility, some of our network is not available for 50MAX vehicles, and our ageing population can find those travel choices are more limited. Whilst challenges such as access to public transport services, pedestrian and cycle connectivity, a lack of integration between modes, poor facilities, parking, and road safety affect all road users, the issues can be more acute for older people and the mobility impaired. One issue is the ability of our network to accommodate mobility scooters and road safety. These challenges can affect mode choice and the ability to encourage alternatives to the private car.
- Affordability is also a concern, as demographics can influence travel patterns and mode choice, and infrastructure investment will need to be made within the context of funding constraints, which is being impacted by COVID.
- Parking has been, and will continue to be, an issue particular to our major urban areas of Paraparaumu and Waikanae and is as a result of land use (including out of centre developments with associated parking facilities), mode choice, accessibility, and commuter parking. These problems, particularly around the town centres and railway stations, include the insufficient capacity to serve business and commuting needs, spill-over parking into residential areas, and providing the right balance of long term parking (e.g., to serve commuting needs) and short term parking (to enable turnover of spaces for local businesses). These issues could become increasingly worse as a result of

increased development across the District without a management strategy and changes to travel modes.

- Amenity is where we need to increase our focus. Decisions on land use and transport can affect amenity, attractiveness, mode choice and safety, and the town centres needs to capitalise on opportunities provided by the Roads of National Significance (RONS) projects) such as Mackays to Peka Peka and Peka Peka to Ōtaki . The performance measures shown in the table below identify that we have not met some of our targets, which contribute to the objective of our network being affordable and reliable, and users can easily get around the district by their preferred means.

#### Level of Service: Performance Measures

| Measure   | Target                                      | Result                       |
|---|---|------------------------------|
| Percentage of the sealed local road network that is resurfaced  | 5% (expressed as kilometres)                | 4.5 was achieved in 2019/20. |
| Residents (%) who are satisfied with the condition of roads     | 70%   | 70% was achieved in 2019/20. |
| Roads that meet smooth roads standards                          | Overall smooth travel exposure is above 85% | 90% achieved in 2019/20      |
| Residents (%) who are satisfied with the condition of footpaths | 65%   | 77% achieved in 2019/20.     |

Turning to safety, when compared to our Council peer group, Kāpiti has higher personal risk on secondary roads and the second highest risk for arterial roads. Our accident statistics show that eight serious injury or fatal crashes were recorded in 2019/20 giving a five year rolling average of 10. Performance measures have also shown that 83.5% of residents were satisfied with street lighting, which dropped from the 2016/17 result of 86%. Lighting is important as it can contribute to a sense of personal safety, which can be a decision making factor in mode choice.

While these are measures of existing performance, there is also a need to ensure that they are not exacerbated by growth.

#### Summary of Assessment

Council aims to enhance community connectedness through the creation of a well-planned physical transport system that allows for the reliable, efficient, and safe movement of people and goods.

As can be seen from the above performance measures, there are some areas where we continue to need to prioritise our infrastructure spending and a need to ensure that new developments contribute towards solutions rather than add to existing pressures.

Our improvement projects are based on the priorities established in our 30-year programme, and Kāpiti Coast District Council has developed a response to our challenges based on a number of key elements:

- Providing additional capacity;
- Encouraging mode shift;

- Improving mode choice and connectivity;
- Supporting growth;
- Maintaining and making the best use of our existing network; and
- Managing the safety of our roads.

The Long Term Plan identifies transport spending including revocation projects, the Cycleway Walkway Bridleway Network, footpaths and footpath renewals, bridge repairs and minor safety improvements.

The most significant level of infrastructure provision in the Kāpiti District is the RONS projects being led by the NZTA. As well as increasing capacity within and across our District, the Expressway also provides Council with the opportunity to improve the current road network, including the soon-to-be revoked State Highway 1. Additionally, Council has also identified investment in new roading infrastructure, and the details of this are identified in the sections relating to specific locations below.

However, balancing the ability for Council to maintain the current roading network and fund renewals while meeting future growth needs, is an ongoing challenge, given the size and scale of the assets and limited funding sources, and increasing capacity is not sustainable in the long-term. Neither does it wholly address other key areas of performance such as resilience, amenity, accessibility and safety.

Opportunities for the modal shift are also required as part of network improvements and individual developments. This includes the use and linkages of cycleways, walkways, opportunities to connect to public transport, and working with the Regional Council and Central Government to seek funding opportunities to support growth, improved public transport and infrastructure delivery. This is particularly important when considering 31% of our working population commutes outside of the District, and there is a high reliance on private cars. It creates the need for good access and connectivity to the State Highway and public transport network and we will continue to work with our partners to monitor demand, seek improvements to public transport, and make the most of opportunities where they arise, such as improvements relating to the revocation of State Highway 1 and train station access. Both capacity improvements and opportunities to encourage mode shift will help support a resilient transport network as well as improve safety and accessibility. Resilience of our network not only supports connectivity, but also ensures a quick recovery or limits damage after an event through a high level of construction standards for both Council and developer led / funded infrastructure.

Addressing climate change will play a key part in transport investment and decision making, including measures to support mode shift, giving effect to standards and policies, and taking enforcement action where appropriate. Principles of avoiding, remedying or mitigating effects on the environment, giving effect to environmental standards, and advocating for the right funding and signals from Central Government will also be fundamental to sustainable growth. Council identifies the focus areas for transport in the Sustainable Transport Strategy.

To address issues relating to amenity our renewal and upgrades programme, that is co-funded by the NZTA, will continue to be a spending priority and we will gradually increase the footpath budget to improve on current levels of service measured by resident satisfaction.

With regards to safety, Council is currently undertaking a number of initiatives to support safety for all road users, give effect to the Government Policy Statement, and address communities

identified at risk. This includes Districtwide speed limit review and safety interventions on roads that NZTA have identified as being the top 10% of roads that require improvement to address high risks to road users. These are undertaken in accordance with NZTA's requirements. We have a programme of localised road safety schemes such as new roundabouts on major community connectors and pedestrian crossings. In addition, the revocation of State Highway 1 provides us with the opportunity to implement schemes that will improve high-risk junctions and connectivity, accessibility, and safety within our town centres for all road users.

We work closely with the community through education to reduce the number of road accidents in the region and reduce the social cost of damage to people, vehicles, and property. We run a number of road safety projects and activities involving primary and secondary schools and a range of community groups. The LED lighting conversion will also address safety and performance measures relating to residents' satisfaction of lighting, as well as lead to significant energy cost savings and decrease carbon emissions from this source by more than half.

### Future Development

Whilst our Long Term Plan identifies Council spending, local transport infrastructure to support new development is also provided by each new development on an 'as needed' basis through master planning, resource consent, and development contribution processes. In seeking to achieve this Council will need to deliver a co-ordinated approach to development through structure planning master planning, and strong subdivision and development requirements to avoid piecemeal development that creates cumulative issues on the network.

The National Policy Statement on Urban Development has also changed the landscape with regards to development, particularly around centres and rapid transit stops, and the removal of parking standards from District Plans. The effects of this on the transport network will need to be identified and addressed through Integrated Transport Assessments the District Growth Strategy and future plan changes and structure plans.

Funds from rates, development contributions, and NZTA subsidies are used to help address network maintenance and renewals such as safety of roads and structures, but two issues relate more specifically to new developments' impact on the network. This includes congestion, which is a problem impacting Paraparaumu and Waikanae, and parking; particularly around our town centres and transport hubs, which requires ongoing management. While congestion will be addressed through increased capacity, development led schemes, and projects to encourage mode shift, Council has also developed parking management strategies for Paraparaumu and Waikanae. Some of the parking issues in Waikanae are as a result of limited public transport services in the Ōtaki area, and we continue to perform an advocacy role and work with our partners to seek improved public transport services.

Looking at our network in more detail, an assessment of the local roading network and pressures across the key urban areas of Paraparaumu, Waikanae, Ōtaki, and Paekākāriki is outlined below. The revocation process to vest current State Highway 1 in Council has enabled Council to think more innovatively about how our town centres should look, feel, and operate in the future, supporting future growth.

The Council will continue to work with Greater Wellington Regional Council and New Zealand Transport Agency to ensure that schemes of significance are identified and funding secured in the Regional Land Transport Plan and National Land Transport Programme. We note that the Greater Wellington Regional Council have also identified the role of public transport in responding to growth, and we will work with them to ensure the needs of Kāpiti are met. We

are generally supportive of the approach to public transport provision and have been seeking bus and rail improvements in our District, particularly in Otāki. We note the layered hierarchy of services as being core routes, local routes, and targeted services and want to ensure that improvements to core routes are not at the expense of local routes. In addition, in planning new developments we will take account of the public transport planning and the needs of public transport through appropriate design.

### Paraparaumu

While the completion of the McKay's to Peka Peka Expressway has improved capacity and helped reduce traffic levels across the wider network, it has not reduced congestion on Kāpiti Road, with inter-peak periods not varying significantly to the morning and afternoon peak. Poor east-west connections within Paraparaumu town centre and adjacent areas are a key contributor to congestion. Based on current conditions, future plans for anticipated growth and intensification around the Paraparaumu Metropolitan Centre, along with future business development around Te Roto Drive and the Kāpiti Airport, would see congestion along Kāpiti Road and Rimu Road worsen.

The East West Connectors project has been identified as a significant project in both the Kāpiti Coast District Council Long Term Plan and the Regional Land Transport Plan. The project includes a number of proposals including providing a connection between Ihakara Street and Arawhata Road, linking Ihakara Street to the north-west, and improving access to town centre development. This will help address current issues such as congestion on Kāpiti Road and support economic and residential growth in the town centre and airport areas.

In combination with parking restrictions (such as time restrictions) to manage demand and enforcement, the number of existing car parking spaces available have gone some way to enable shopping, worker, and commuter parking to park safely in the Paraparaumu central business area. However, there are parking pressures from worker and commuter parking spilling into residential areas and creating problems around the railway station. We will need to consider how this will be addressed, particularly in light of the National Policy Statement on Urban Development in assessing development proposals and transport investment, as well as working with our partners to look at options to address these issues in the future.

In addition, the proximity for intensification of residential development to the town centre and railway station is expected to support plans for modal shift. Plans are currently being developed for improved access to the railway station in Paraparaumu for public transport, pedestrians, and cyclists, and this includes an at-grade crossing, amenity improvements, and integrating bus and train services. Other schemes include:

- improved connections for Coastlands and the civic precinct;
- upgrade of Kāpiti Lights (completed)
- assessment of junctions along Kāpiti Road and possible improvements;
- improvements to Iver Trask Place (completed) to improve pedestrian activity and amenity;
- Rimu Road streetscaping to improve the pedestrian environment and amenity; and
- the Paraparaumu town centre link road.

### Waikanae

Waikanae is expecting the largest amount of growth across the District, largely associated with the Ngarara and Waikanae North developments, but also as development occurs along Waikanae East (along the bottom of the Hemi Matanga Range) and in rural Reikorangi, linked to the back of Waikanae via the Akatarawa Road.

Growth and accessibility across the Ngarara and Waikanae North developments are supported by a proposed road in the ODP. The proposed road will be developed and vested as development progresses and provide a second link between Waikanae Beach, new areas for development, the Waikanae town centre, and Old State Highway 1.

Waikanae currently experiences congestion where Elizabeth Street crosses the Old State Highway junction, which experiences congestion with traffic giving way at lights and a train crossing. A notional link road between Hadfield Road and Huia Street has been identified in the ODP and is being investigated as an alternative route to relieve pressure on the Elizabeth Street junction.

Waikanae town centre has also been experiencing parking pressures, particularly with demand from train commuters. The Greater Wellington Regional Council has constructed a large new commuter car park in Waikanae town centre to add to the Park and Ride provision along the Kāpiti Line. This has helped relieve the parking pressures around the Waikanae train station, but has not completely resolved parking issues in the area. As a result, we will work with our partners to look at options to address these issues in the future.

In Waikanae, the Council has a number of schemes planned or underway to deliver a viable and attractive roading and access system that can accommodate the impact of projected passenger transport and growth, vehicle, pedestrian and cycle movements and enhances the Waikanae town centre. This includes:

- improved connections to the railway crossing (such as a new pedestrian crossing);
- upgrades to car parking at Mahara Place;
- improved links between the Whakarongotai Marae and the town centre;
- upgrade of the Te Moana intersection and connection to Waikanae River;
- improvements to the Ngaio Road streetscape;
- Minor road realignments;
- Revocation of State Highway 1; and
- Te Moana Road improvements.

### Ōtaki

The Peka Peka to Ōtaki expressway is currently in construction and expected to be completed in 2021. The new expressway will provide further challenges and opportunities to Ōtaki. The expressway will provide better access in and around the State Highway network. Roading links to support growth in Ōtaki North are currently being explored along with an assessment of the impact on the railway precinct and the town centre of the Peka Peka to Ōtaki Project. We continue to work with local interest groups to look at schemes that may be implemented in the future.

It was also recently announced that a business case looking at the extending of Wellingtons commuter network to Levin will be undertaken in the next year as part of the Government's inaugural rail network investment programme. Extending electrification of commuter trains to Otaki has long been advocated for by Council and the community and is a key determinant of future growth and how transport and land use planning is integrated in the area.

### Paekākāriki

Paekākāriki local roading network has ongoing safety considerations where it adjoins the state highway network. The upcoming completion of Transmission Gully is expected to result in a significant reduction in the amount of traffic passing through the interchange. This, along with

the revocation of State Highway 1, provides the opportunity for these safety issues to be addressed. The impacts of future development would need to be considered in the context of current pressures, such as safety and issues, relating to the railway line.

### Network improvements

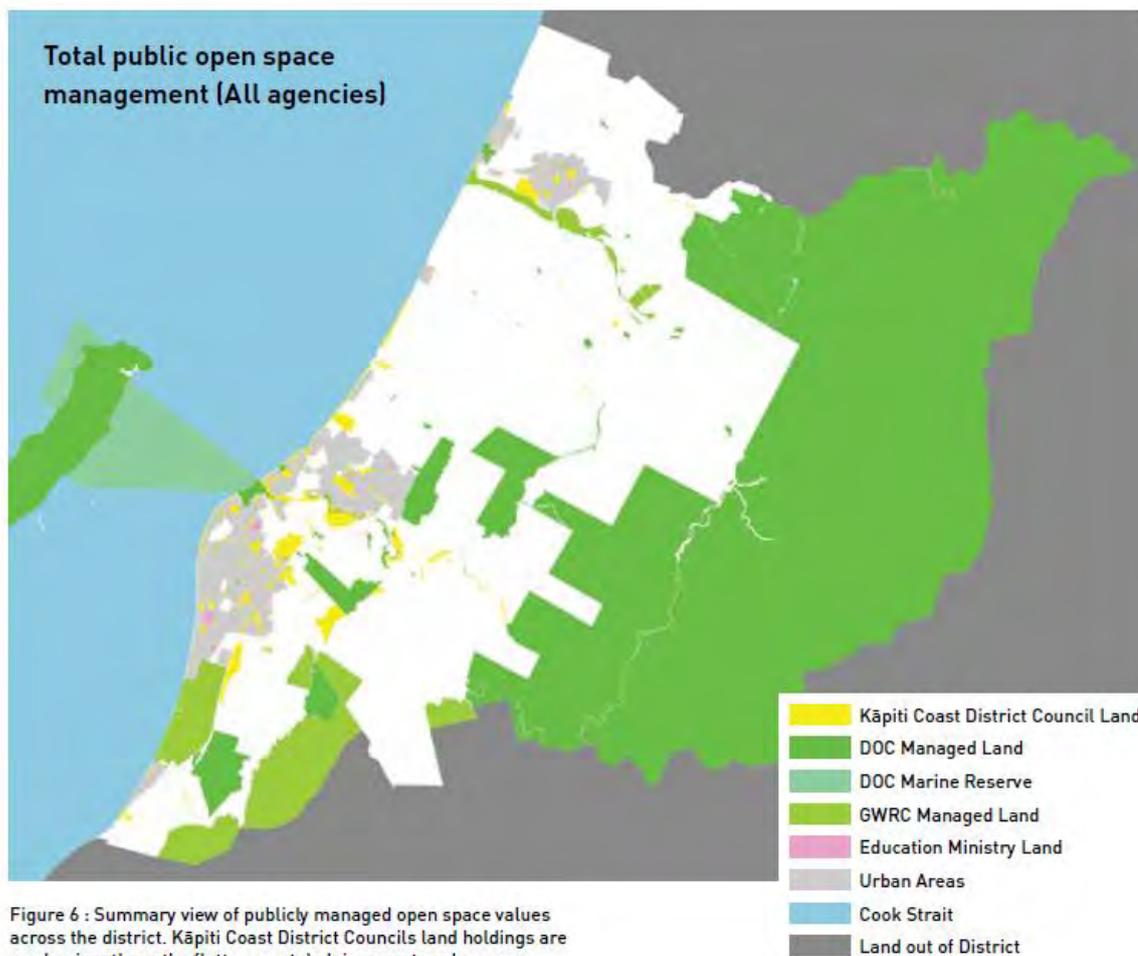
As discussed above a number of specific transport projects that are planned that will enable future development capacity. These will be considered further within the context of infrastructure to support growth within an infrastructure delivery strategy but include:

- Transmission Gully (government-led);
- Peka Peka to Ōtaki Expressway (government-led) and upgrade the connection at Te Horo from the Peka Peka Expressway to Ōtaki Forks (removes severance from Ōtaki township);
- Proposed Ihakara Street to Arawhata Road relief road (potentially 2022 subject to Provincial Growth Fund application);
- Ihakara and airport connector road (2035);
- Construct a roundabout at the Mazengarb Road/Ratanui Road intersection to improve the current level of service of this intersection and improve safety;
- Annual (low cost, low risk) minor safety enhancement programme;
- Notional roads identified in the ODP such as Ōtaki North and Hadfield Road;
- Waikanae emergency rail access;
- Conversion of the District's streetlights to improve amenity and safety;
- Revocation Town Centre Projects – to improve accessibility, connectivity, and safety;
- Deliver the annual general maintenance and renewals programme for the roading network – including maintenance and renewals of footpaths;
- Road safety education programme including school travel planning;
- Road network planning as part of Council's regulatory planning processes;
- Kapiti Road signalisation optimisation to improve flows; and
- Continued work with partners to look at ways of improving access to and use of public transport services.

## **Assessing the capacity of Kāpiti Coast's open space network**

### **Description of network**

Council has direct management responsibility for 590.6 hectares of open space in Kāpiti (excluding the beach). There are 11 hectares of Council reserves per 1,000 residents, somewhat below the national benchmark of 15.9 hectares. It's important to note though that the Kāpiti Coast includes extensive open space areas managed by other agencies such as Greater Wellington Regional Council (GWRC) and the Department of Conservation (DOC). Including all land managers, there is a total of 34,792.15 hectares in the Kāpiti Coast, resulting in an impressive 648 hectares per 1,000 residents.



At a ward level there is an uneven distribution of Council open spaces across the district. Figure 6 highlights the provision by ward, and illustrates some current trends in distribution. The difference in overall open space distribution can be explained by the large DOC or GWRC parks in some wards.

| Ward                | KCDC open space (ha) | DoC open space (ha) | GWRC open space (ha) | Total open space network (ha) |
|---------------------|----------------------|---------------------|----------------------|-------------------------------|
| Ōtaki               | 67.54                | 25,031.51           | 916.89               | 26,015.94                     |
| Waikanae            | 233.25               | 3,264.72            | 244.23               | 3,742.20                      |
| Paraparaumu-Raumati | 273.07               | 2,057.85            | 388.32               | 2,719.24                      |
| Paekākāriki         | 16.79                | 641.02              | 1,656.95             | 2,314.76                      |
| <b>Total</b>        | <b>590.66</b>        | <b>30,995.10</b>    | <b>3,206.39</b>      | <b>34,792.15</b>              |

As part of the current review of the Open Space Strategy Council is in the process of building on the Open Space Categories developed by Recreation Aotearoa to develop a categorisation that can be compared at a national level but that meets the specific needs of our community and environment. The table below shows Council's proposed open space categorisation along with existing levels of provision.

| Open space category                | Area of open space owned/managed by Council (ha) | Area owned/managed by Council (ha/1000 residents) | Comparison with other New Zealand councils (ha/1000 residents) |
|------------------------------------|--|---|--|
| Districtwide/destination park      | 121.5  | 2.48  | not measured   |
| - Public gardens                   | 0  | 0   | 0.4  |
| Sport and recreation               | 68   | 1.3   | 1.8  |
| Iwi practice and sites             | unknown  | unknown   | not measured   |
| Heritage                           | 13.3   | 0.27  | 0.45   |
| Neighbourhood parks                | 53.8   | 1   | 0.8  |
| Nature reserves                    | 296  | 5.5   | 7.2  |
| Outdoor adventure                  | 0  | 0   | 3.8  |
| Recreation and ecological linkages | 64.78  | 1.32  | 2.8  |
| Urban public space                 | 0.71   | 0.01  | not measured   |

### Measuring network performance

On the basis of land area alone it may seem that ample open space already exists, however Council's main role in open space provision is at a neighbourhood scale, in an urban context, with easy access to open space close to residential dwellings being a key focus. As the district grows and new areas of housing are developed it is not appropriate to rely on existing land holdings. Therefore, any assessment of network capacity and performance is critically reliant on ease of access from residential dwellings and the extent to which that land is or can be enhanced to support the needs of the resident community.

A key level of service for open space is that residents in urban areas live reasonably close to a recreation facility (including other publicly owned space) and a range of active recreation facilities is available throughout the District. Specific measures of this include:

- Residential dwellings in urban areas are within 400 metres of a publicly owned open space as required by the District Plan.
- Sports grounds are open (scheduled hours and weather dependent)
- Residents are satisfied with availability of facilities
- Residents are satisfied with the quality and range of recreation and sporting facilities in the District
- Residents are satisfied with council playgrounds

Additionally, Iwi values are woven through all open space types, but there are also certain open space sites that specifically provide for iwi practices. Data about the extent of iwi practices and sites in the open space network is limited, as there is no active mapping or monitoring to capture this information at this time.

### Summary of Assessments

Population forecast growth is used as the basis of anticipating future capacity requirements for the Open Space network. Capacity requirements are either extrapolated at a Districtwide or Ward based level depending on the park and asset type. For example, sports fields are shared across a districtwide population but local playgrounds service a walkable catchment. The following catchments were identified for consultation as part of the draft Open Space Strategy:

| Open space category                     | Suggested development catchment |
|---|---------------------------------|
| A. Districtwide/destination             | Districtwide                    |
| B. Sport and recreation                 | Districtwide                    |
| C. Iwi practices and sites              | Ward based                      |
| D. Heritage                             | Ward based                      |
| E. Neighbourhood                        | Ward based                      |
| F. Nature reserves                      | Districtwide                    |
| G. Outdoor adventure                    | Districtwide                    |
| H. Recreation and ecological connection | Districtwide                    |
| I. Urban public space                   | Ward based                      |

The assessment of reserves is required as part of the process of assessing new development. This includes contributions to the Council towards the acquisition, protection and enhancement of areas of cultural, ecological, or amenity value. This is to address additional demand caused by development. The reserve contribution can either be paid to improve existing facilities, or land developers can set aside a piece of land for open space use, or a mix of both.

The location, type, and extent of new public open space is to a degree dictated by the location and extent of new private development. Council can identify areas of expansion, but the

specifics are often not at a level applicable for development until a much later stage. Developments are also subject to economic forces and other factors which create uncertainty. Given these unknowns, neighbourhood parks are an important "base unit" of any open space network and provide an important unit of measure in order to be able to extrapolate future capacity requirements.

For Neighbourhood parks, the number of dwellings within the catchment of an area of open space depends on the density of development. Based on a typical suburban development density and current modelling, the Council has determined that 224 dwellings are able to be serviced within 400 metres walking distance of a neighbourhood reserve (accounting for street networks etc.).

Assuming an average occupancy of 2.5 people per dwelling, this equates to 560 people in a typical neighbourhood park catchment. By extrapolating this number across the time frame of population forecast, we are able to identify trigger points for when new neighbourhood parks are required.

Over the next 30 years, it is anticipated that Open Space capacity equivalent to 40 new neighbourhood reserves will be required to maintain capacity in relation to growth. The provision of future parks by ward area is shown in Table X below.

Table X. Future provision of neighbourhood parks by ward to meet expected population growth

| Ward area             | 3 years | 10 years | 30 years |
|-----------------------|---------|----------|----------|
| Paekākāriki           | 0       | 0        | 1        |
| Paraparaumu / Raumati | 0       | 4        | 11       |
| Waikanae              | 1       | 6        | 17       |
| Ōtaki                 | 0       | 3        | 11       |

Currently, the primary locations of greenfield development which may lead to new parks and open space development are in the Ngarara zone, on the urban fringe of Waikanae North and some limited space in Ōtaki. It is also recognised that infill housing and intensification increases the use of existing assets, requiring additional investment in order to maintain levels of service in line with growth and community expectation.

The prevailing trend in open space demand is the need to balance increased growth with the provision of quality open space experiences. The community has a desire for a quality natural environment and managing this expectation in relation to future growth will be one of the primary challenges for the open space network in the medium term. This will involve both reinvestment in existing open spaces as well as the acquisition of new open spaces.

The above methodology is based on the assumptions of infinite greenfields growth and Council is currently working on alternative assessments that will support a transition to improved quality of provision in and around town centres to support population intensification in future. Under intensification scenarios Open Space capacity requires land, but is also more critically dependent on the quality of improvements and increased levels of service to provide for the greater population living within each walkable catchment.

#### Network improvements

Our programme of key network improvements includes:

- Finalising the review of the Open Spaces Strategy to ensure we are up to date with issues relating to network development and management for the next Long Term Plan.
- Acquisition of new reserves in greenfield areas or current areas of deprivation. Or, improvement of existing assets in areas of intensification.
- Develop conceptual, policy and funding models to support quality urban open space provision in areas of population densification.
- The development of Otaraua Park as a Districtwide park facility in accordance with the Development Plan 2018.
- Rolling programme of asset renewals for the District's playgrounds.
- Drainage upgrades to major sports fields and the establishment of new artificial surfaces in 2021 and 2031.
- Continued upgrades to Destination Parks (eg. Maclean Park 21/22) to support District identity and economic development.
- Continuation of new asset development to maintain burial capacity in our cemeteries and the future purchase of new cemetery land in Waikanae to maintain capacity in that ward.
- Continued protection and enhancement of the environment through restoration, pest control and biodiversity improvements across the District.
- A three year project to prepare and review Reserve Management Plans for all reserves in the District beginning in 2022.
- Develop and implement a monitoring evaluation and reporting frameworks for key performance measures.
- Continued partnership with mana whenua in future open space network management and development.

#### **Summary of openspace network capacity to meet forecast growth levels**

Discussion and analysis with the Council's Parks and Open Spaces team identifies that, overall, the District has sufficient open space infrastructure available or planned to meet the needs of forecast growth. This is dependent on considering new reserves and open space as new development comes forward to meet current and future needs at both the local and District scale. While there are some gaps in services to current developments, this does not constrain new greenfield development, but does present opportunities around infill to fill these gaps.

The current review of the Open Space Strategy will provide a framework to identify and manage the provision and improvement of open space to meet the growing and changing needs of the district. This is particularly important as some areas across the district become subject to intensified development. The need to further understand and provide mechanisms to address this are recognised under the emerging Open Space Strategy.

|                        | 3 years | 10 years | 30 years | Comments  |
|------------------------|---------|----------|----------|---|
| Paekākāriki            | Yes     | Yes      | Yes*     | The current review of the Open Space Strategy will refresh Council's strategic priorities for managing the Kapiti Coast's |
| Paraparaumu<br>Raumati | Yes     | Yes*     | Yes*     |   |
| Waikanae               | Yes*    | Yes*     | Yes*     |   |

|       |     |      |      |   |
|-------|-----|------|------|---|
| Ōtaki | Yes | Yes* | Yes* | openspace reserves, including how, where, and how contributions from new development will support the ongoing development of the Kāpiti Coast' openspace network. |
|-------|-----|------|------|---|

\*Indicates the future additional need for neighbourhood parks to service additional future growth anticipated across each ward area.

### Assumptions made in assessments

In order to assess the capacity of infrastructure against future population growth, it has been necessary to make a number of assumptions and simplifications. A number of these are covered in the report itself, but a number are also identified below to serve as a caveats to the overall findings of this report.

#### Extrapolating future growth

Sense Partners population and dwelling projections cover the 2018 to 2048 period but were extrapolated out to be able to meet the NPS-UDC 30 years' coverage from 2021 to 2051.

#### Differences between boundaries

There are a small number of differences between statistical areas and areas covered by network infrastructure. This difference has reduced since the last assessment with the use of statistical area 2 units (SA2) in projections that better align with infrastructure networks for urban areas. While better aligned, there are still a small number of areas where a small proportion of population is included into overall assessments of reticulated water and wastewater capacity, despite not being connected to the reticulated network.

While minimal, the inclusion of these areas effectively provides a small proportion of additional available capacity not shown in capacity calculations.

Future processes will look at opportunities to further improve the capture and alignment of data across different boundaries.

#### Water and wastewater

A number of assumptions have been made consistently across the water and wastewater modelling. This includes an allocation of 10% to infill of current sites; that future need does not account for any new significant wet industries; and that inflow and infiltration does not get worse (e.g. new pipes should be water tight).

#### Stormwater

Current modelling of network capacity constraints and DP planning rules take into account early projections for future predicted rainfall and sea-level rise. Further modelling work is planned to update this information for the District in line with the latest central government guidance.