

# Chapter 2: Wellington City Council

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# 1 Executive Summary

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This report presents the housing update of the Housing and Business Land Capacity Assessment (HBA) for Wellington City Council (the Council), as required by the National Policy Statement on Urban Development (2020) (NPS-UD)<sup>1</sup>. The update reports on the demand for, and supply of, residential development capacity over the 30 years to 2051.

This HBA is based on the operative District Plan (2013). It does not take into account the Wellington Spatial Plan (adopted June 2021) which gives effect to the requirements of intensification and up-zoning of the NPS-UD. A new District Plan is being prepared which will be the Council's key tool to implement the direction of the Spatial Plan 2021 and intensification of housing.

## 1.1 Residential Demand

- Wellington City's population is expected to grow by 70,698 people between 2021 and 2051.
- To cater for this population growth, Wellington City will need to provide for an estimated **36,621** new dwellings between 2021 and 2051.

Demand for residential dwellings has been assessed based on population projections produced by Sense Partners. Sense Partners have provided projections for all local councils in the region. The projections range from low to high, which reflects how variable the growth projections are. All local councils in the region are using the Sense Partners projections at the 50th percentile (the mid-point of projections) for their HBA residential update. Sense Partner's forecasts differ from those produced by StatsNZ. This is to be expected because forecasts are developed based on multiple assumptions, for example: migration trends, infrastructure capacity/development, economic performance, government policies, housing availability, and relative attractiveness of Wellington compared to the rest of the region or other cities in New Zealand or overseas. Please refer to Appendix 1.1 for further detail on the methodology. The demand is broken down by dwelling type: stand-alone housing, terrace housing and apartments.

## 1.2 Residential Capacity

- Wellington City's operative District Plan currently enables the development of 104,941 additional dwellings.

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<sup>1</sup> This is intended as a Housing update only. For the current Business Land Capacity Assessment, please refer to the HBA 2019. This HBA is due to be replaced in 2024 in accordance with the three yearly requirements of the NPS-UD and will be a complete review of residential and business land capacity.

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- Of these, 37,875 dwellings are economically feasible.
  - Not all feasible development is expected to be realised. Modelling shows that Wellington City has a capacity for **26,399** realisable dwellings over the period between 2021 and 2051.
  - This represents a **shortfall of 10,222 dwellings** from that required to meet projected population growth.

Residential capacity has been assessed by determining as a starting point what capacity is enabled by the current operative Wellington City District Plan. Plan-enabled capacity is then assessed for feasibility, and lastly consideration is given to what proportion of that feasible development is likely to be realised<sup>2</sup>.

The assessment has revealed that Wellington City has an overall undersupply of realisable residential development capacity. That shortage is evident from the short term (2021-2024). This shortage is particularly acute in the form of terrace housing which cannot meet anticipated demand over the long term (2021-2051). There is sufficient stand-alone dwelling capacity to meet projected demand over the long term, however the majority of that is located within existing urban areas as the City's supply of greenfield land is limited to 2,721 additional dwellings. That greenfield supply is expected to be exhausted within the 30-year period of this HBA.

Capacity for apartment development is higher than expected at 8,042 apartments based on the feasibility assessment undertaken. That supply is sufficient to meet projected demand for apartments throughout the short, medium, and long term. The shortage of capacity for terrace housing is notable and significant against a high projected demand for this housing typology in the future. However, the modelling is based on a maximum profit scenario and therefore some of the apartment capacity could be assumed for terrace housing where terrace housing may also be feasible.

The undersupply of realisable capacity is based on the current District Plan. The next iteration of the HBA in 2024 will model the provisions of the new District Plan, which is currently being reviewed. Plan-enabled capacity figures are expected to be significantly improved once the intensification requirements of the NPS-UD and new District Plan provisions can be taken into account.

### 1.3 Infrastructure

- The City has significant constraints across its three-waters network.
- Investment in the three-waters network will be required to avoid those constraints having a detrimental effect on development capacity.
- This assessment has not been able to quantify the exact impact of those constraints on development capacity.
- Transport infrastructure will require additional investment to keep pace with population growth and to offer acceptable levels of service.

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<sup>2</sup> Feasible and realisable development is discussed in more detail in section 5.0. This looks at the plan-enabled capacity (ie. what could be developed under the District Plan) and then applies an assessment of what would be economically viable to develop, and finally applies a test of the likelihood of these developments being undertaken (ie realisation).

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- Parks and community infrastructure will require additional investment (in both land and associated assets) to keep pace with population growth and to offer acceptable levels of service (in particular in response to housing density change).

### 1.3.1 Three-waters infrastructure

The assessment of infrastructure undertaken for this HBA finds that the three-waters infrastructure for Wellington will impose constraints on growth over the 30-year span of this HBA. These constraints will be more acute in some areas of the city than others and differ in which of the three-water components are affected throughout the City. However, it is difficult to quantify what the exact impact of these constraints will be on development capacity over time. This would necessitate attempting to map development realisation accurately against infrastructure constraints. Given the inherent uncertainty around realisation, this HBA has ultimately not attempted to make such a quantification. Future iterations of this HBA could look to improve this assessment should a finer grain of detail become available on the nature of infrastructure constraints.

It is clear that there are various pressures across the three-waters network city-wide. To address these pressures the Council continues to invest in the upgrading and renewal of infrastructure assets. It is the level of investment required and its sequencing that may ultimately impact on the supply of development capacity.

### 1.3.2 Transport

There are existing constraints on the transport network across the City. Whilst current levels of service broadly meet the needs of the City, anticipated growth will see these levels of service decline and increasingly reach poor levels. Accommodating and facilitating this growth will require significant investment to achieve acceptable levels of service.

Given the role of Wellington City as the main employment centre in the region, the state highway network servicing the city is subject to significant peak-time congestion. This is additional to peak-time loads on the public transport network. Key congestion points are from Tawa to Ngauranga, and Ngauranga to the airport.

Similar congestion issues affect public transport. Bus services are utilising the same traffic corridors as regular traffic, and space constraints mean that options for separation are limited. Peak traffic flows cause conflicts between north-south and east-west traffic. This impacts on the capacity and reliability of the public transport network within the city.

Overall, there is some pressure on the City's transport network but not of a level that would impact on development capacity within the city. The Let's Get Wellington Moving project is a joint transport planning initiative between NZTA, Greater Wellington Regional Council and Wellington City Council that is seeking to develop a programme of infrastructure investment to address transport improvements in Wellington that will help to respond to these pressures.

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### 1.3.3 Other infrastructure

An assessment of other infrastructure<sup>3</sup> shows that ongoing development of new infrastructure and improvement of existing infrastructure will need to occur in line with capital programs which may need to be increased in response to growth.

## 1.4 Next steps

Overall, this HBA for Wellington City has revealed that the city has a shortage of residential development capacity. The insufficiency to meet demand is clearly evident by the rising house prices observed within the City. Insufficiency to meet demand is more evident over the medium and long term, comprised of shortages for terrace housing particularly. The Council will need to respond by way of planning interventions to increase housing capacity.

The Council has commenced a review of the Wellington City District Plan to address the requirements of the NPS-UD. The new District Plan will take direction from the Spatial Plan 2021 which proposes significant intensification around the city to meet the forecast growth in the city's population and housing needs over the next 30 years. The preparation of this HBA has provided a baseline information source to inform the review of the District Plan. It is expected that the new District Plan will significantly increase the plan-enabled capacity in the future. The new District Plan is expected to be notified by mid-2022, in line with the NPS-UD timeframe.

The shortage of supply identified in this HBA will be exacerbated by constraints within the three-waters network. While this HBA has not been able to quantify the exact impact of these constraints, in some areas of the city they will be significant without further intervention. The Council is planning for continued investment in its infrastructure network by way of renewal and upgrade projects, along with new capital investment.

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<sup>3</sup> Other infrastructure includes parks and community facilities.

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## 2 Introduction

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Wellington City is poised to grow by 70,698 people between 2021 and 2051. This significant growth will put further pressure on a housing market which is showing signs of stress, evidenced by recent house and rental price rises.

As a city that is constrained by its geography, Wellington's compact urban form is a product of its location and landform. This has a number of benefits for the city, including the ease of mobility, proximity to services, proximity to employment, and efficiency in the provision of infrastructure.

Maintaining a compact urban form has been an important objective for the Council. The Council's approach to achieving that objective is expressed in the current Wellington City District Plan and other documents, such as the Spatial Plan and, previously, the Urban Growth Plan.

However, maintaining a compact urban form also poses challenges in accommodating future growth. Wellington City's ability to open additional areas of greenfield land on its fringe is constrained by the same topography that brings with it benefits and that helps shape Wellington's character.

Therefore, it is important to accommodate as much future growth as possible within the existing urban area. This is efficient from the point of view of infrastructure provision, but also serves to reinforce an existing urban form that itself brings benefits, such as the concentration of people, supporting businesses, public transport patronage, minimising the city's footprint and loss of ecological values, and a host of other positive effects.

This HBA report has sought to assess, to the greatest extent possible, what capacity the city has for further development, where that capacity exists, and what type of development that capacity can cater for. It then contrasts that capacity with an estimate of what demand exists for it over the next 30 years. Overlaid on that assessment are further considerations of infrastructure availability and an assessment of whether the development capacity that exists is economically feasible to develop and likely to be realised.

This chapter of the Wellington Regional HBA seeks to meet the requirements of the NPS-UD for Wellington City Council. In particular it addresses the requirements of subpart 5 of the NPS-UD to:

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- Provide information on the demand and supply of housing and of business land in the urban environment, and the impact of planning and infrastructure decisions of the relevant local authorities on that demand and supply; and
  - Inform RMA planning documents, FDSs, and long-term plans; and
  - Quantify the development capacity that is sufficient to meet expected demand for housing and for business land in the short term, medium term, and long term.

This report should be read in conjunction with Chapter 1 of the Wellington Regional HBA and associated appendices. Chapter 1 details the underlying methodology and assumptions that underpin the data presented in this report.



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# 3 Existing Policy Context

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## 3.1 National Policy Statement on Urban Development

The National Policy Statement on Urban Development (NPS-UD) came into force on 20 August 2020. The purpose of the NPS-UD is to improve the competitiveness of the housing and urban markets as a mechanism to increase housing supply through an enabling policy environment and better decision making. The NPS-UD seeks to ensure that planning is responsive to changes in demand, meets the diverse needs of communities, and encourages well-functioning, liveable urban environments. It also requires councils to remove overly restrictive rules that affect urban development outcomes in our cities. As part of the evidence-based decision making, the NPS-UD directs local authorities to produce a Housing and Business Development Capacity Assessment (HBA) every three years that provides information on the demand and supply of housing and business land, and the impact of planning and infrastructure decisions.

## 3.2 Spatial Plan

The Council adopted its Spatial Plan in June 2021. The Spatial Plan integrates and replaces the Urban Growth Plan (2015) and Northern Growth Management Framework (2003).

The Spatial Plan is the Council's strategy for managing the City's growth over the next 30 years. It seeks to ensure that as the City's population increases, new houses, transport networks, infrastructure, and services are developed sustainably and in areas that benefit the city the most so that residents continue to enjoy a world-class quality of life.

The Spatial Plan provides a strategy for how Wellington will grow, providing the key policy direction needed to influence the review of the District Plan. The preparation of this HBA (residential update) will also help inform the review of the District Plan<sup>4</sup>.

## 3.3 Wellington City District Plan

The Wellington City District Plan, which became operative in 2000, is the Council's key planning document that controls the use of land in the city. Prepared under the Resource Management Act

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<sup>4</sup> Noting that a subsequent HBA will be due in 2024, in accordance with the three yearly requirements of the NPS-UD.

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1991 it does this by zoning land and setting out objectives, along with policies and rules to achieve those objectives.

The District Plan seeks to maintain Wellington's compact urban form by providing a generally permissive regime for urban development and intensification within the existing urban area. It encourages apartment development within the central area, and targets specific areas for medium density housing.

The Council is currently reviewing the District Plan and aims to notify a Proposed District Plan for submissions in 2022. This HBA is based on the operative District Plan only. It does not take into account the adopted Spatial Plan or emerging District Plan, as new District Plan provisions were not ready in time for modelling.

### 3.4 Other policy initiatives

The Council has a broad work programme relevant to the wider housing agenda.

The Council produced the Mayoral Housing Taskforce report in 2017 and adopted a Housing Strategy in 2018. The Housing Strategy defines the outcomes the Council is working towards over the 2018-2028 period and acknowledges the important role that Council plays in leading the change required to see all Wellingtonians well housed. In 2020, the Council adopted the second Housing Action Plan, for 2020-2022, which sets out the current and planned projects and initiatives to be delivered by Council in relation to housing. Initiatives being undertaken by the Council include the Te Kāinga programme. The Council have set a target to provide 1000 affordable rental units through this programme. Under the Te Kāinga programme, the Council enters into long-term leases with commercial building owners and developers to deliver stable and affordable rental housing options for some of the City's essential and key workers<sup>5</sup>. The Council has 339 apartments in the pipeline at the time of writing. The first project under this programme; Te Kāinga Aroha, welcomed the first tenants in March 2021 and provides 52 inner city apartments.

The Financial and Infrastructure Strategy was adopted in 2021 and covers a 30-year period 2021-2051. The overarching objective of the strategy is to ensure that financial and infrastructure investment decision-making directly supports the Council's strategic objectives and the Long-Term Plan (LTP). The LTP 2021-2031 was adopted by the Council on 30 June 2021. This sets the direction for the next 10 years and outlines what the Council will be investing in. The LTP is reviewed every 3 years.

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<sup>5</sup> Key workers are those employed in essential public service sector roles. Rentals will be prioritised based on the following criteria: People who work in, or are qualified for and intend to work in an essential public sector role; People on a low-to-medium income (under \$85,000 for an individual and \$130,000 for a group) who have difficulty accessing rental housing in Wellington City and are not eligible for income related rent and don't own their own home. Rent will be fixed to the consumer price index, rather than market rental rates.

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# 4 Analysis of housing market and impact of planning

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## Key Findings

*House prices have risen significantly in Wellington City, leading to increasing unaffordability.*

*In Wellington City home ownership rates amongst Māori are 27% compared to 45% for non-Māori.*

*In 2018, 1,254 Wellingtonians were severely housing deprived (homeless).*

*In 2021, there were 846 households on the public housing register (waitlist).*

*There are 531 applicants on the Council's housing waitlist.*

Clause 3.23 of the NPS-UD requires that the HBA include analysis of how the local authority's planning decisions and provision of infrastructure affects the affordability and competitiveness of the local housing market. The analysis must include an assessment of how well the current and likely future demands for housing by different groups are met. This analysis must be informed by a range of market indicators and price efficiency indicators.

This sub-chapter addresses the requirements of clause 3.23 of the NPS-UD.

## 4.1 Market indicators

The following section outlines a range of relevant indicators and provides specific context to the development trends in Wellington City. Many of these indicators are measured nationally and provided for regions and local authorities by the Ministry of Housing and Urban Development (MHUD). A subsequent discussion considers the implications of these indicators.

### 4.1.1 Residential Sales Prices<sup>6</sup>

The housing market has been under considerable stress for several years, which has correlated with increases in house prices; with the rate of increase rising. According to the CoreLogic House Price Index at May 2021, the annual growth rate for property values within the city was 21.3%. The quarterly rate of growth exceeded 10.4% at the end of April 2021<sup>7</sup>. This shows that house prices are rising at an unprecedented rate. The average house value in Wellington City is currently \$1.1 million.

The figure below, produced using data from MHUD on dwelling sales prices, shows how sale prices have increased significantly over time. For many years Wellington's sales prices were similar to the Auckland market, and changes to those prices largely followed each other. However in 2012/2013 Auckland began to experience significant price increases while Wellington stayed largely flat. Wellington's market only began a significant upsurge in 2015/2016 which has steadily continued.

The trend for sale prices in the Greater Wellington Region has closely followed the trend in Wellington City, indicating that Wellington City is a key driver for sale prices in the region. This highlights the importance of Wellington City as the largest housing market in the region, with the most housing diversity, but also the highest prices resulting from higher land values, and higher incomes.

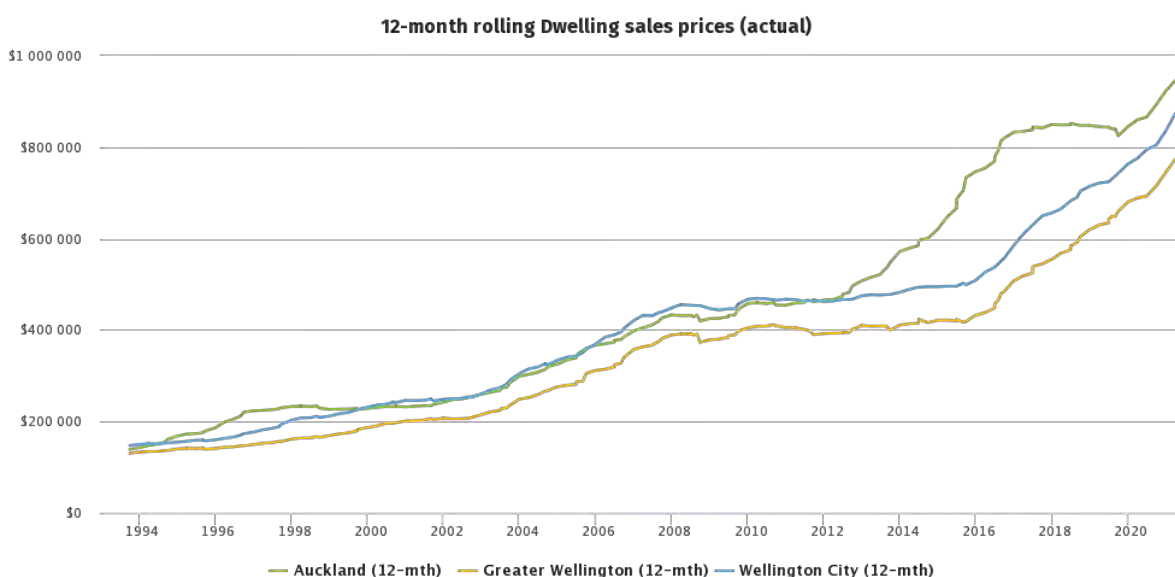


Figure 2.1. Median residential dwelling sale price for Wellington City, Greater Wellington, and Auckland. Source: MHUD.

While the growth in Wellington City's housing prices highlights the desirability of the City as a place to live, the negative implications of this are that the rate of increase has had a significant effect on

<sup>6</sup> This indicator shows the median prices of residential dwellings sold in each quarter. This median price series is not adjusted for size and quality of dwellings. Prices are presented in nominal terms and have not been adjusted for inflation.

<sup>7</sup> <https://www.corelogic.co.nz/news/latest-corelogic-data-shows-demand-property-lingers-slowdown-looms#.YLBsnqgZaQ>

housing affordability. This has consequential effects on the ability of people to live and work in the City, affecting workers in areas such as the service sector for instance, as well as young professionals.

#### 4.1.2 Residential Rents

Approximately 41% of people rent their home in Wellington according to 2018 Household census data.

Residential rents have been consistently increasing for Wellington City over time. However, on closer examination there are periods of heightened growth for Wellington City. Figure 2.2 shows a spike in rents in 2007 and again in 2019. Over 2019, weekly rent rose by \$52 from their highest point in 2018. Wellington’s mean rent has recently begun to surpass Auckland.

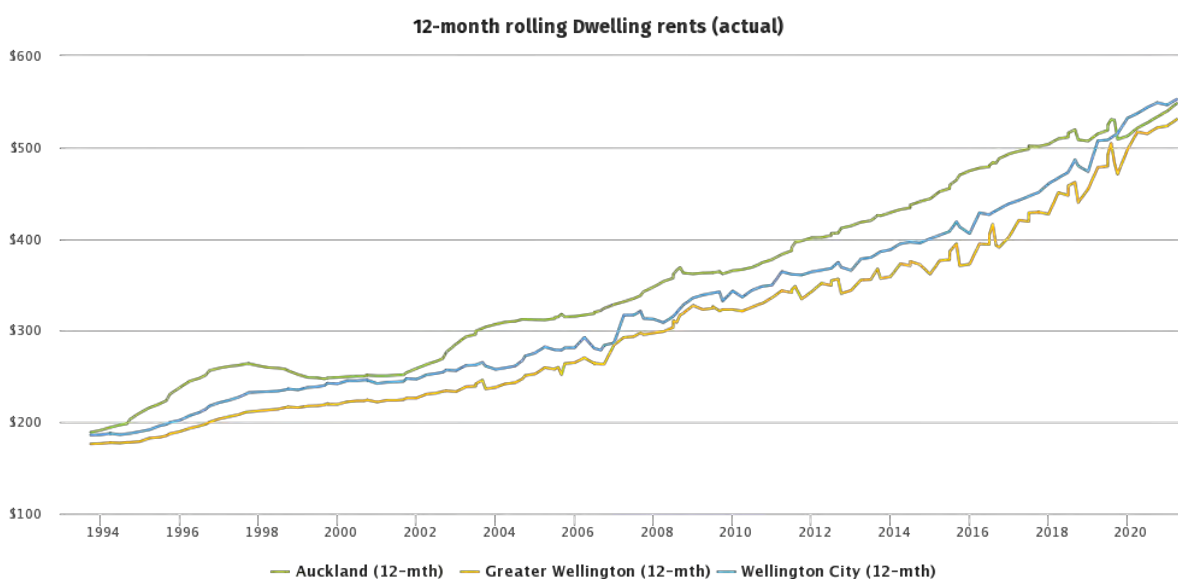


Figure 2.2. Average rents<sup>8</sup>. Source: MHUD.

The most recent data for Wellington City shows the geometric mean rent for Wellington at the end of March 2021 was \$553 per week.

The increase in rental prices, combined with a general shortage of supply, is leading to rental stress within the city. This is discussed in section 4.1.4.

<sup>8</sup> 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 public housing.

### 4.1.3 Dwelling Sales

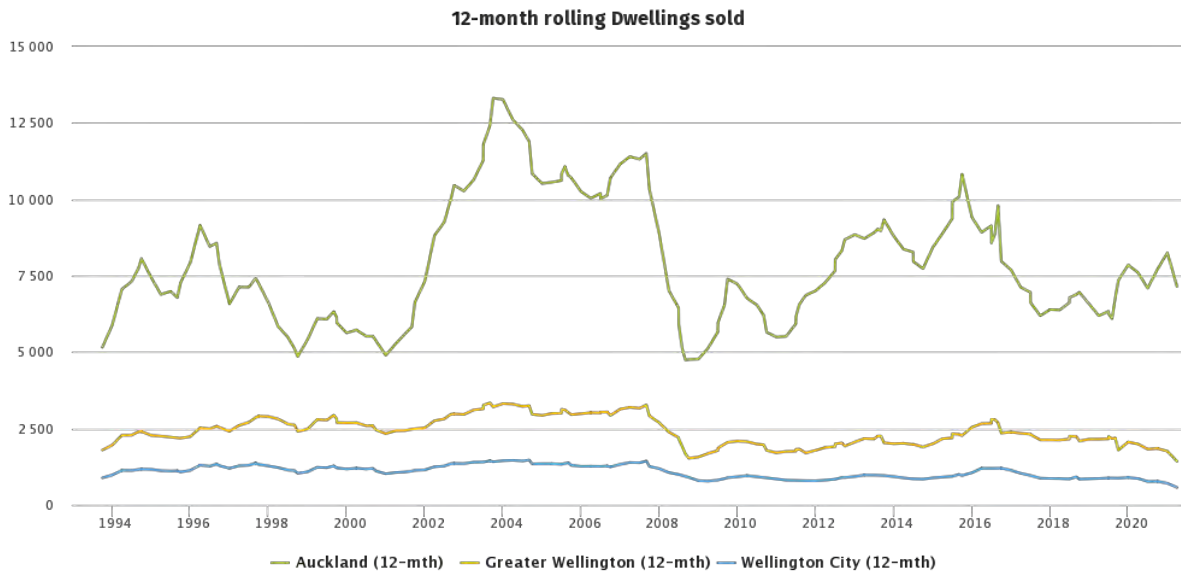


Figure 2.3. Dwelling sales in Wellington City. Source: MHUD.

Dwelling sales in Wellington City have remained relatively flat over the course of the above series, and certainly when contrasted against Auckland, and to a lesser extent Greater Wellington, which both show variation. In closer detail, Wellington City varies year on year, with an increase in the early 2000s and a drop-off following the global financial crisis in 2008. Low sales volumes are not evidence of a lack of activity in the market. On the contrary, the market has been very active in recent years. Rather, the lack of stock coming for sale is causing further pressure on prices as buyers seek to purchase from a limited range of stock. This is further highlighted in Figure 2.4 below.

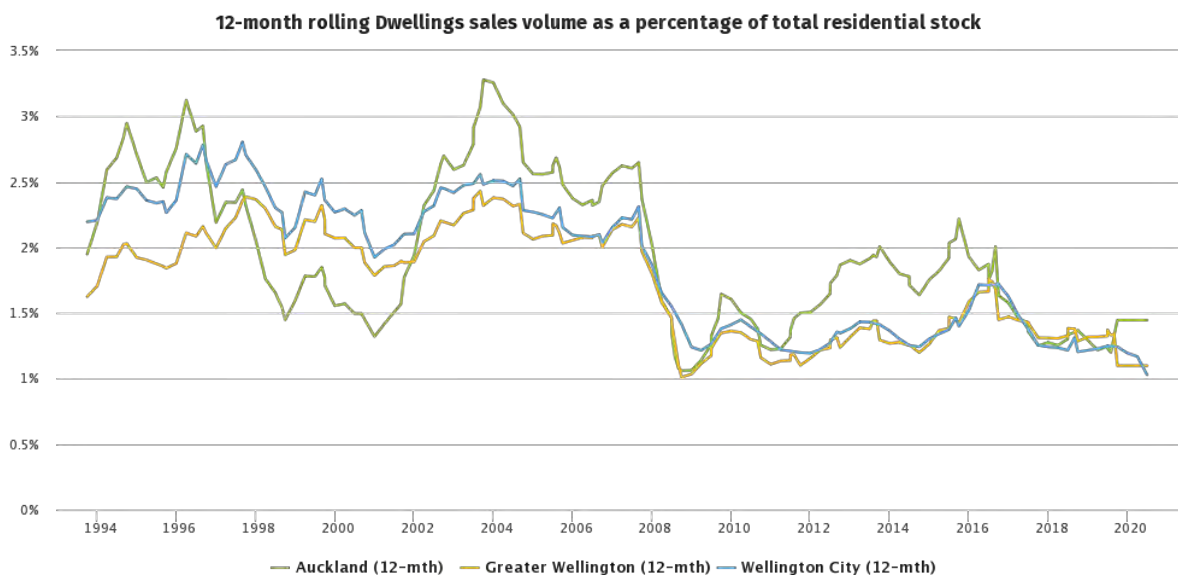


Figure 2.4. Residential sales volumes in Wellington City as a percentage of overall housing stock. Source: MHUD.

Figure 2.4 shows sales volumes as a percentage of overall housing stock for Wellington City compared with Auckland and the Wellington Region. The graph shows sale volumes for Wellington City are at their lowest level since the above series commenced. This affects the overall number of sales made. A scarcity of dwellings for sale has the effect of driving up prices as buyers compete for a limited pool of available housing. Current sales volumes for Wellington City are at 1%.

Where the trend since 2016 shows sales volumes have generally been declining for Wellington City, as well as Auckland and Greater Wellington, recent data now shows signs that sales volumes in Auckland are increasing whereas Wellington City continues to decrease.

#### 4.1.4 Housing Affordability

Housing affordability refers to how affordable it is to purchase or rent a home. There is a clear difference between ‘affordable housing’ which has been purposely built, designed, or priced to meet the needs of eligible households whose needs are not met by the market, and housing that is simply more affordable in relation to income i.e., ‘relative affordability’. There are a lot of factors which influence housing affordability and ‘affordability’ may also mean different things to different people. Affordability is affected by dwelling prices, mortgage interest rates and the incomes of households. It is therefore a difficult concept to measure, and no single metric will apply to all people.

Wellington’s mean household income is \$151,500 as of June 2021. The mean household income is the average household income for the City. Household income is considered more reflective of the ability of a household to afford housing costs compared to personal income. However, it is important to note that Wellington’s mean household income is influenced by a high proportion of very high personal incomes when compared against other cities and mean income as a metric does not provide an indication of the proportion or number of households living with an income below

the mean. It should also be acknowledged that household composition varies; for example singles versus couples.

The Ministry of Housing and Urban Development provides data on housing affordability for all councils throughout New Zealand. The Ministry's Housing Affordability Measure (HAM Buy) measures trends in housing affordability for first home buyer households. HAM Buy is an estimate of how many renters would spend more than 30% of their income if they bought a lower quartile house with the same number of bedrooms as their current house, in the area that they currently live in. This indicator measures how many renters can afford to buy a home in their current area. A higher number indicates a lower level of affordability. Average income is determined using data from the 2013 Household Economic Survey and then adjusted for inflation at each time point.

Figure 2.5 shows the HAM Buy measure for Wellington City and compares this against Auckland and Greater Wellington Region. The share of potential Wellington City first home buyer households who would be spending over 30% of their income on housing costs increased from 68.9% in December 2017 to 69.7% in December 2018.

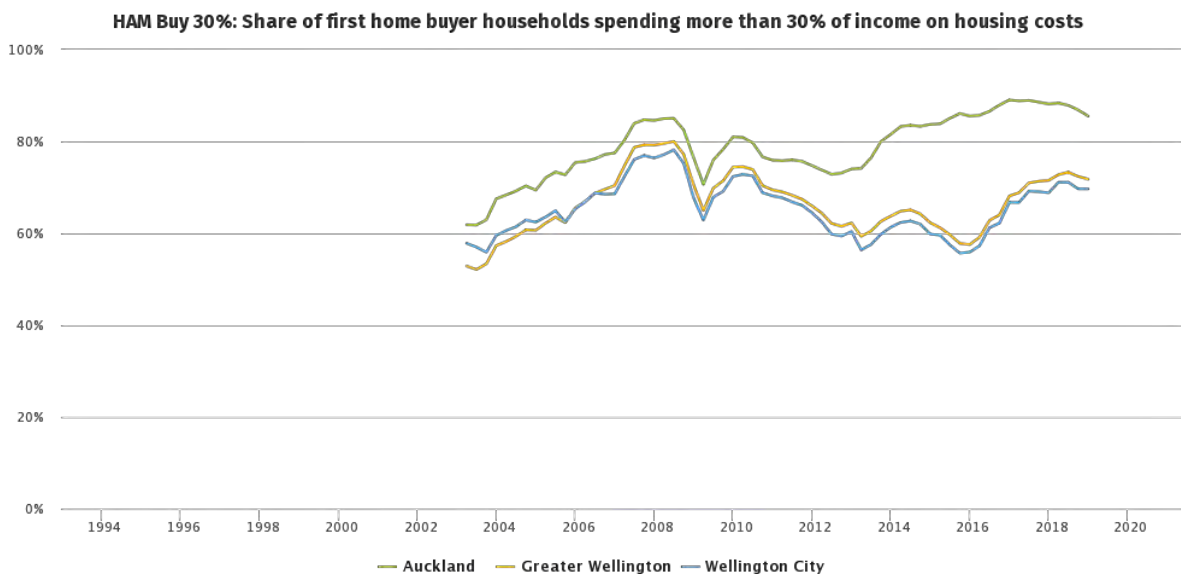


Figure 2.5. Housing Affordability Measure (Buy) for Wellington City. Source: MHUD.

By this measure, the data is showing a continuing trend that, for first home buyers, it is becoming less affordable to buy a house in Wellington. It is still more affordable to buy a house in Wellington compared to Auckland and also slightly more affordable compared to the wider Greater Wellington Region, which is likely reflective of slightly higher incomes in Wellington City compared to the rest of the region. At a national level, the HAM Buy percentage was 74.8% in December 2018, indicating that Wellington City is still more affordable when measured against the national average.

At the time of writing this HBA, the HAM Buy Indicator data was only available to December 2018. This data is therefore not reflective of the more significant rises in housing prices currently being observed in the city. This measure also has limitations in that it only measures where first home



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buyers are buying a home of equal size and in the same area they are renting. For many first home buyers, it is likely they would be seeking to buy a larger home than they would rent.

Further data from MHUD on the ratio of median sale price to median income shows the ratio has been rising since 2015. The ratio for Wellington in 2019 is above 8. This is benchmarked against a ratio of 3 which is the standard affordability threshold used internationally. This ratio is considered to be medium-high and in the second quartile compared to other parts of New Zealand.

It is important to note that there are many factors that affect housing affordability. Global financial trends, immigration and tax policy have contributed to a rapid increase in demand (and incentive) to purchase homes especially since COVID-19. At the same time the amalgam of land use planning, consenting, infrastructure provision, construction sector productivity and bank lending criteria have constrained supply.

An alternate measure of housing affordability is presented by infometrics. Data sourced by infometrics compares average current house values from CoreLogic with an estimate of annual average household income<sup>9</sup>, to calculate the ratio of average house values to average household incomes. A higher ratio suggests that average houses cost a greater multiple of typical incomes, which indicates lower housing affordability. The ratio for Wellington has been steadily increasing as house prices have risen without equivalent rises in incomes. The ratio of current house values to annual average household income was 6.7 as at March 2021, suggesting house values are 6.7 times average annual household income in Wellington City. The ratio for New Zealand was 7.1 at March 2021.

In addition, Wellington City Council has also developed its own Wellington Housing Affordability Model (WHAM). This model is supplementary to other affordability measures. WHAM is built based on the premise that assessing affordability depends on a household's circumstances and composition, and that housing affordability is more complex than one set dollar amount or ratio that is applied in a 'one size fits all' way.

WHAM estimates household expenditure (excluding housing costs) for different household groups using data from the Household Economic Survey-Expenditure (StatsNZ) and considers the house cost affordable for that group, after taking account of all other household expenditure. It can be applied to understand the potential weekly surplus or deficit for a set house cost for a defined household (composition and income).

Both rental and purchase price affordability can be assessed using WHAM. It can also be used to understand, at a relatively granular level, what is affordable for a defined population group. While WHAM was designed to understand affordability at a project level, it can be applied to a city-level to understand the income required for a house price to be affordable<sup>10</sup>.

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<sup>9</sup> Household incomes are considered a better measure for housing affordability than individual incomes as it reflects the true ability of a household to afford housing.

<sup>10</sup> A number of assumptions are built into WHAM around expenditure, savings, available deposit, mortgage rates etc. For more on WHAM see the Council's website <https://wellington.govt.nz/>

On the graph below, the WHAM line (in orange) is the household income considered to be required to afford the average sale price in the City. As expected, the required income rises as house prices rise. The model shows that the household income required to afford the average sale price in Wellington in June 2021, now exceeds the mean Wellington household income. As a result, house prices are now becoming unaffordable to a greater percentage of the City’s population.

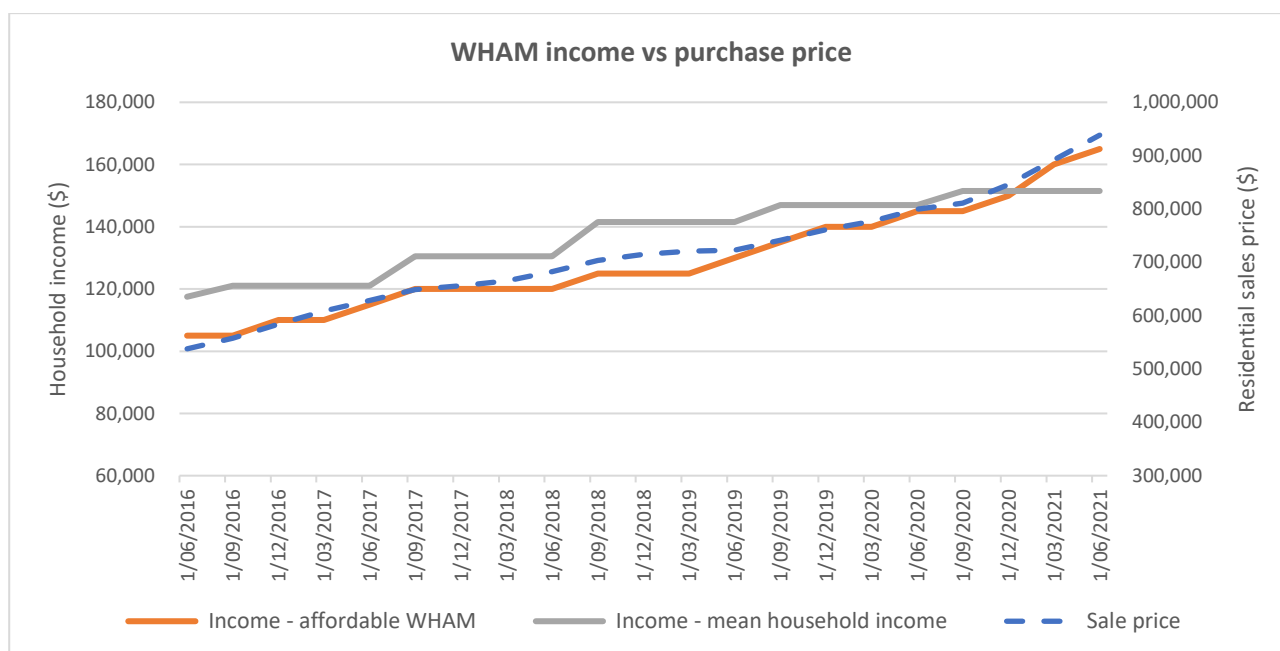


Figure 2.6. Affordability of median residential dwelling sale price for Wellington City - household income required for sale price to be affordable, using WHAM. Source WCC.

Turning to rental affordability, in Figure 2.7 below, the WHAM line (in orange) is the household income level considered to be required for the average rent to be ‘affordable’. The required income therefore rises as rents increase. For example, in June 2021, a household income of \$105,000 would be required to support paying an average rent of \$592 a week. This has increased from a required income of \$90,000 at the end of 2018.

Wellington’s mean household income (in grey) is well above the WHAM line showing that the mean household income could comfortably afford average rent prices. However, as discussed above, the mean household income for Wellington City is high at \$151,500 in 2021. By using a mean income level for the City, this graph is therefore not likely representative of the rental stress experienced by many in the City. The renter population would most likely earn below the average household income. The WHAM model suggests that in 2021, those households earning less than \$105,000 would find it difficult to pay an average weekly rent of \$592, factoring in other expected expenditures. The WHAM model has been developed to be able to test income levels of different groups to a finer detail and inform Council’s ongoing work in this area.

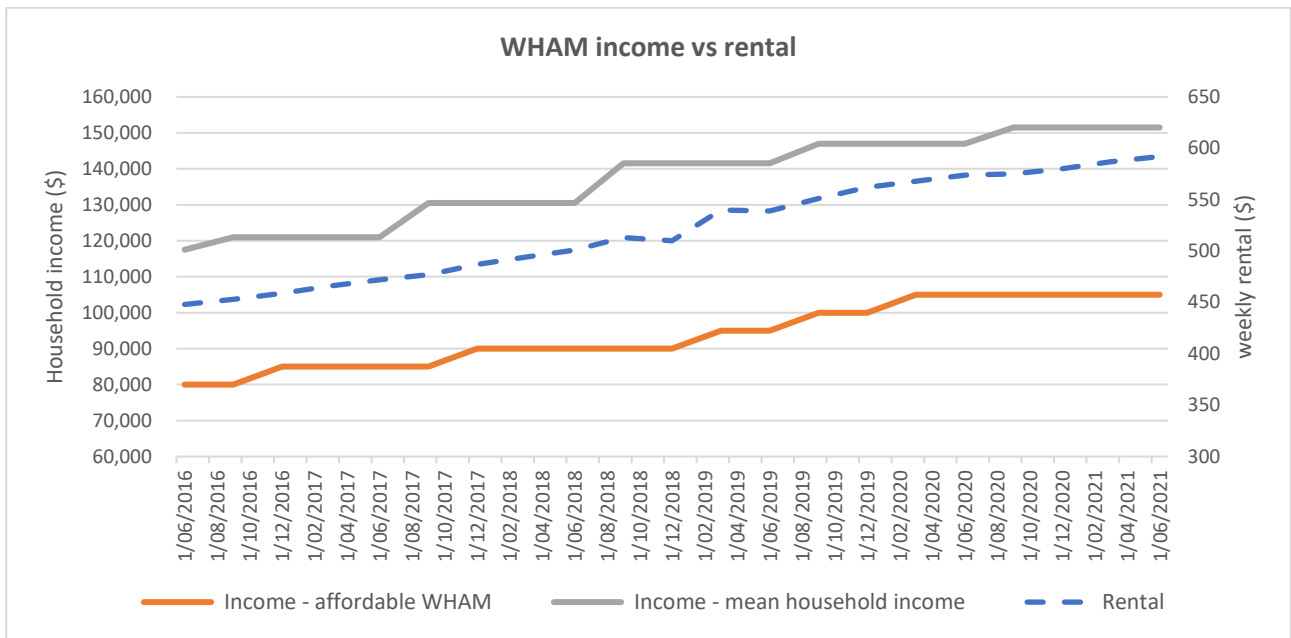


Figure 2.7. Affordability of average rental<sup>11</sup> - household income required for average rental to be affordable, using WHAM. Source MHUD and WCC.

Another measure of rental affordability is the Housing Affordability Measure (HAM Rent) which measures trends in housing affordability for renting households. The indicator addresses whether a household that rents can feasibly afford to live in its current accommodation. HAM Rent identifies the proportion of renters in an area whose rent is more than 30% of their household income. This is a common benchmark to determine relative affordability. Households having to spend more than 30% of their income on housing costs are considered to be experiencing rental stress.

This indicator helps us to understand housing affordability pressures experienced by renters and whether these are improving or not. A higher number on the chart indicates a lower level of affordability.

At a national level, the share of renter households spending over 30% of their income on housing costs remained fairly constant at 31% in December 2018. The share of renter households in Wellington City spending over 30% of their income on housing costs was 31.9% in December 2018. This is shown in the figure below. At the time of writing this HBA, the data was only available to December of 2018 for this indicator.

<sup>11</sup> 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.

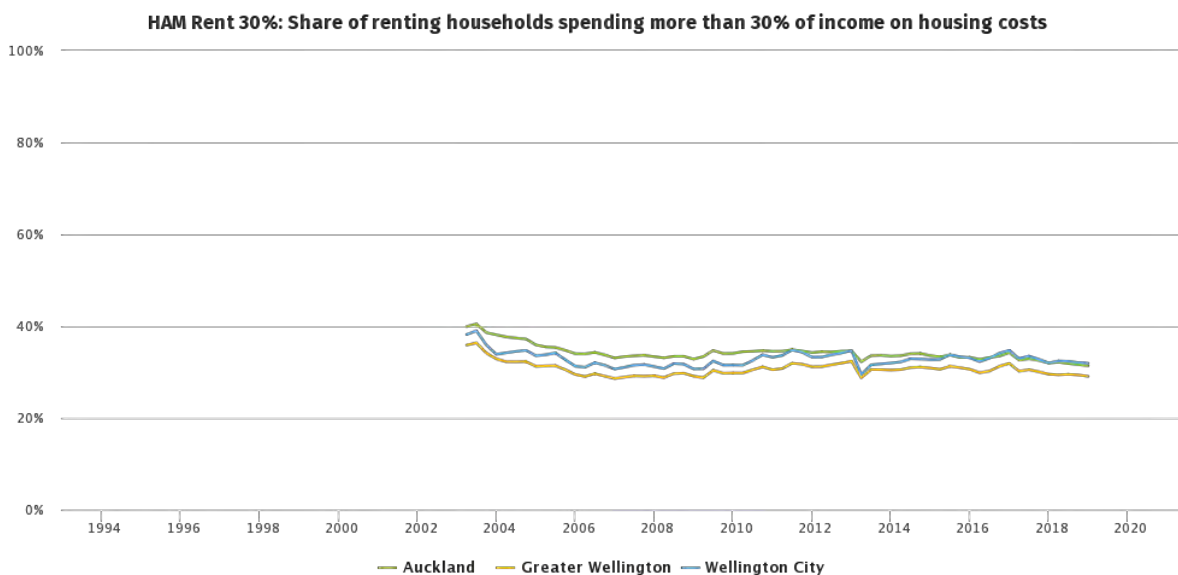


Figure 2.8. Housing Affordability Measure (Rent) for Wellington City. Source: MHUD.

Noting the above dataset, further data obtained from MHUD on rental stress for Wellington City in 2018 suggests that 41% of the rental population are spending more than 30% of their income on rent and of this 20% are spending more than 50% of their income on rent. This suggests the graph above (published by MHUD) does not accurately reflect the rental stress in the City. By this indicator, Wellington City is showing rental stress and this is high relative to other parts of the Country.

Infometrics also provides a rental affordability index which is the ratio of the average weekly rent to average household income. A higher ratio suggests that average rents cost a greater multiple of typical incomes, which indicates lower rental affordability. For Wellington in 2021, the rental affordability index was 18.3%. This has increased from 17.3% in 2019.

#### 4.1.5 New Dwellings<sup>12</sup>

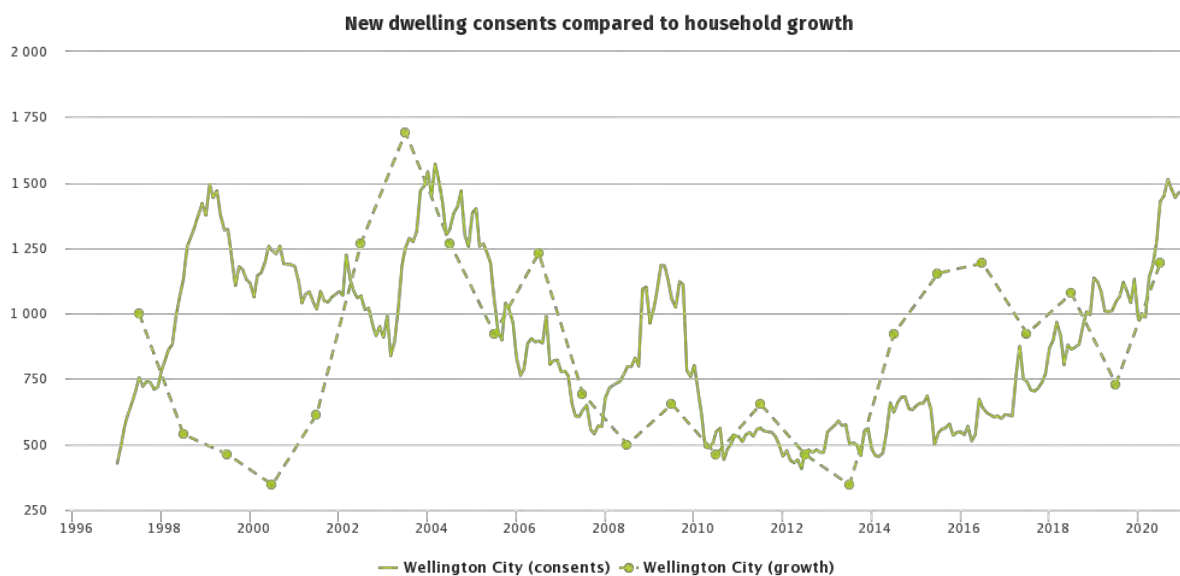


Figure 2.9. New dwelling consents and household growth. Source: MHUD.

Since 2013, Wellington City has been growing on average by 1000 households per year. Early growth between 2013 and 2018 clearly outstripped growth in building consents over the same period. Building consents are now increasing and have surpassed household growth rates as of 2019. Whilst dwelling consents could be considered to be a lagging indicator in the sense that they respond to population growth, the gap observed between the two over 2013–2018 will require a significant increase in building consents before there is sufficient supply. The upward trend of household growth also continues to increase demand and maintain pressure for new dwellings. This gap is reflected in the latent demand that has been reported alongside the demand requirements in this HBA.

#### 4.1.6 Summary of market indicators

A clear picture begins to emerge from these indicators. Population growth has been strong in Wellington since late 2013. This upswing in population growth has not been matched by development activity. Resultantly, a shortage of supply has existed since that time, which continues to grow.

An increase in development activity is presently being seen but it is not proportionate to the growth in population that has been experienced. There have been periods where the growth in consents

<sup>12</sup> 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.

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(and by extension new dwellings) has exceeded population growth. However, despite these short periods, consents for new dwellings have not increased to such a level that would overcome the undersupply that has occurred over other periods of time, and keep up with the steady population growth.

This general low supply of new stock coming to market has led to generally low dwelling sales, especially as a percentage of overall housing stock. Recently, though later than in other parts of New Zealand, Wellington has experienced significant increases in both house prices and rents. This has had a consequential and predictable impact on housing affordability for both renters and buyers.

## 4.2 Price Efficiency Indicators

Clause 3.23 of the NPS-UD requires councils to monitor a range of price efficiency indicators. These indicators seek to provide a deeper insight into the operation of the land market and planning interventions within it.

There are four such indicators:

- Price-Cost Ratio
- Rural-Urban Differentials
- Industrial Differentials
- Land Concentration Index

These indicators are produced by the Ministry for Housing and Urban Development. They are reproduced directly<sup>13</sup>.

### 4.2.1 Price-Cost Ratio

The price-cost ratio indicator provides an insight into the responsiveness of the land market, relative to construction activity. It monitors the price of housing, compared to construction costs, to estimate how much of the remaining price is driven by the costs of the land (infrastructure-serviced sections) and whether this proportion is changing over time. In short, it monitors the proportion of land cost to the cost of a home. The ratio is composed of the following:

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<sup>13</sup> *Urban Development Dashboard* <https://huddashboards.shinyapps.io/urban-development/> *The Industrial Differential Indicator is not discussed in this housing update. Please see the 2019 HBA.*

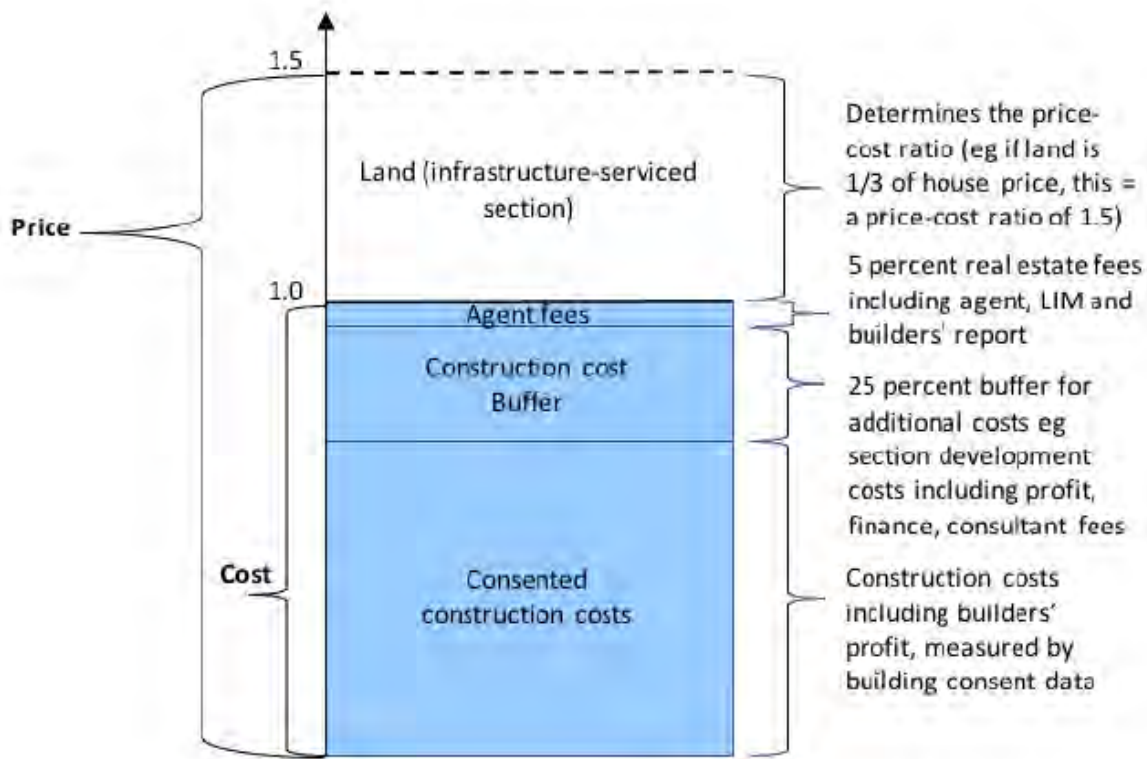


Figure 2.10. Composition of the Price-Cost Ratio. Source: MBIE and MfE.

A ratio of below one indicates that houses are selling for a price below the cost of replacing them. Such a situation may occur in areas of no growth or even contraction.

A price-cost ratio of between 1-1.5 is historically common where the supply of land and development opportunities is responsive to demand. As noted in the Evidence and Monitoring Guidelines<sup>14</sup> all urban areas in New Zealand had a ratio of between 1-1.5 some 20 years ago. In areas of New Zealand with more affordable housing markets, such ratios are still common.

And a price-cost ratio above 1.5 suggests, with some caveats, that land supply, i.e., availability of sections, and development opportunities are not keeping up with demand. As a result, land prices are having an effect on house prices.

The price-cost ratio for Wellington City Council is shown below in Figure 2.11. The figure shows Wellington City has experienced price-cost ratios over 1.5 since 1999. The figure also shows that the price-cost ratio has been rising and was sitting at about 2.1 in 2020 signalling that land constraints and lack of development opportunities are materially impacting on the price of dwellings. Wellington City has a higher ratio than the Greater Wellington region (1.7) showing there are more affordable land values elsewhere in the region. This is to be expected given Wellington City also has other geographical constraints on land supply including steep hills and the harbour which reduces the extent of developable land within proximity to the Central Business District (CBD). Demand is also driven by the desirability of Wellington City as a place to live, given the

<sup>14</sup> National Policy Statement on Urban Development Capacity: Guide on Evidence and Monitoring.

proximity to jobs, entertainment and other lifestyle factors that come from living closer to the regional CBD. These pressures will serve to influence higher prices.

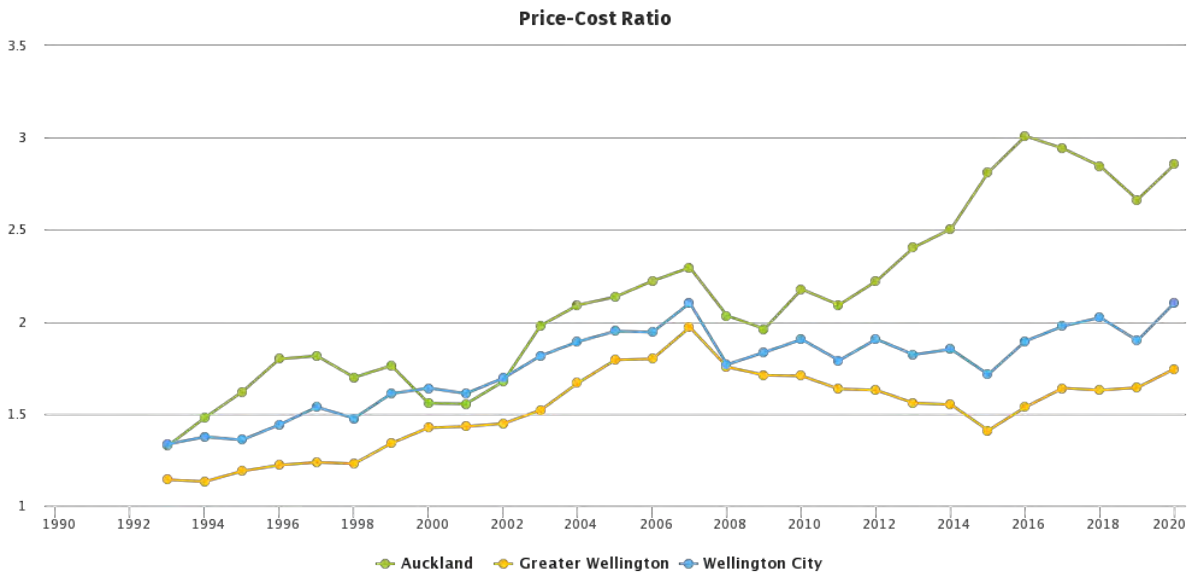


Figure 2.11. Price-cost ratio. Source: MHUD

The price-cost ratio for Greater Wellington and Wellington City have generally followed a similar trend over the time series compared to Auckland. In Auckland the price-cost ratio was steadily increasing between 2010 and 2016, whereas over the same period Wellington has remained largely constant. Between 2016-2018, Auckland’s price-cost ratio began to decrease whereas Wellington’s rose. Between 2018-2020 Wellington City appears to be following a similar trend to Auckland. An increasing price-cost ratio suggests that land supply and development opportunities are not meeting demand and land values are now disproportionately affecting the cost of houses.

#### 4.2.2 Rural-Urban differentials

The rural-urban differential has been calculated to compare the values of residential land either side of the boundary between urban and non-urban zones, after removing the impact of differences in amenities, geographic characteristics, and infrastructure. It seeks to measure the impact of land use regulations on urban sections on the edge of a city, compared with alternative land use regulations on the other side of the ‘boundary’. Traditionally this would be a distinction between residential and rural land uses.



The difference can be expressed as both a ratio and a dollar difference. For Wellington<sup>15</sup> the rural-urban ratio is:

Table 2.1. Wellington rural-urban ratio. Source: MHUD

Urban Area	Ratio	Difference (\$/m <sup>2</sup> )	Difference (\$/600m <sup>2</sup> section)
Wellington	2.30	\$201	\$120,371

If the value of land jumps where the zoning changes, this indicates that various land-use regulations are constraining urban development capacity. The differential estimates how much urban residential land values are being elevated because of these regulatory constraints. It is a key indicator of whether plans provide sufficient development capacity.

A ratio above 1.00 is a signal that zoning or other regulations may be constraining development capacity, increasing urban land values. A ratio of 2.30 shows that urban land is worth slightly more than twice the value of non-urban land. Additionally, there is a per 600m<sup>2</sup> section difference of over \$100,000. This suggests that there may be insufficient development capacity and that planning constraints are impacting on land costs.

In a Wellington City context seeing a higher ratio is not surprising. The City is geographically constrained with a limited supply of greenfield land at its northern fringe. Rural land is often particularly steep and difficult to develop, further reinforcing a lower land value for rural land. Further, while a ratio above 1 may highlight the impact of regulation on land prices, this is also to be expected given the practice of zoning land and limiting land use in other non-urban areas. This is fundamental to land use planning, and indeed the modelling that underpins this assessment in that the higher value a potential use, the more valuable the land. As such, a higher land value for urban areas should be expected and to an extent is needed. It is the scale of the difference that is perhaps of more importance. Further monitoring will highlight movements in this area.

### 4.2.3 Land Concentration

The last indicator addresses land concentration, or more particularly land ownership concentration. The indicator attempts to show to what extent undeveloped residential land (often associated with greenfield land) is concentrated in large land holdings. The indicator is again provided by MHUD.

The indicator measures undeveloped land currently zoned for residential development, as well as land that might be zoned for urban residential development in the future and whether or not this land is held by a few landowners that could have a disproportionate impact on its availability for development, and therefore on prices. This measure indicates whether concentrated land ownership can explain high or increasing price-cost ratios and provides a picture of what could

<sup>15</sup> It is noted that the ratio for Wellington is the ratio that has been prepared for the larger urban area, and not Wellington City specifically. Therefore the ratio should be considered as providing a regional, not city specific picture. However it is likely that the regional ratio is broadly representative of the Wellington City situation.

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happen in the future. This can help inform future development strategies that identify the location and timing of rezoning and infrastructure provision.

For Wellington, there was 178ha of undeveloped land in 2017 which equates to 5% of the City's residential zoned land. The land concentration index for Wellington City is 286 which is a low score, indicating a low level of land ownership concentration<sup>16</sup>. This indicates the vacant and undeveloped, residential zoned land in the city, is spread out and owned by a greater number of landowners. The indicator compares with a score of 1,476 for Upper Hutt and 1,225 for Porirua which indicate a high concentration of land ownership in a few landowners.

#### 4.2.4 Summary of price efficiency indicators

The analysis of the price efficiency indicators suggests that:

- The price-cost ratio for Wellington is higher than what would be expected in a responsive market. This is reflective of a generally limited land supply and few options for significant increases. This is not however a symptom solely of the impact of regulation. In a Wellington City context, a greater driving factor is the geographic limitation of the city in terms of its topography and harbourside location.
- The drivers of the higher price-cost ratio are also those that impact on the rural-urban differential. The rural-urban differential for Wellington City does suggest that urban land prices are higher than they should be. However, it is considered that such an increase is not solely caused by policy constraints. Policy constraints may have a role however Wellington's geographical constraints are such that they impact on the ability of the city to significantly increase greenfield land supply.

### 4.3 Assessment of housing for particular groups

This section attempts to provide an assessment of how well the demand for housing by certain groups is currently being met and how well future demands for housing by these groups will be met, as required by Clause 3.23(2) of the NPS-UD. The groups below have been identified for an initial assessment but this HBA recognises that not all groups have been reflected here. People may also belong to more than one group. There are limitations to the data available.

#### 4.3.1 Housing for Māori

Wellington City was home to 17,409 people who identify as Māori at the time of the 2018 Census<sup>17</sup>. This equates to approximately 8.5% of the city's total population. At a regional level, Wellington City is home to approximately 24% of the region's Māori population.

Affordability of housing in the city is a growing issue. The sections above demonstrate that Wellington City is experiencing significant increases in house prices as well as rises in rents. This is having a consequential and predictable impact on housing affordability for both renters and buyers.

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<sup>16</sup> The Council's examination of this indicator suggests that it has a level of inaccuracy in this measure for Wellington City.

<sup>17</sup> Figures based on the 2018 Census-Usually Resident Population.

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Looking specifically at Māori, it is clear at a national level, that there is disparity between Māori and non-Māori across a range of measures. This disparity is evident when looking at homelessness, high rental costs relative to income, low rates of home ownership and intergenerational poverty. Nationally, Māori people make up 37% of public housing tenants despite comprising just under 17% of the general population. Māori home ownership rates are also significantly lower than ownership rates for non-Māori. In Wellington City home ownership rates amongst Māori are 27% compared to 45% for non-Māori<sup>18</sup>. This strongly suggests that for many Māori, their housing needs are not well met in the City.

Housing has an essential role in breaking cycles of poverty and dependence. Having access to safe and healthy homes in the right location, of the right size, and at the right price will be particularly important to improve the outcomes for Māori within Wellington.

Across New Zealand, there are a range of initiatives being set up to address housing supply and affordability, many of which specifically target Māori and aim to accelerate Māori housing and wellbeing outcomes.

The Council has a role to play in supporting Māori people to realise their housing aspirations into the future by enabling a range of housing types and housing to suit a range of whānau sizes. Many of the assumptions underpinning housing demand in this HBA is based on an average household size which may not be particularly reflective of household sizes for particular groups such as Māori where larger inter-generational families/whānau may be more commonplace. In supporting a range of housing types, the District Plan review will include new provisions around Papakāinga<sup>19</sup> housing for the city. Te Aro Pā is Wellington's first papakāinga. Dwell is managing the homes on behalf of the Te Aro Pā Whenua Trust which represents the collective owners of the land. They have developed a contemporary kāinga (village) made up of ten three-bedroom units and four one-bedroom units for young families, kaumātua and professionals who have a connection to the original Ngāti Ruanui and Taranaki Iwi people of Te Aro Pā. In 2016, both Ngāti Toa and Port Nicholson Block Settlement Trust signalled they are exploring the possibility of papakāinga development in their respective areas of interest.

Wellington City Council are also investigating a programme of work to further explore demand and aspirations for housing by Māori within the City. In addition, the Wellington Regional Growth Framework also includes an initiative for an Iwi-Māori housing plan which will provide insights on

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<sup>18</sup> Individual home ownership indicates whether or not a person aged 15 years and over owns (or partly owns) the dwelling they usually live in or holds the dwelling in a family trust. The classification for this variable has changed since the 2013 Census and the 2018 Census included a category for 'hold in a family trust'. Stats NZ have indicated the 'hold in a family trust' and 'own or partly own' categories can be grouped and used for comparing the 2018 Census data with earlier data. This variable provides information on home ownership at the individual level ie whether individual people own their home or not. Data sourced from Stats NZ: Individual home ownership and ethnic group (grouped total responses) by age group and sex, for the usually resident population count aged 15 years and over, 2006, 2013, and 2018 Censuses (RC, TA, SA2, DHB) (stats.govt.nz). Non-Māori combines European, Pacific peoples, Asian, Middle Eastern/Latin American/African and other ethnicity.

<sup>19</sup> Papakāinga has traditionally referred to a cluster of dwellings occupied by a particular whānau/hapū group and located on their ancestral whenua (land). More recently, the term has also been used to refer to a communal living environment that supports Māori who don't have an ancestral connection. They generally offer a mix of uses, including private residential areas, alongside semi-private and/or communal spaces.

current and likely future demands and aspirations for housing by Māori. This will inform future iterations of the HBA.

#### 4.3.2 Low-income households

When New Zealanders are in need of public housing, their needs are recorded on either the Housing Register or the Transfer Register<sup>20</sup>. The Housing Register captures the housing requirements of people who have applied for public housing through the Ministry of Social Development (MSD). Essentially it represents a waiting list for public housing. Nationally, the Housing register was up 45.3% (as of March 2021) compared to the previous year, demonstrating a growing need for public housing around the Country.

Within Wellington City there are 2,014 public housing tenancies and 96 transitional housing places<sup>21</sup>; these are administered by Kāinga Ora and community housing providers. As at March 2021, there were 846 households on MSD’s housing register and 129 households on the transfer register<sup>22</sup>. Essentially this means 846 households are waiting for public housing tenancies to come available. Compared with the wider Wellington Region, Wellington City currently has the largest waiting list for public housing. This is shown in Table 2.2.

Table 2.2. Housing Register- Number of units by bedroom size, March 2021<sup>23</sup>.

	Number of bedrooms required						Total
	1	2	3	4	5+	unknown <sup>24</sup>	
Wellington City	522	198	84	30	9	6	846
Porirua City	141	132	39	9	3	3	330
Upper Hutt City	75	66	24	12	0	0	174
Lower Hutt City	297	195	63	9	6	0	573

<sup>20</sup> The Housing Register is prioritised by need and consists of social housing applicants who have been assessed as being eligible. The Transfer Register is made up of people already in social housing, but who have requested and are eligible for a transfer to another property. Tenants may require a transfer to a larger or smaller unit for example.

<sup>21</sup> Public Housing Tenancies includes Kāinga Ora and community housing provider tenanted properties that are either subsidised through Income-Related Rent Subsidy or the tenant is paying market rent. The figure is based on housing stock as at 31 December 2020. Transitional housing provides safe, short-term accommodation for people in need, along with tailored housing related support while they’re there. Transitional housing is managed by providers, who are skilled in supporting tenants with a range of social and tenancy-related services, and are also responsible for maintaining the properties. The transitional housing programme is led by HUD in collaboration with Kāinga Ora, transitional housing providers, the Ministry of Social Development and the wider housing sector. People living in transitional housing pay rent of up to 25% of their income, which is in line with income-related rents for public housing. The balance is subsidised to providers by HUD. Public Housing in Wellington Region – December 2020 (hud.govt.nz).

<sup>22</sup> Housing Register - Ministry of Social Development (msd.govt.nz).

<sup>23</sup> Source: Ministry of Social Development.

<sup>24</sup> Unknown includes addresses that cannot be allocated to a Territorial Authority.

Kapiti Coast District	105	45	24	3	0	0	180
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Table 2.2 also shows a breakdown of the bedrooms required based on those people on the MSD Housing Register. The figures suggest the priority for additional social housing in Wellington City is primarily in 1- and 2-bedroom units; equating to 85% of the current demand for social housing in the City.

The Ministry of Housing and Urban Development Public Housing Plan 2021-2024 sets out the Government’s public housing supply intentions for the next four years. It provides information about the location and number of additional public housing places that will be delivered by June 2024. For the Wellington Region the plan states there are 2,259 households on the Housing Register and there is a Housing Deprivation of 8% for the Region<sup>25</sup>. The plan proposes a 2020-2024 supply intention of an additional 470-690 public housing places and 160-170 Transitional Housing places for the region. The plan suggests Wellington City will be the target for this increased supply where there is high housing deprivation.

In addition to the public housing described above, Wellington City Council also provides ‘city housing’. City housing is available to eligible, low-income households and particularly for the fit elderly, refugees, migrants and those with low-level psychiatric needs or physical disabilities.

Wellington City Council is the largest council led public housing provider in New Zealand. The Council owns 1,931 properties across Wellington, supporting over 3,200 people.

The Council currently has 523 applications on its housing waitlist with 79 applications pending further information<sup>26</sup>. In addition, there are 60 current tenant households waiting for a transfer. Council data shows that of the households waiting, at least 164 of these have been registered for over 18 months.

City housing properties are broken down into five geographic ‘zones’. Applicants can indicate their preferred zone(s) at the time of their initial interview. The figure below illustrates the waitlist for each zone and compares this with the total number of existing units in these zones. The majority of the existing Council housing stock is focused in Central Wellington and South Wellington. These areas also have the highest numbers on the waiting list. This may suggest a preference from

<sup>25</sup> *Public-Housing-Plan-2021-2024-web.pdf (hud.govt.nz) Figures as of September 2020. Housing Deprivation (2018) represents the number of people experiencing severe housing deprivation in a given region, as a percentage of the nationwide total. For example, 6% of people experiencing severe housing deprivation in New Zealand live in Northland. Note some figures have been rounded. Severe housing deprivation is closely associated with homelessness. It refers to people living in severely inadequate housing due to a lack of access to minimally adequate housing. This means not being able to access a private dwelling to rent or own that has all basic amenities. Housing that lacks at least two of the three core dimensions of housing adequacy – habitability, security of tenure, and privacy and control – is deemed severely inadequate.*

<sup>26</sup> *It is noted that there may be a number of applicants on both the Council waitlist and the public housing waitlist managed by the Ministry of Social Development (MSD). Up until now there has been no ability to share data across agencies to get a true picture of housing need in Wellington. In 2021, the Council launched a workstream to look at a data sharing agreement with MSD. This will assist in future social housing planning across the region.*

tenants for housing in the central city or inner suburbs but may also be influenced by a perceived increased likelihood of getting a unit in these locations where there are more existing units.

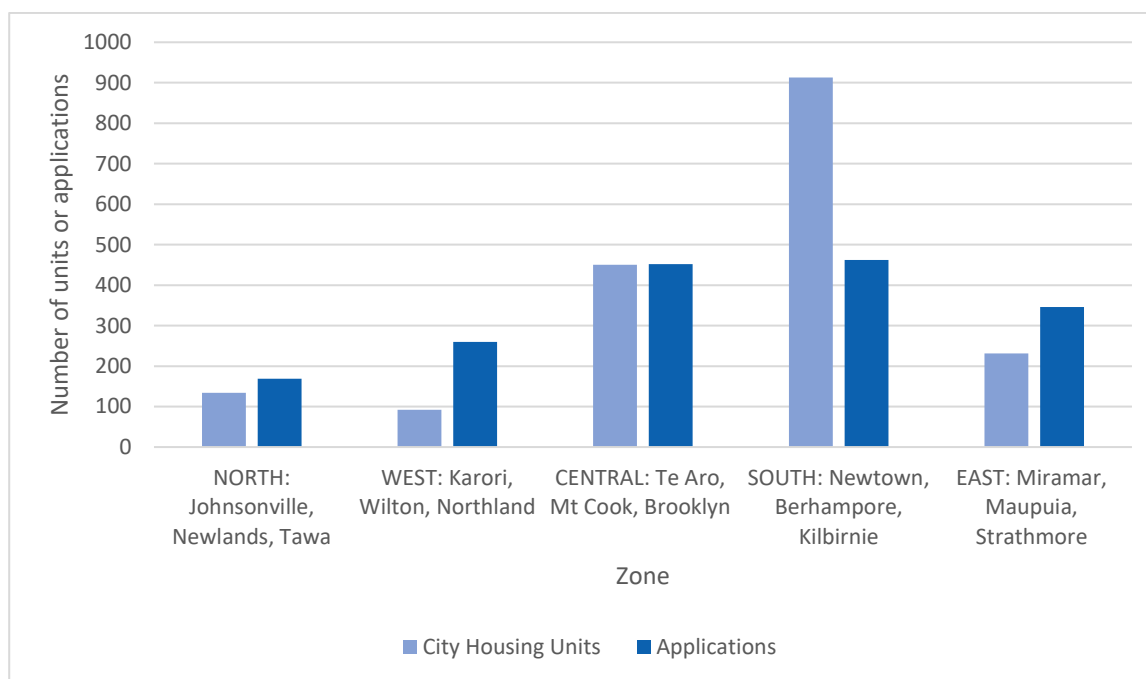


Figure 2.12. Number of existing city housing units<sup>27</sup> and applications for city housing units by zone. Source: WCC city housing data.

The Council’s housing portfolio includes apartment complexes, townhouses and stand-alone houses. The majority (69%) of units are studios and one-bedroom units and 2% of the portfolio are larger four-to-six-bedroom units. This complements the portfolio managed by Kāinga Ora of multi-bedroom units for families.

A key difference between the Council’s city housing and public housing by Kāinga Ora or other registered Community Housing Providers (CHP) is that tenants in city housing are not eligible to receive the Income Related Rent Subsidy (IRRS). City housing tenants currently pay 70% of market-assessed rents, regardless of their income and circumstances. In comparison, tenants in other social housing properties (public housing tenancies) pay no more than 25% of their net income in rent. This difference leads to inequity between city housing tenants and those tenants who receive IRRS. In other words, city housing is not as affordable as public housing. A high-level analysis of data collected as a part of the 2021 City Housing Tenancy Review indicates that nearly 85% of current city housing tenants would be eligible for IRRS if it were available to them. This may also explain why there are more people applying for housing with Kāinga Ora in Wellington than with the Council.

Of the Council’s total housing portfolio, 183 units are leased to external providers, including Kāinga Ora, Community Housing Providers and other housing providers. These leasing arrangements mean

<sup>27</sup> This excludes leased properties such as the 104 units leased to Kāinga Ora.

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that most tenants in these properties can receive the IRRS, and therefore pay much lower rent than if these properties were managed directly by the Council.

As housing has become increasingly unaffordable within the city, the demand for social housing is rising. As city housing rental rates are linked to market rents (rather than rent being set as a proportion of income) upward pressure on rental rates in the city places further pressure on city housing tenants and the affordability of city housing.

#### 4.3.3 Severely housing deprived (Homeless) population

Severe housing deprivation is synonymous with homelessness. The New Zealand Definition of Homelessness (NZDH) is the official statistical standard of homelessness. 'Homelessness is defined as living situations where people with no other options to acquire safe and secure housing: are without shelter, in temporary accommodation, sharing accommodation with a household or living in uninhabitable housing.'

According to the Severe Housing Deprivation 2018 Estimate Report produced by MHUD, there were 1,254 people in Wellington City considered to be severely housing deprived in 2018<sup>28</sup>.

Presence of a severely housing deprived population within the City shows the housing needs of this vulnerable group is not currently being met. This is likely closely linked to the shortage of public and Council housing outlined above.

#### 4.3.4 Housing choice for Elderly

Population projections for the City show our population is ageing. The population aged 70 years old and over is projected to rise from 6.8% in 2018 to 12.2% in 2048. By 2048, around 17.6% of the population will be over 65 years of age. At the same time our working age population is expected to fall from 73.9% in 2018 to 67.8% in 2048. All parts of the region show a similar trend of an ageing population to be supported by a smaller working base, although Wellington City is forecast to have a higher proportion of working population than elsewhere in the region at 2051.

As we get older, our housing needs change. Elderly people are less likely to have dependents at home and are therefore more likely to require smaller dwellings (typically 1 or 2 bedrooms). Homeowners or renters would likely downsize into smaller units provided there are sufficient smaller units in the private market. In 2018, only approximately 36% of dwellings in the City were 1 or 2 bedrooms<sup>29</sup>. The growth of the elderly population is contributing to the increase of households and therefore new dwellings, relative to the overall population growth. Smaller units on the private market would need to be available to a range of incomes, recognising that income available for housing costs can change through a person's lifetime. Assumptions can also be made that our

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<sup>28</sup> As a vulnerable and hard-to-find population it is expected that this figure has been undercounted in the census. This figure is based on those without shelter, in temporary accommodation or sharing accommodation but excludes those living in uninhabitable housing (lacking certain basic amenities) *Severe-Housing-Deprivation-2018-Estimate-Report.pdf* (hud.govt.nz).

<sup>29</sup> Stats NZ 2018 census data.

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elderly population will favour low maintenance properties with level access and where services and facilities are in close proximity.

There are also several housing options catering exclusively to elderly persons. These are typically termed retirement villages or care homes.

Retirement villages are defined by the Retirement Villages Act 2003 as ‘...premises that contains 2 or more residential units that provide, or are intended to provide, residential accommodation together with services or facilities, or both, predominantly for persons in their retirement, or persons in their retirement and their spouses or partners.’ Retirement villages vary around the Country and each will have its own entry criteria to become a resident. Commonly retirement villages will have an age criteria of over 70-75 years however some may allow entry to residents at 65 years or 60 years. Residents of retirement homes may have access to communal facilities within the village although residents are typically living independently (i.e., do not require full-time specialist care although may be considered assisted living).

Within Wellington City, there are a number of retirement villages<sup>30</sup>:

- Malvina Major Retirement Village, Khandallah
- Village at the Park, Newtown
- Rita Angus Retirement Village, Kilbirnie
- Huntleigh Retirement Apartments by Enliven, Karori
- Selwyn Sprott Village, Karori

Care homes (or rest homes) provide specialist housing for elderly persons who require full-time care. The majority of existing retirement villages in Wellington City operate a care home in the same premises. In addition, there are a number of additional care homes, not associated with retirement villages. The care homes within the City are:

- Ultimate Care Poneke House, Newtown
- Irwell Rest Home, Island Bay
- Ultimate Care Maupuia, Maupuia
- Ultimate Care Churtonleigh, Churton Park
- Longview Home by Enliven, Tawa
- Te Hopai Home and Hospital, Newtown
- Alexandra Rest Home, Newtown
- Village at the Park/Arvida Care, Berhampore
- Millvale House, Miramar
- Vincentian Home for the Elderly, Berhampore
- Cashmere Home and Cashmere Heights Home by Enliven, Johnsonville
- Huntleigh Home by Enliven, Karori
- Malvina Major Retirement Village (Care Home), Khandallah
- Village at the Park

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<sup>30</sup> Based on listings appearing in *Village Guide Retirement Villages and Rest Homes across NZ | Find & Compare (villageguide.co.nz)*.



- 
- Rita Angus Retirement Village (Care Home), Kilbirnie
  - Selwyn Sprott Village, Karori

At the time of preparing this HBA, the capacity of these retirement villages and rest homes to meet the current and future demand of elderly residents is unclear. Further examination of capacity levels would be useful context for future iterations of the HBA.

In addition to the existing supply, a new Bupa Retirement Village and Aged Care Complex in Crofton Downs is under construction and expected to be completed in early 2022. The village will provide 85 independent units and 49 care rooms and care suites. This new retirement village in Crofton Downs is expected to provide additional supply to meet the demand for elderly persons housing. At the time of writing, a proposal for a new Ryman Healthcare retirement village and care home in Karori of around 300 units is also awaiting a decision on resource consent. If granted, the Karori Village is proposed to provide both independent living units and serviced apartments within the village as well as a resthome offering hospital care and specialist dementia care units. The market appears to be responding to the forecast growth of the elderly population with additional retirement village and care home capacity.

#### 4.3.5 Student Accommodation

Wellington City is home to three main tertiary institutions – Victoria University, Massey University and Weltec. The University of Otago also has a presence in the city.

Increased pressure on the rental market has a flow on effect for student accommodation. Principally there is a shortage of rental housing in the City. This shortage of supply has seen marked increases in rental prices which has affordability effects for tenants. These effects are even more acute for students. In a worst-case scenario, students are simply struggling to find accommodation.

Beyond the immediate effects on students, these issues affect the institutions directly, and in turn have flow on effects for the City.

Victoria University advises that first year students generally do not experience problems finding accommodation as they rely mainly on university owned halls of residence<sup>31</sup>. There are a number of these halls available for first year students within Wellington City. Together the halls of residence provide around 3,963 beds<sup>32</sup>. However, returning undergraduate students, postgraduate students and international students are more likely to seek private sector accommodation. With a shortage of rental accommodation available city-wide, students are struggling to find suitable, affordable accommodation. The current 2021 student loan living costs stipend is set at \$242.53 a week<sup>33</sup>. This

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<sup>31</sup> Two senior staff from Victoria University were interviewed as part of the preparation of the HBA 2019.

<sup>32</sup> There are 16 University Halls within Wellington, of which Victoria University operate 14 of these and Massey University operate two. Victoria University Thesis: A case for student housing: A holistic approach to student housing in the modern university learning environments 2020.

<sup>33</sup> Student Loan living costs - StudyLink [www.studylink.govt.nz/products/a-zproducts/student-loan/living-costs.html](http://www.studylink.govt.nz/products/a-zproducts/student-loan/living-costs.html)

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is the maximum amount of loan students can borrow toward their weekly living costs. Rising rent prices puts pressure on the student body to manage their living costs.

The demand for student housing will also change as the student body moves in, around and out of Wellington City through the year. Research found that during the academic year close to 50% of the student body relied solely on the private housing market for accommodation, whereas outside of the academic year this drops down to 30% of the student population, with many students choosing to return to live with their parents or a relative over the break<sup>34</sup>. The rental market is usually busiest over January-March when many students are looking for accommodation at the start of the academic year. Victoria University has reported seeing declining student numbers, particularly for second year students, who are moving to different locations having completed their first year in Wellington. The University suspects this is linked to rental shortages and rent prices in the city.

Victoria University is considering options for addressing this issue including what further actions it can take to provide additional residential accommodation options. It sees the Council as having a key role in ensuring that there are sufficient and affordable options for student accommodation.

Ensuring there is sufficient, affordable student accommodation for our current and future students within Wellington City requires further analysis and planning. Future HBA's should build on any data and research available to better understand the housing need for students.

#### 4.3.6 Visitor Accommodation

Visitors to the city require temporary accommodation. This is typically provided in the form of hotels, motels or property rental services such as Airbnb.

Hotels in Wellington are predominately located in the central city. Demand for visitor accommodation is expected to remain strongest in the central city given the proximity to the airport, visitor attractions, bars and restaurants. The Council zones the city centre appropriately to allow for a mix of uses including new hotels or serviced apartments for visitors.

Prior to 2020, hotel accommodation was experiencing significant occupancy in Wellington City. However, the Covid-19 pandemic, and lack of international visitors is having a considerable impact on the hotel industry. In 2019, hotel occupancy was 78% which fell to just 49% in 2020<sup>35</sup>. Two hotels in Wellington City are also being exclusively occupied for managed isolation and quarantine facilities (MIQ) at present<sup>36</sup>; these are Bay Plaza Hotel Wellington and Grand Mercure Wellington. If visitor numbers increase to peak pre-covid levels (2019 levels), hotel accommodation may show similar signs of stress, especially if MIQ facilities remain in place, effectively removing two city hotels. However, in addition to the commercial hotel sector, property rental services such as Airbnb have experienced significant growth in recent years. Data from AirDNA shows that in January 2015 there were 60 'Entire Place' listings available in Wellington. By January 2020 that had grown to 915

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<sup>34</sup> Victoria University Thesis: A case for student housing: A holistic approach to student housing in the modern university learning environments 2020.

<sup>35</sup> <https://www.colliers.co.nz/en-nz/research/new-zealand-hotel-market-review-2020>

<sup>36</sup> The purpose of managed isolation is to ensure arrivals entering New Zealand do not have COVID-19 before they are released into the community. All visitors to New Zealand are currently required to stay in a Managed Isolation and Quarantine Facility for 14 days, operated by the NZ Government.

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‘Entire Place’ listings. On average, of the ‘Entire Place’ listings for Wellington City around 45% are generally hotel equivalent. In other words, these are studio and one-bedroom listings which are most likely to compete directly with the hotel sector. The remainder are larger houses which can provide accommodation choice for visitors in groups that differs from a typical hotel service (i.e., use of kitchen facilities, living spaces and garden space suited to groups and families travelling together).

The latest figures available for September 2020 showed a decline in ‘Entire Place’ listings from 808 in September 2019 to 558 in September 2020<sup>37</sup>. This is likely attributed to the current border restrictions for visitors to New Zealand.

While the listings figures represent supply for visitor accommodation, it also indicates housing stock that is not available for long term rental or permanent occupation. However, even at its highest peak in 2020, 915 dwellings being listed represents approximately 1% of the overall housing stock: being an estimated 88,955 dwellings in 2020<sup>38</sup>. Therefore, by this indicator, it does not suggest that visitor accommodation is significantly impacting on the housing supply in the city.

Nationally, around 10% of dwellings were unoccupied on census night 2018. Compared to the national average, for Wellington City, only 6% were unoccupied on census night. Broken down further, of the unoccupied dwellings in the city, 45% were recorded as ‘empty dwellings’ with the remainder being ‘residents away’<sup>39</sup>. This suggests that there are less dwellings in Wellington sitting vacant or as second homes than the national average.

Overall, it is clear that visitor accommodation in Wellington is not reliant solely on the hotel sector. The combination of hotels and property rental services such as Airbnb provide a range of accommodation and demand is likely to be able to be met in the immediate future. Hotels remain appropriately enabled within the land use zoning of centres. The indicators also suggest that the use of private dwellings as visitor accommodation and holiday homes is not likely to be significantly affecting supply of dwellings for permanent residential use.

#### 4.3.7 Disabled persons

Approximately 4.2% of the city’s population are living with some form of disability<sup>40</sup>. Disability could include hearing, vision, psychological or physical. Living with a disability will undoubtedly influence and affect housing choice. Data available from Statistics NZ shows the average weekly income for a disabled person between 15-64 years of age in 2020 was \$594 compared to \$944 for a non-

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<sup>37</sup> AirDNA data as of September 2020 provided to Wellington City Council. AirDNA collects data from property rental services including Airbnb but this is not exclusive.

<sup>38</sup> Based on Sense Partners dwelling projections.

<sup>39</sup> NZ.Stat (stats.govt.nz).

<sup>40</sup> <https://www.stats.govt.nz/tools/2018-census-place-summaries/wellington-city#health> . A person is regarded as disabled if they have 'a lot of difficulty' or 'cannot do at all' one or more of six activities referred to as Activity limitations in the 2018 Census; walking, seeing, hearing, cognition, self-care, and communication).

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disabled person<sup>41</sup>. Not only are disabled people more likely to have lower incomes than non-disabled people, their disability can have a significant impact on their housing needs. Much of the general housing stock in Wellington may not be suitable for people living with certain disabilities. In a city like Wellington, physical mobility impairment is particularly limiting on housing choice given much of the City's housing is in steep areas with access via stairs or steep paths. For persons with a disability, living in accessible or adapted housing can enable them to lead dignified and independent lives. To cater for our disabled population, and to meet the needs of our ageing population, a range of accessible or adaptable units are required to provide a choice in housing. At present, there is a lack of data on the proportion of accessible housing available in the City and the extent to which intervention in planning and building regulation may be needed to increase supply and choice.

#### 4.3.8 Summary for groups section

This section has sought to identify current housing demand and supply of housing for particular groups. More information is still needed to start to accurately answer this question of how the housing needs of particular groups is being met or will be met in the future. This is an area of the HBA which could be further developed. The assessment of housing need for low-income households has focused on data of social housing and Council provided housing. There are waitlists for both public housing and Council housing showing supply is not meeting the needs of this group. The presence of a severely housing deprived population within the City also shows a lack of adequate housing to meet the needs of all Wellingtonians, although this is likely closely linked to the social housing. Future HBAs will aim to report back on progress to better align supply and demand of public/Council housing.

A key influence in housing choice and demand is income and this will be particularly important for those groups with income-related characteristics. In addition, for some of these groups, there may be specific drivers such as accessibility, access, household size and location which may play a role in their housing needs as a group.

More Census questions addressing housing needs for specific groups would be helpful in informing future HBAs.

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<sup>41</sup> NZ.Stat ([stats.govt.nz](https://stats.govt.nz))

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# 5 Housing Demand

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## Key Findings

*Wellington City will grow by 70,698 people between 2021 and 2051.*

*To accommodate this growth, the City will require 36,621 new dwellings. This includes the competitiveness margin (15-20% over projected demand) as required by the NPS-UD.*

### 5.1 Population and Household Growth

Demand for housing is driven by increases in population. As noted above, this report utilises projections provided by Sense Partners. Sense Partners provided a range of projections; recognising the complexity and uncertainty in estimating future growth; and this HBA has chosen to adopt the median (50th percentile) figures.

Population growth for Wellington City Council over the period 2021-2051 is projected to be:

*Table 2.3. Projected population growth for Wellington City, 2021-2051.*

	Estimated population 2021 <sup>42</sup>	Population growth 2021-2024	Population growth 2024-2031	Population growth 2031-2051	Estimated population 2051	Total Population growth 2021-2051
Projected population	219,016	8,472	18,608	43,869	289,714	70,698

To determine demand for additional dwellings to meet population growth, the population growth is divided into households. Each additional household is then assumed to represent demand for an

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<sup>42</sup> The base year 2021 requires an estimate in the absence of an accurate population count. The last census was taken in 2018 and the population of Wellington was 211,200 people.

additional dwelling<sup>43</sup>. This results in a projection of the number of dwellings required to meet that population growth as follows<sup>44</sup>:

Table 2.4. Demand for dwellings, Wellington City, 2021-2051. Data source: Sense Partners.

	Estimated dwellings 2021 <sup>45</sup>	Additional dwellings 2021-2024	Additional dwellings 2024-2031	Additional dwellings 2031-2051	Total additional dwellings 2021-2051
Total dwellings (median projection)	90,266	4,148	8,426	18,724	31,298

The table above indicates that an additional 31,298 dwellings will be required within Wellington City to meet forecast population growth. In accordance with clause 3.22 of the NPS-UD local authorities must provide for a competitiveness margin for development capacity, over and above the expected demand, in order to support choice and competitiveness in housing markets. In other words, the Council needs to provide a suitable buffer of over-supply. The competitiveness margin is set at 20% for the short (2021-2024) and medium term (2024-2031) and 15% for the long term (2031-2051). Applying the competitiveness margin, the demand for dwellings is calculated below.

Table 2.5. Demand for dwellings, adjusted for over-supply, 2021-2051. Data source: Sense Partners.

	Estimated dwellings 2021	Additional dwellings 2021-2024	Additional dwellings 2024-2031	Additional dwellings 2031-2051	Total additional dwellings 2021-2051
Total dwellings (median projection)	90,266	4,978	10,111	21,532	36,621

## 5.2 Latent Demand

In addition to the demand identified above, recent under-development of housing compared to population growth suggests that an existing latent demand for housing exists. This is most readily estimated by considering historic population growth against the construction of new dwellings<sup>46</sup>. In

<sup>43</sup> For the purposes of calculating dwelling demand, growth in the population of people in 'non-private dwellings' (ie those living in hospitals, prisons, educational institutions) is excluded. In other words, growth in this sector of the population is not considered to equate to demand on dwellings.

<sup>44</sup> The dwelling demand shown (additional dwellings) represents demand for stand-alone or attached (terrace and apartment) dwellings only. Demand for 'other dwellings' is assumed to remain constant. 'Other dwellings' includes people living in tents, mobile dwellings, motor camps, make-shift shelters, rough sleepers and 'non-private dwellings'.

<sup>45</sup> The base year (2021) estimate of total dwellings includes 'other dwellings'.

<sup>46</sup> Constructed dwellings are measured by the issuing of a Code Compliance Certificate. Some inaccuracy may exist in the monitoring of this data. Constructed dwellings are used over consented dwellings to avoid counting consented dwellings that are not implemented. Population growth over

determining latent demand, the number of dwellings built for each year from 2000-2020 was contrasted against population growth over the same timeframe. Average household size was then applied to determine whether an adequate number of dwellings were constructed to keep pace with population growth<sup>47</sup>.

This is demonstrated in Table 2.6 and Figure 2.13 below:

Table 2.6. New dwelling construction and population growth in Wellington City, 2000 – 2020. Source: WCC.

Year	Built Dwellings	Population Growth	Dwellings Required	Shortfall/Surplus
2000	325	900	344	-19
2001	169	1,600	611	-442
2002	336	3,300	1,260	-924
2003	583	4,400	1,679	-1,096
2004	543	3,300	1,260	-717
2005	1,158	2,400	916	242
2006	898	3,200	1,221	-323
2007	824	1,800	687	137
2008	588	1,300	496	92
2009	959	1,700	649	310
2010	1,179	1,200	458	721
2011	375	1,700	649	-274
2012	478	1,200	458	20
2013	463	900	344	119
2014	484	2,400	916	-432
2015	498	3,000	1,445	-947
2016	488	3,100	1,183	-695
2017	660	2,400	916	-256
2018	500	2,800	1068	-568
2019	675	1,900	725	-50
2020	577	3,100	1,183	-606
<b>Total</b>	<b>12,760</b>	<b>44,500</b>	<b>18,468</b>	<b>-5,708</b>

time was determined using data on the estimated resident population between 2000-2020 from Infometrics. Found at: <https://ecoprofile.infometrics.co.nz/Wellington%2BCity/Population/Growth>

<sup>47</sup> The average household size was 2.62 in 2013 and this was applied as the average to calculate historic demand. Source: Forecast ID 2020.

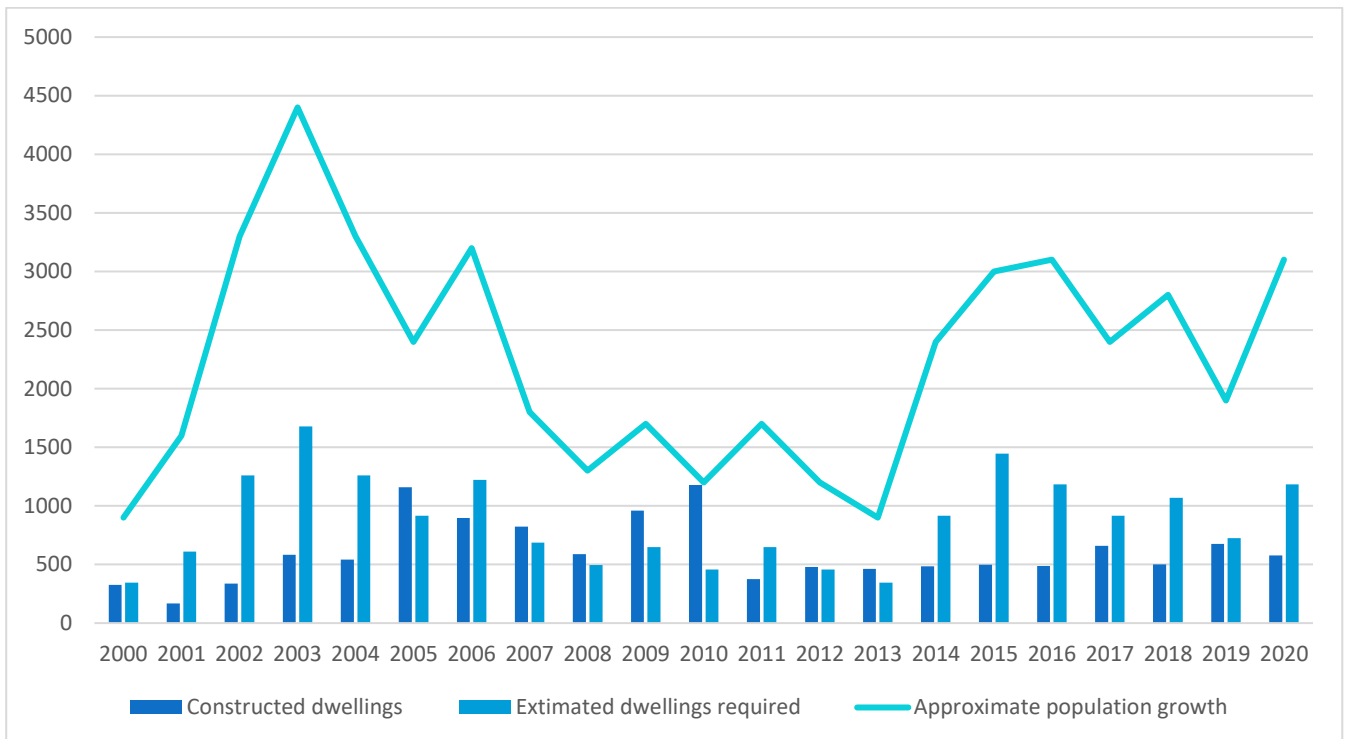


Figure 2.13. New dwellings and population growth, Wellington City, 2000 – 2021. Source: WCC.

Monitoring the rate of new dwellings constructed in the City since 2000, against an estimated demand based on population growth, suggests an existing undersupply of 5,708 dwellings. This has increased from an estimated latent demand of 4,652 at the end of 2016 as presented in the previous HBA 2019.

Given the estimations and limitations that are involved in preparing the above data, it has not been included in the core demand numbers that form the basis of this HBA. The limitations of this data include limited exploration of the types and size of dwellings constructed, and the accuracy of the population growth, particularly around retention in local areas where it is possible to easily cross a local boundary and be miscounted. As such, this latent demand is reported alongside the core demand number in order to demonstrate the extent of the possible latent demand but highlighting the degree of uncertainty involved in its estimation.

### 5.3 Demand by Typology

The overall demand can be considered by type of dwelling. Broadly, demand is described in this HBA across three categories:

- Stand-alone dwellings – typically refers to stand-alone houses on separate allotments.
- Terrace dwellings – typically refers to terrace housing, semi-detached dwellings and low-rise apartment buildings.
- Apartments – in a Wellington context, refers to higher density apartments, generally within the CBD.



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Focussing on different typologies is important given the range of household types in the City, and the variation in typologies across different areas of the City.

Based on the projections by Sense Partners the following demand by dwelling type is projected<sup>48</sup>:

*Table 2.7. Projected dwelling demand by type.*

	<b>2021-2024</b>	<b>2024-2031</b>	<b>2031-2051</b>	<b>Total</b>
Stand-alone dwellings	2,468	3,893	9,301	<b>15,662</b>
Terrace dwellings	1,904	4,562	8,296	<b>14,762</b>
Apartments	606	1,656	3,935	<b>6,197</b>
<b>Total</b>	<b>4,978</b>	<b>10,111</b>	<b>21,532</b>	<b>36,621</b>

The demand model used for this HBA grouped demand into stand-alone and attached housing. Attached housing could comprise either terrace style housing or apartments. To differentiate the demand by terrace and apartments, the demand for attached housing in central Wellington was apportioned to apartments in the table above. This is discussed further in the following section.

## 5.4 Demand by location

In addition to addressing overall demand, it is important to consider where the demand exists for the various housing types. For the purposes of this HBA, Wellington has been divided into seven broad catchments as shown in Figure 2.14.

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<sup>48</sup> Adjusted for competitiveness margin in accordance with clause 3.22 and 3.27 of the NPS-UD.

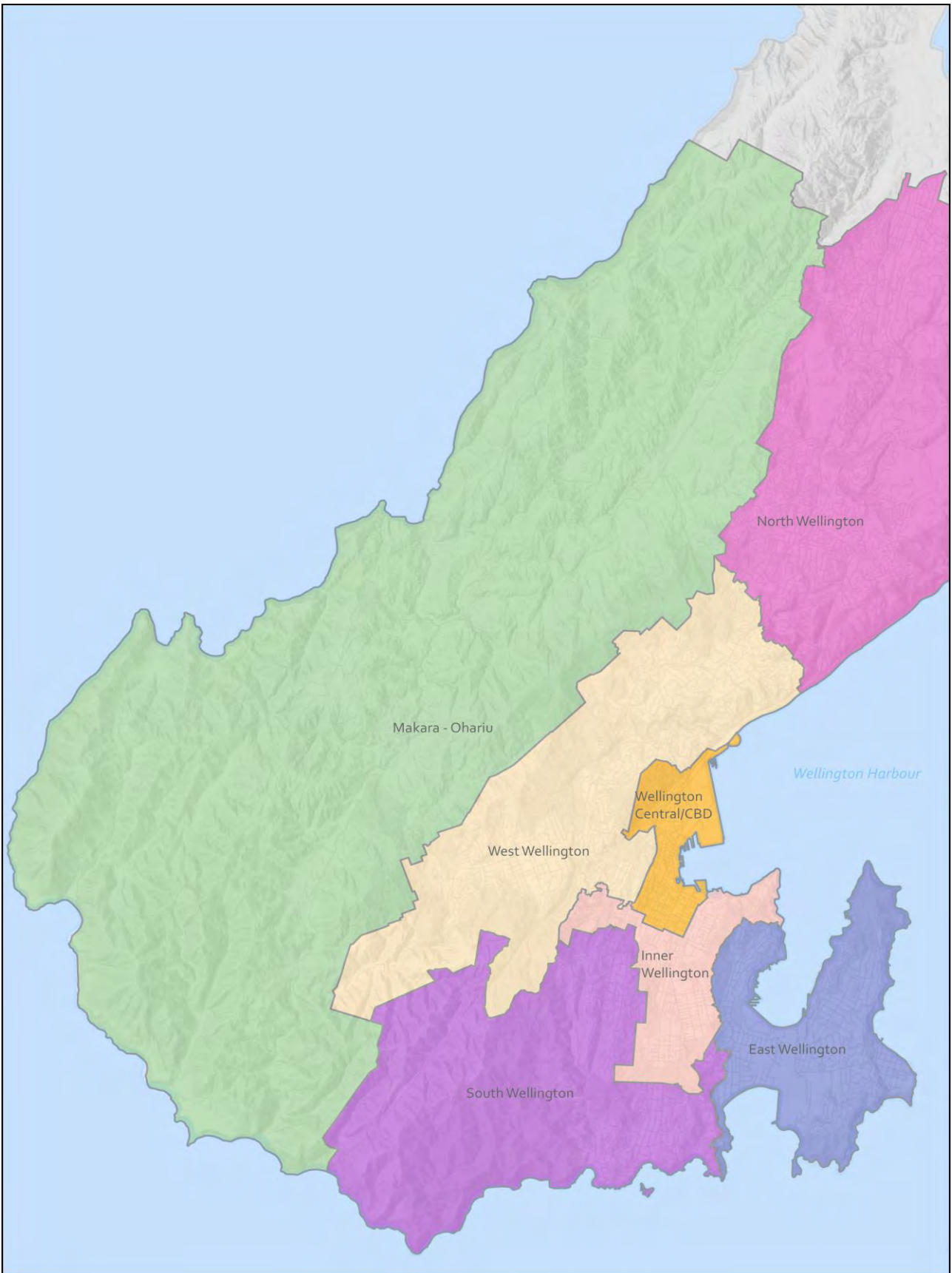


Figure 2.14. Wellington City residential catchments. Source: WCC.

The above divisions have been created by grouping together areas of the City that form logical housing catchments i.e., the southern suburbs vs. the eastern suburbs. They represent clearer sub-markets of the City in which the demand and supply of different typologies can be contrasted at a more detailed level.

The following tables show demand by housing type across the seven catchments<sup>49</sup>. In preparing these tables, several assumptions were made. First, all demand for ‘attached’ dwellings in Central Wellington is categorised as apartments and consequently no demand is shown for terrace dwellings in the Central Wellington catchment. Across all other catchments, demand for attached dwellings has been attributed wholly to terraces with no demand showing for ‘apartments’ in these locations. A general assumption has been made that apartments in other catchments are likely to be low rise in contrast to those in Central Wellington, or be part of mixed-use development in centres and therefore it is considered appropriate to differentiate the typologies in this manner.

Table 2.8. Projected dwellings by type, North Wellington, 2021-2051.

North Wellington	2021-2024	2024-2031	2031-2051	Total
Stand-alone dwellings	932	1,450	3,708	6,090
Terrace dwellings	816	2,783	3,920	7,519
Apartments	0	0	0	0
<b>Total</b>	<b>1,748</b>	<b>4,233</b>	<b>7,628</b>	<b>13,609</b>

Table 2.9. Projected dwellings by type, Central Wellington, 2021-2051.

Central Wellington	2021-2024	2024-2031	2031-2051	Total
Stand-alone dwellings	44	20	179	243
Terrace dwellings	0	0	0	0
Apartments	606	1,656	3,935	6,197
<b>Total</b>	<b>650</b>	<b>1,676</b>	<b>4,114</b>	<b>6,440</b>

Table 2.10. Projected dwellings by type, Inner Wellington, 2021-2051.

Inner Wellington	2021-2024	2024-2031	2031-2051	Total
Stand-alone dwellings	268	229	436	933
Terrace dwellings	175	524	1,508	2,207
Apartments	0	0	0	0
<b>Total</b>	<b>443</b>	<b>753</b>	<b>1,944</b>	<b>3,140</b>

<sup>49</sup> Refer to Appendix 2.1 for a list of which suburbs have been allocated to each catchment. All dwelling figures adjusted for competitiveness margin in accordance with clause 3.22 and 3.27 of the NPS-UD. Totals by catchment differ slightly from total dwellings required given in Table 2.5 due to rounding errors occurring when data is interpolated into SA2 levels.

Table 2.11. Projected dwellings by type, Southern Wellington, 2021-2051.

<b>Southern Wellington</b>	<b>2021-2024</b>	<b>2024-2031</b>	<b>2031-2051</b>	<b>Total</b>
Stand-alone dwellings	260	581	1388	2,229
Terrace dwellings	193	162	329	684
Apartments	0	0	0	0
<b>Total</b>	<b>453</b>	<b>743</b>	<b>1,717</b>	<b>2,913</b>

Table 2.12. Projected dwellings by type, Western Wellington, 2021-2051.

<b>Western Wellington</b>	<b>2021-2024</b>	<b>2024-2031</b>	<b>2031-2051</b>	<b>Total</b>
Stand-alone dwellings	655	1,223	2,321	4,199
Terrace dwellings	430	808	1,380	2,618
Apartments	0	0	0	0
<b>Total</b>	<b>1,085</b>	<b>2,031</b>	<b>3,701</b>	<b>6,817</b>

Table 2.13. Projected dwellings by type, Eastern Wellington, 2021-2051.

<b>Eastern Wellington</b>	<b>2021-2024</b>	<b>2024-2031</b>	<b>2031-2051</b>	<b>Total</b>
Stand-alone dwellings	299	379	1,225	1,903
Terrace dwellings	289	284	1,158	1,731
Apartments	0	0	0	0
<b>Total</b>	<b>588</b>	<b>663</b>	<b>2,383</b>	<b>3,634</b>

Table 2.14. Projected dwellings by type, Makara-Ohariu, 2021-2051.

<b>Makara-Ohariu</b>	<b>2021-2024</b>	<b>2024-2031</b>	<b>2031-2051</b>	<b>Total</b>
Stand-alone dwellings	10	11	46	67
Terrace dwellings	0	0	1	1
Apartments	0	0	0	0
<b>Total</b>	<b>10</b>	<b>11</b>	<b>47</b>	<b>68</b>

Considering dwelling demand by these areas confirms some existing and expected growth patterns. North Wellington is expected to accommodate the largest proportion of the City's housing growth. The projections predict strong demand for stand-alone housing in northern Wellington, which aligns with Wellington City's greenfield growth areas and observed trends in new homes built in those areas to date. Over the next 30 years, the demand in terraced dwellings is expected to be even greater. Under the NPS-UD, areas around train stations are expected to enable up to 6 storey buildings. The northern catchment contains the majority of Wellington City train stations and the District Plan will enable greater density along these rail corridors. Areas such as Johnsonville and

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Tawa in particular are expected to see significant growth in terraced dwellings and account for over 50% of the demand predicted in the northern suburbs for terraced dwellings.

Unsurprisingly, the dwelling demand for Central Wellington is almost entirely in apartments. In the context of the central City this is likely to be high rise apartments, while a small proportion of the demand may be stand-alone housing. This is consistent with the nature of development experienced in the City in recent years and consistent with the Council's strategy for the central City. The demand for dwellings in the central City is reflective of its attractiveness as a place to live.

Inner Wellington, with its proximity to the central area, is an ideal location for higher density residential development, which is reflected in the projected demand for terraced housing. Terraced housing demand in this catchment could translate to demand for terrace style developments and higher rise apartments, for example, the existing apartment developments within Oriental Bay. It is noted that even stand-alone housing in this catchment is generally of a higher density than the outer suburban areas.

Western, Southern and Eastern Wellington are the established suburban areas of the City. They generally reflect a lower density of residential development, though also have experienced significant infill development. Increasingly, some pockets of medium-density development in the form of terrace housing have begun to appear in these areas, often as the result of redevelopment of larger residential sites. Each of these areas is projected to see further demand for this form of housing. Makara-Ohariu is a rural area which is predicted to show minimal growth and typically only stand-alone dwellings would be expected here. Overall, these suburbs continue to show demand for additional housing, but not at the level of the northern suburbs. While growth in the western suburbs is predicted to be as high as in the central City, the southern and eastern suburbs show more modest growth. Given the level of existing development in these areas, meeting this demand will prove challenging without increases in density.

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# 6 Housing Development Capacity

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## Key Findings

*Modelling indicates that the Wellington City District Plan provides for 104,941 dwellings.*

*Of the capacity that is enabled by the District Plan, some 36% or 37,875 dwellings are considered to be economically feasible to develop at the time of writing this report.*

*Applying a further realisation test to feasible capacity, results in an overall realisable capacity of 26,399 dwellings over the next 30 years, to 2051.*

### 6.1 Plan-enabled capacity

Residential capacity has been assessed by determining as a starting point what capacity is enabled by the Wellington City Operative District Plan. This 'plan-enabled capacity' considers the maximum development potential for each land parcel based on the current District Plan rules. In other words, it models the maximum size/height of building and number of residential units that each land parcel could provide, factoring in all the rules and standards that apply to the site which can affect the overall development footprint that can be achieved<sup>50</sup>.

The modelling of residential development capacity for this HBA has been split into two parts. Firstly, modelling has been undertaken of the capacity that is available in the city's greenfield areas. In Wellington City our greenfield areas are Lincolnshire Farm, Upper Stebbings and Glenside West and one small area at Churton Park. These 'greenfield' areas are identified for future urban use but may have a current rural zoning. For example, the Council is working to realise the currently rural zoned Upper Stebbings Valley area which has been identified for future urban use. At present, the Council

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<sup>50</sup> As an example, rules may require minimum setbacks and minimum outdoor space and maximum site coverage which affects the developable 'footprint' of each site. This in turns affects the number of units achievable within that built footprint.

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has no intention to re-zone any further areas of land, so these areas represent the last of the greenfield development capacity available in Wellington.

Areas of 5 hectares or greater were considered as part of the greenfield model. Modelling has assessed the plan-enabled development potential of these sites which has excluded Significant Natural Areas (SNAs) from the parcels as no development is expected on SNAs. The removal of SNA's from the assessment of greenfield areas has resulted in a reduction of area available for development compared to the greenfield capacity previously modelled in the 2019 HBA. Where the reduction of the SNA results in a 'greenfield site' of less than 5 hectares, it is no longer assessed as being greenfield land and not included in the assessment of capacity. For Lincolnshire Farm, Upper Stebbings and Glenside West, the capacity for housing was informed by structure planning. Despite a reduction in the extent of greenfield land, the plan-enabled capacity has increased slightly from the modelling in 2019 due to increased projections in the residential yields expected from the sites. The greenfield plan-enabled capacity is 2,721 dwellings.

Secondly, modelling has been undertaken of what infill capacity and redevelopment capacity exists within existing urban areas. All modelling uses current District Plan<sup>51</sup> settings as a starting point. Plan-enabled capacity for infill and redevelopment in the existing urban areas has been determined to be 102,220 dwellings by this modelling. The previous HBA 2019 modelled the same operative District Plan. However, Wellington's plan-enabled capacity for infill and re-development has reduced slightly from 103,783 dwellings in 2019. This is reflective of the development that has taken place since 2019 which then removes or reduces the capacity of a site.

Overall, the District Plan plan-enabled capacity is 104,941 dwellings. That capacity is comprised of 2,721 dwellings in greenfield areas and 102,220 dwellings from brownfield development. On this basis, the District Plan provisions currently provides for more than enough theoretical capacity to meet forecast demand for the next 30 years.

Modelling plan-enabled capacity is only the first step to understanding development capacity. While the theoretical capacity in the city is high, not all development is economically feasible, especially where it would involve relocating or demolishing an existing dwelling to intensify a site.

The modelling methodology, assumptions and limitations have been discussed in the regional chapter of this HBA and are detailed in Appendices 1.2 and 1.3.

## 6.2 Feasible development capacity

The second step to understand the implications of plan settings on development is to assess the economic feasibility of the 'plan-enabled capacity'. The 'feasible' capacity is an assessment of what portion of the plan-enabled capacity would be economically viable to develop. Development is unlikely to occur if it is not economic to do so. In Wellington, there are many factors which affect

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*51 Wellington City Council amended the District Plan in May 2021 to remove any minimum car parking requirements for any activity or development across the city, as required by the NPS-UD. While this is now operative within the District Plan, the modelling undertaken to produce the plan-enabled capacity figure for this HBA predates this change. This should theoretically increase the plan-enabled capacity. The modelled plan-enabled capacity in this HBA is therefore a conservative estimate.*



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the feasibility of development- for instance the steep topography of Wellington will affect construction costs.

As discussed above, the capacity was modelled in two parts; greenfield development capacity, and infill and redevelopment capacity. The results of the feasibility of this capacity are discussed in the sections below. Refer to Appendix 2.1 of the 2019 HBA for the methodology to determine feasible capacity.

### 6.2.1 Greenfield Development Capacity

The majority of Wellington’s greenfield land is subject to a master-planning process and as a result the housing capacity is well understood. All the housing proposed to be developed in these areas is considered feasible and realisable as the developer is actively pursuing the development. For the remaining greenfield land, the Council has applied a separate greenfield feasibility model developed for the councils by MRCagney for the previous HBA. MRCagney produced an accompanying report which details the feasibility modelling process for greenfield land. This report is available in the 2019 HBA.

The assessment of plan-enabled capacity in Wellington city’s greenfield areas shows a feasible supply of 2,721 new residential sections<sup>52</sup>. The greenfield capacity is included in the Northern Wellington catchment in the totals below.

For greenfield, an estimated ratio of the typologies expected has been made. This is 60% stand-alone dwellings and 40% terrace dwellings. Stand-alone housing has traditionally been the majority of greenfield housing however higher densities are expected in the greenfield areas in future, so a portion has been allocated to terrace housing.

### 6.2.2 Infill Development and Redevelopment Capacity

The infill and redevelopment model addresses areas of land under 5 hectares that are zoned for residential or mixed-use development.

Feasible infill and redevelopment capacity is modelled as being:

*Table 2.15. Overall supply of feasible residential capacity by typology (infill and redevelopment).*

Typology	Quantity
Stand-alone Housing	15,673
Terrace Housing	1,913
Apartments	17,568
<b>Total</b>	<b>35,154</b>

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<sup>52</sup> *In this instance, one section equates to one dwelling.*



Overall, the amount of feasible infill and redevelopment capacity has increased from the modelling undertaken for the previous HBA. This is reflective of current market conditions in Wellington City where house prices are rising considerably. The table above shows that stand-alone and apartment housing make up the majority of feasible capacity modelled across the city, with a very small percentage being attributed to terrace housing. This is a notable deviation from modelling in the previous HBA where around 33% of feasible capacity was in the form of terrace housing. Although the level of feasible terraced housing may be low, the model considers the relative demand is likely to be high, potentially reallocating some feasible development from other typologies. As the modelling is based on the 'maximum profit' scenario, it could be assumed that in many instances where apartments are feasible, terrace housing is also likely to be feasible.

The city-wide feasible capacity can be broken down further into the same catchments used to assess demand<sup>53</sup>:

*Table 2.16. Supply of feasible infill and redevelopment residential capacity by typology and catchment.*

	Stand-alone	Terrace	Apartments	Total
Central Wellington	200	104	12,344	12,648
Inner Wellington	1,498	62	2,697	4,257
Northern Wellington	5,308	117	771	6,196
Western Wellington	3,977	1,368	172	5,517
Southern Wellington	1,970	0	284	2,254
Eastern Wellington	2,720	262	1,300	4,282
<b>Total</b>	<b>15,673</b>	<b>1,913</b>	<b>17,568</b>	<b>35,154</b>

The feasible capacity of infill and redevelopment has increased for all catchments except West Wellington which is slightly decreased since the 2019 assessment. Within the Central City, the feasible capacity has increased by 102% in total. In North Wellington, there has been a 57% increase in feasible capacity modelled for brownfield infill and redevelopment.

### 6.2.3 Overall Feasibility

Combining Residential Greenfield capacity (2,721) with Infill and Redevelopment capacity (35,154) indicates an overall feasible development capacity of 37,875 dwellings.

<sup>53</sup> No feasibility figures are included for the Makara-Ohariu catchment as this is generally rural and is not captured by the modelling undertaken to date.

In making this combination, greenfield capacity has been added to stand-alone and terrace capacity in the Northern Wellington catchment<sup>54</sup>, as shown in the table below.

Table 2.17. Overall supply of feasible residential capacity by typology and catchment (Infill, Redevelopment and Greenfield).

	Stand-alone	Terrace	Apartments	Total
Central Wellington	200	104	12,344	12,648
Inner Wellington	1,498	62	2,697	4,257
Northern Wellington	6,941	1,205	771	8,917
Western Wellington	3,977	1,368	172	5,517
Southern Wellington	1,970	0	284	2,254
Eastern Wellington	2,720	262	1,300	4,282
<b>Total</b>	<b>17,306</b>	<b>3,001</b>	<b>17,568</b>	<b>37,875</b>

Land values in Wellington City have increased by more than 50% over the most recent valuation data. This had led to a material increase in feasible capacity, albeit one that has been tempered by the significant increases in construction and development costs.

The feasible capacity of development in the city would meet the forecast demand for housing in the next 30 years to 2051. This suggests that the District Plan provisions enable just enough development that is economically feasible in this current market to meet demand. However, the likelihood of this development capacity being realised still needs to be factor in.

### 6.3 Realisation

Not all development capacity will be delivered over the next 30 years. Landowners have different motivations for their land and may not wish to sell to a developer, or may not wish to subdivide or redevelop themselves. Others may simply enjoy their property as it currently is. Additionally, different development types have different risk profiles and financing requirements. All these factors affect realisation of feasible development capacity.

As required by the NPS-UD, this HBA assesses the realisable proportion of feasible development capacity. This is detailed further in the report by Property Economics attached as Appendix 2.2.

Property Economics details realisation rates by development type and across different areas. It concludes that, in the round, 67% of the feasible capacity identified by this HBA for infill and redevelopment is likely to eventuate. The realisable capacity, among other market and non-market considerations, applies a relatively higher profit margin requirement to apartments in order to adjust for relative risk. The realisation rate for apartments is less than 50% whereas it is upwards of 90% and 80% for stand-alone and terrace dwellings. For stand-alone development, there is generally a lower risk profile compared to apartment and terrace housing. Resultantly, a high level

<sup>54</sup> Greenfield development capacity has been applied to Northern Wellington and split between stand-alone and terrace dwelling at an estimated ratio of 60:40.

of realisation is assumed. Property Economics notes that eventual yield could be higher than the number that is modelled. This matter is addressed through additional sensitivity analysis as detailed in the appended Property Economics report.

For greenfield development, a 100% realisation rate is assumed. This is because the greenfield sites are very few and are owned by developers who intend to develop them fully within the next 30 years.

Including greenfield, around 70% of the *feasible capacity* identified by this HBA is likely to eventuate.

Overall, for the purposes of assessing sufficiency of residential development capacity in the following section, total residential capacity for Wellington City is modelled as being 26,399 dwellings. The table below shows the realisable capacity by typology and by catchment.

*Table 2.18. Overall supply of realisable residential capacity by typology and catchment (Infill, Redevelopment and Greenfield).*

	Stand-alone	Terrace	Apartments	Total
Central Wellington	141	57	4,852	5,050
Inner Wellington	1,314	47	2,148	3,509
Northern Wellington	6,401	1,176	360	7,937
Western Wellington	3,763	1,125	31	4,919
Southern Wellington	1,764	0	66	1,830
Eastern Wellington	2,355	214	585	3,154
<b>Total</b>	<b>15,739</b>	<b>2,618</b>	<b>8,042</b>	<b>26,399</b>

Tables 2.17 and 2.18 show feasible and realisable capacity in all catchments. North Wellington and West Wellington have the highest rates of realisation from feasible capacity (89%). Central Wellington has the lowest rate of realisation on feasible capacity (40%). This can be attributed to the majority of housing in the Central Wellington catchment being apartments where the model applies a lower rate of realisation to adjust for relative risk in apartment development.

## 6.4 Summary of capacity

Overall, this section has assessed Wellington’s housing capacity in three steps. The plan-enabled capacity was modelled to be 104, 941 dwellings. Of the capacity that is enabled by the District Plan, some 36% of dwellings are considered to be economically feasible. Applying a further realisation test to feasible capacity, results in an overall realisable capacity of 26,399 dwellings over the next 30 years, to 2051.

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# 7 Housing Sufficiency

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## Key Findings

*Wellington City has a realisable residential capacity of 26,399 dwellings.*

*That realisable capacity is insufficient to meet projected demand of 36,621 new dwellings over the 30 years to 2051.*

*The shortfall is 10,222 dwellings based on the growth projections outlined in this HBA.*

Having established both demand and supply, the two can now be contrasted. This will answer the question that is at the heart of this HBA – does Wellington City have sufficient feasible residential capacity that is likely to be realised over the next 30 years to meet expected population growth to 2051?

At a city-wide level, the following comparison can be made:

*Table 2.19. Residential development capacity sufficiency for Wellington City, 2021-2051.*

	Number of dwellings
Demand <sup>55</sup>	36,621
Capacity	26,399
Shortfall/Surplus	-10,222

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*55 Dwelling demand includes competitiveness margin in accordance with clause 3.22 and 3.27 of the NPS-UD. Existing latent demand has been excluded from these figures.*

There will be a **shortfall** of 10,222 dwellings across the city based on the parameters of the modelling undertaken for this HBA.

Based on current market economics and operative District Plan, the shortfall of 10,222 dwellings would be entirely in terraced housing. The demand for apartments would appear to be met by the capacity for apartments within the City across the 30 years of the HBA. Likewise, the capacity for stand-alone housing just meets the projected demand in the 30 year timeframe. A summary of the overall demand and capacity by housing typology is provided in the table below.

*Table 2.20. City wide demand and capacity comparison by housing typology 2021-2051.*

Typology	Demand	Capacity	Shortfall/Surplus
Stand-alone dwellings	15,662	15,739	77
Terrace dwellings	14,762	2,618	-12,144
Apartments	6,197	8,042	1,845

As discussed in the section above, the capacity for terrace dwellings is very low. This is based on a modelling exercise which takes the highest profit scenario. This may result in terrace housing being under-represented where it is still feasible to develop for terraced housing. As forecasts show demand for terrace housing is strong, this may result in capacity for other typologies being taken up by terrace housing instead.

The demand for apartment housing was assumed to be central city only with demand for higher density outside of the central city allocated as terraced housing demand. The feasibility modelling has resulted in a relatively high number of apartments and some of these are distributed in catchments outside of the central city where demand was assumed to be terraces. This results in a discrepancy between demand and capacity. As discussed above, it is likely that some of the capacity for apartments could be re-allocated to terrace capacity which may still be feasible; albeit the scenarios for apartments were taken to be more profitable. This would be particularly the case where the demand in a catchment is for terrace housing rather than apartments.

In the central city catchment, the figures show forecast demand is not met, and this is mostly in apartments. Examining this, the feasibility was high for apartments in the central city but realisation rates for apartments are low to reflect relative risk of apartment construction compared to lower density housing projects.

Table 2.21. Demand and capacity comparison by housing type and by housing catchment<sup>56</sup> 2021-2051.

	Demand	Capacity	+/-
<b>North Wellington</b>			
Stand-alone dwellings	6,090	6,401	311
Terrace dwellings	7,519	1,176	-6,343
Apartments	0	360	360
<b>Total</b>	<b>13,609</b>	<b>7,937</b>	<b>-5,672</b>
<b>West Wellington</b>			
Stand-alone dwellings	4,199	3,763	-436
Terrace dwellings	2,618	1,125	-1,493
Apartments	0	31	31
<b>Total</b>	<b>6,817</b>	<b>4,919</b>	<b>-1,898</b>
<b>Inner Wellington</b>			
Stand-alone dwellings	933	1,314	381
Terrace dwellings	2,207	47	-2,160
Apartments	0	2,148	2,148
<b>Total</b>	<b>3,140</b>	<b>3,509</b>	<b>369</b>
<b>Central Wellington</b>			
Stand-alone dwellings	243	141	-102
Terrace dwellings	0	57	57
Apartments	6,197	4,852	-1,345
<b>Total</b>	<b>6,440</b>	<b>5,050</b>	<b>-1,390</b>
<b>South Wellington</b>			
Stand-alone dwellings	2,229	1,764	-465
Terrace dwellings	684	0	-684
Apartments	0	66	66
<b>Total</b>	<b>2,913</b>	<b>1,830</b>	<b>-1,083</b>
<b>East Wellington</b>			
Stand-alone dwellings	1,903	2,355	452

<sup>56</sup> Makara-Ohariu was not modelled for development capacity.

	Demand	Capacity	+/-
Terrace dwellings	1,731	214	-1,517
Apartments	0	585	585
<b>Total</b>	<b>3,634</b>	<b>3,154</b>	<b>-480</b>

It is difficult to apportion overall development capacity over time. That is, it is difficult to accurately estimate how overall supply will be taken up over time due to the range of factors that influence development rates. To overcome this, this HBA estimates uptake by typology, based on historical rates of development. Ongoing monitoring, and future iterations of this report, will enable further refinement of this data and uptake rate.

Having analysed historical rates of development uptake between 1991 – 2020, the following city-wide averages emerge:

- Stand-alone: 302 dwellings per annum
- Terrace: 240 dwellings per annum
- Apartment: 272 dwellings per annum

These averages can then be applied to give an estimate of the likely rates of uptake, based on historical averages, over the course of the 30 years of this HBA to assess the degree of sufficiency. This assumes development rates continue in a similar trend.

Table 2.22 below provides a breakdown for each housing typology across the short, medium and long term<sup>57</sup>. Capacity over time at a city-wide scale for the first two periods of 2021-2024 and 2024-2031 is based on the historical averages identified above. For the period 2031-2051, the capacity identified is the overall capacity for that housing type minus the capacity allotted to 2021-2031.

Table 2.22. Demand and capacity comparison by housing type over time.

	2021-2024			2024-2031			2031-2051		
	Demand	Capacity	+/-	Demand	Capacity	+/-	Demand	Capacity	+/-
Stand-alone dwellings	2,468	906	-1,562	3,893	2,114	-1,779	9,301	12,719	3,418
Terrace dwellings	1,904	720	-1,184	4,562	1,680	-2,882	8,296	218	-8,078
Apartments	606	816	210	1,656	1,904	248	3,935	5,322	1,387
<b>Total</b>	<b>4,978</b>	<b>2,442</b>	<b>-2,536</b>	<b>10,111</b>	<b>5,698</b>	<b>-4,413</b>	<b>21,532</b>	<b>18,259</b>	<b>-3,273</b>

<sup>57</sup> The delineation over time uses historical consenting averages by house type as outlined in section 4.2. 'Other dwellings' are not included.

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The above total shows that, based on development trends for each typology over the last 30 years, stand-alone and terrace dwelling development in the next three years would not be sufficient to keep up with demand. Apartment development capacity in the short term would meet demand. For apartments, this continues across the 30 year HBA with capacity remaining above demand.

For stand-alone dwellings, the development rate continues to be insufficient to meet the demand in the medium term but demand would be met in the longer term. The overall capacity for stand-alone housing does meet the projected 30 year demand.

As discussed above, the greatest difference in demand and capacity is in the terraces typology. The overall projected demand for terrace housing across the 30 year HBA far exceeds the capacity based on maximum profit. However, as medium density housing development has a lower market entry level for potential developers than apartment development (due to lower financing requirements, simpler construction techniques and easier consenting and compliance, amongst other factors) some apartment capacity is likely to be taken up by terraces typologies. It is also unlikely that the market would over-provide one typology (i.e. apartments) while not responding to a shortage (and rising prices) in another typology.

## 7.1 Conclusion on sufficiency

The sections above have addressed demand, plan-enabled capacity, and feasible and realisable capacity in order to conclude whether there is sufficient capacity in Wellington City to meet forecast growth.

Wellington City has *insufficient* capacity to meet the projected 30-year demand for housing. Over the long term, the shortfall is expected to be most acute in terrace style housing.

If development trends continue at the average rate over the last 30 years, there will be shortages in supply of stand-alone and terrace housing in the short and medium term. By 2051 stand-alone housing would theoretically meet demand and apartment demand would also appear to be met. However, this assumes future development trends follow the average over the past 30 years and does not take into account latent housing demand (discussed in section 5.2). Wellington is already observing significant housing stress as supply has failed to meet demand.



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# 8 Infrastructure

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## Key Findings

*There are constraints across the three-waters network that will impact on development capacity without intervention. These constraints vary in their scale and location.*

*Transport infrastructure is generally fit for purpose but investment is needed to support mode shifts to public transport and active transport to meet projected growth. This will help manage peak time congestion and contribute to emissions reductions for the city and region.*

*The city has an extensive open space network but a finer grained analysis is required to adequately determine where increased investment is required, aligning with growth areas.*

*The community facilities network requires review to understand long term investment aligned to asset condition, growth areas and community needs.*

The NPS-UD requires that the Council considers the availability of infrastructure in its assessment of capacity. Development capacity means the capacity of land to be developed for housing or for business use, based on:

- a) the zoning, objectives, policies, rules and overlays that apply in the relevant proposed and operative RMA planning documents; and
- b) the provision of adequate development infrastructure to support the development of land for housing or business use.

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Development capacity is infrastructure-ready if:

- a) in relation to the short term, there is adequate existing development infrastructure to support the development of the land
- b) in relation to the medium term, either paragraph (a) applies, or funding for adequate infrastructure to support development of the land is identified in a long-term plan
- c) in relation to the long term, either paragraph (b) applies, or the development infrastructure to support the development capacity is identified in the local authority's infrastructure strategy (as required as part of its long-term plan).

Infrastructure is broadly defined by the NPS-UD as either development infrastructure or additional infrastructure. Development infrastructure refers to three waters<sup>58</sup> infrastructure and roading infrastructure, including state highways. Other infrastructure refers to a broader range of infrastructure including open space, social infrastructure, community infrastructure and network utilities.

A summary of the infrastructure investigations undertaken for this HBA is set out below. The full assessments are attached as appendices to this report.

## 8.1 Three-Waters

Wellington Water has undertaken an assessment of the three-waters infrastructure for the City. The full assessment is attached as Appendix 1.3. That report should be read alongside this summary to fully understand the modelling methodology, assumptions, levels of service, and further commentary on mitigation measures.

Growth across Wellington City will place increasing demand on three-waters network infrastructure. The existing networks are generally in poor condition, with significant capacity constraints. Much of the three-waters network has limited capacity for widespread growth and requires coordinated and considered investment to provide for new development (greenfield, brownfield-infill and redevelopment).

Capacity assessments undertaken have identified a range of three-waters infrastructure improvements required to provide for growth across the city such as:

- Upgrades to each of the three existing wastewater trunk network including treatment plants.
- Upgrade of wastewater pipes and water supply mains to cater for additional population.
- New wastewater overflow storage tanks across the network.
- New and upgraded reservoirs in the outer suburbs to increase storage for drinking water supply, particularly in the northern and eastern suburbs.
- Provision of stormwater runoff treatment especially in medium and high-density growth areas.

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<sup>58</sup> Three waters infrastructure refers to water supply, wastewater and stormwater.

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- For flood protection and managing stormwater, the proposed options are limited to increasing capacity via pipes and pumps (in sea level rise affected areas), even though the likely options would include a mix of blue-green infrastructure and planning controls.

### 8.1.1 Drinking water

The WCC drinking water storage and supply network consists of many individual water storage areas (WSA) dictated by the topography of the city. This makes water storage planning more complex than in other parts of the region. In some areas there are opportunities to share water through changes to WSA boundaries, although these have not been considered in the assessments to date and are the subject of more detailed modelling/planning studies. In general, most of the city is constrained for water storage, and large-scale redevelopment will need to consider options and timing of increasing storage capacity. The Wellington Central WSA will receive a significant increase in storage when the new Omararo Reservoir comes online (currently under construction).

### 8.1.2 Wastewater

WCC is serviced by three wastewater treatment plants; Moa Point (Seatoun), Western (Karori) and Porirua (servicing northern Wellington and Porirua). The trunk network has several constraints including engineered overflow points that frequently discharge during wet weather events. Growth within many parts of Wellington is constrained due to undersized, and aging infrastructure pressured by the need to improve environmental standards to minimise wet weather overflows. Providing for planned growth within Wellington City requires identification of key upgrades including conveyance, pump station, wet-weather storage and wastewater treatment plant upgrades. This work is on-going.

### 8.1.3 Stormwater

Wellington's stormwater networks comprise both built assets such as pipes, inlets and outlets, as well as natural assets, such as overland flow paths and watercourses. These networks discharge stormwater into streams, the harbour and the ocean at many locations across the region. The stormwater network is designed to carry away water from small to medium sized rainfall events. Therefore, the onus is to manage flooding events that are greater in size by way of land use controls. Stormwater upgrades have been identified in many parts of the city to address existing flooding constraints and support growth. A range of stormwater upgrades are included in the LTP and 30-year infrastructure strategy. Further business case development is recommended to support infrastructure-ready development capacity where cost-benefits validate further investment in network solutions.

### 8.1.4 Overall assessment

For the purpose of the three-waters assessment, a catchment is considered to either have sufficient capacity for water, wastewater or stormwater or not have sufficient capacity. The nature of this assessment is one that happens at a given point in time, whereas in practice, such matters are not as absolute. Without any investment, mitigation or other intervention, a given catchment will at some point reach capacity. But these investments are ongoing, whether by the Council through renewal and replacement programmes, developers as part of development proposals, or by other

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mitigation measures and network management relating to site specific development proposals. For consistency, where a mitigation action may be required, the assessment has assessed the area as not having capacity. In other words, it is a conservative assessment.

Overall, the assessment highlights that the three-waters network will not be sufficient to accommodate expected growth in the city without significant ongoing interventions and investment.

## 8.2 Local Road Network

The capacity of Wellington's local road network has been assessed internally by Council staff. The full report can be found at Appendix 2.3.

Wellington's transport infrastructure is in good condition overall. The current levels of service are largely meeting the needs of the city, and the service levels are sustainable and affordable.

Wellington's primary transport concerns are:

- Growing traffic congestion and unreliable journey times
- Declining levels of service as population grows
- Safety issues, especially for cycling and walking
- Vulnerability to disruption from unplanned events

Trends since 2000 show a decrease in driving per person and an increase in levels of commuting by walking, cycling, and public transport. Although Wellington's population and employment levels have been increasing, the total amount of car travel, average journey times, and average travel speeds have remained relatively constant over the past decade. If recent trends continue over the next 30 years, total car travel demand is expected to stay at current levels or increase marginally as an increase in population is offset by continuing reduction in car travel per capita. Following recent trends, we can also expect continued increases in levels of walking and cycling in Wellington. Wellington City is also forecast to have an increasing elderly population which is likely to increase demand for accessible transport infrastructure.

Due to Wellington's topography, options for increasing capacity are often limited by corridor constraints. In general corridor widening to expand capacity is unrealistic. Key corridors are often those that are most congested and need to accommodate a range of transport modes. Although car travel is decreasing, certain key corridors are becoming more heavily used by buses and other heavy vehicles. Increased volumes and vehicle loading create additional stress upon the road pavement structure, accelerating pavement defects and reducing the asset life of both the pavement surface and structure. This is particularly a challenge given the expected increases in public transport traffic volumes.

By 2031, modelling indicates morning peak transport demands increasing by 21% for car trips and 41% for public transport trips overall, and for trips to the CBD increasing by 15% by car and by 58% by public transport.

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The Council's approach is to maximise the efficiency of existing corridors by reallocating space away from relatively inefficient private vehicle traffic and parking lanes to higher capacity public transport and active modes. Moving more people by public transport, walking, and cycling, will allow the Council to move more people through constrained road corridors. The Council is working with Waka Kotahi and Greater Wellington Regional Council on the Let's Get Wellington Moving project to develop a strategic response to transport issues in Wellington, which will form the core component of capital improvements in the City over the next 30 years. The 'Let's Get Wellington Moving' programme will support Wellington's growth while making it safer and easier to move people with fewer cars. Wellington City Council has also committed to becoming a net zero carbon city by 2050. Nearly 60% of carbon emissions in Wellington are due to transport, so changing the way people travel around the city is critical.

Overall, the current state of the network provides a suitable level of service. However, anticipated population growth both within the city and regionally will add pressure on the local road network and change demands for travel modes. There will always be an ongoing requirement to invest in infrastructure maintenance, renewal and upgrades to improve network quality, accommodate population growth, and enhance the effectiveness of the transport network as a whole.

### 8.3 State Highway Network

Waka Kotahi/ NZ Transport Agency has provided an assessment of the State Highway network. This is attached as Appendix 1.5. The assessment takes a regional focus, noting that many journeys on the state highway cross local authority boundaries and issues such as journey reliability, safety and resilience as well as mode shift impact the region.

In Wellington Central, the interface with State Highway 1 will be a focus for Let's Get Wellington Moving including improving amenity for pedestrians through Te Aro. Regional highway access to the port and other key destinations will also be reviewed. Development of the Kaiwharawhara port/ferry precinct to increase capacity for freight via ferries and rail may have flow on effects for State Highway 1 that will need to be considered alongside opportunities for mode shift to rail.

The Northern Growth Area (Lincolnshire Farm) is expected to accommodate a substantial amount of new greenfield housing. A key consideration to this area is the business case for the Petone to Grenada link. An investigation into improving regional connectivity and resilience through a west-east connection will utilise work done for the Petone to Grenada link while investigating other routes. Any future connection will need to consider urban development potential and prioritise travel via public transport and active modes.

New greenfield development in Upper Stebbings and Glenside West may become reliant on connections to State Highway 1 through the Churton Park/Glenside interchange for travel throughout the region. Waka Kotahi will work with the Council and Regional Council to ensure that the development is maximising opportunities to encourage use of active and shared modes.

In the eastern suburbs from Hataitai to Miramar, the preferred transport interventions will be informed by the Let's Get Wellington Moving programme; namely the City Streets, Mass Rapid Transit and state highway investigations. The Cobham Drive crossing and State Highway 1 Safer

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Speeds review is in the three year programme and will improve safety on Cobham Drive and State Highway 1 and support active mode trips to and from the eastern suburbs with a shared path.

## 8.4 Public Transport

A public transport assessment has been provided by Greater Wellington Regional Council, and is provided at Appendix 1.4.

Public transport within Wellington City is mostly reliant on a bus network, with rail services in the northern suburbs. The Johnsonville Line provides an important commuter service between Wellington Railway Station and Johnsonville Train Station, connecting the suburbs of Crofton Downs, Ngaio and Khandallah. The Johnsonville Line is subject to ongoing rail upgrades to renew traction power overhead line systems, renewing sleepers within all seven tunnels along the line and works to improve slope stability in Ngaio Gorge.

The other railway line with services in Wellington City is the Kapiti Line. This runs between Wellington Station to Waikanae with five stations servicing Wellington's northern suburbs. A programme of works to bring the Kapiti Line up to a modern standard started in 2008 and are mostly completed. This works was undertaken to allow for longer, faster trains and more services to meet growing commuter demand. Works included an extension to the double tracking, upgraded station facilities, improved signalling and the installation of modern overhead power system.

On some key corridors in the City, bus capacity is reaching capacity limits. The bus network is affected by increasingly congested traffic which affects the reliability of the service and ability to increase the frequency of services on core routes. Significant investment in infrastructure, including mass transit and increased bus priority is necessary to enable continued growth in public transport within the city. Key to providing a high quality, high capacity public transport network is the Let's Get Wellington Moving programme. The programme is investigating system improvements including bus priority enhancements and a Mass Rapid Transit route.

The Wellington Regional Mode Shift Plan outlines key opportunities to increase mode shift. For Wellington, this includes the Let's Get Wellington Moving programme; bus improvements through adding capacity by increasing frequency, more buses, use of double deckers, and route refinement; and cycle network development.

## 8.5 Education

The Ministry of Education has provided an assessment of school rolls and capacity for the region. This is attached as Appendix 1.7.

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Current school capacity varies across the city<sup>59</sup>. A summary of capacity within each catchment is provided below. This assessment only included state schools and state-integrated schools<sup>60</sup>. In addition there are a number of private schools across the City which add more capacity.

### 8.5.1 Wellington Central and South

There are 16 state primary schools within this catchment. Four of these are state-integrated schools, which have capacity for approximately 300 students. The remaining state schools are at or over capacity.

The Ministry has identified this catchment as a growth area and a priority area for focus and investment over the next 10 years.

There are four secondary schools in this catchment, one of which is state integrated. All secondary schools are at or over capacity. Wellington Girls College was funded for redevelopment and 16 additional teaching spaces.

### 8.5.2 Wellington West

There are seven state primary schools and two state-integrated primary schools in this catchment. There is capacity for 323 students within the state schools and 357 in the state-integrated schools.

There are no secondary schools in the western Wellington catchment with students being zoned for secondary schools in the Wellington Central and South catchment.

### 8.5.3 Wellington East

Eastern Wellington has the greatest latent capacity for school roll growth.

There are 11 state and four state-integrated primary schools in this area. There is space for 610 students in the state schools and approximately 370 spare student spaces in the state-integrated primary schools.

There are four secondary schools servicing this catchment which are all single sex schools. There is space for 100 students across the two state secondary schools and space for 200 students within the two state-integrated secondary schools.

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<sup>59</sup> The assessment is based on July 2020 rolls. Primary and intermediate schools have been grouped together as primary schools.

<sup>60</sup> State-integrated schools have been included in this assessment. State-integrated schools have a special character (usually Anglican/Catholic etc) and may not appeal to all families. This means that population growth will not necessarily result in an increase in enrolments or roll capacity being utilised at these schools. Buildings associated with state-integrated schools are owned by a private entity although the Ministry of Education does provide some maintenance funding for buildings. These schools are also capped by a 'maximum roll' which is set or altered by the Ministry of Education. For the assessment, the maximum roll for state-integrated schools is used rather than on-site capacity.

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#### 8.5.4 Wellington North

The Ministry has identified this catchment as a growth area and a priority area for investment over the next 10 years.

There are 20 state primary schools and three state-integrated primary schools in the catchment. There is capacity for 378 students in the state primary schools and 132 in the state-integrated primary schools.

Amesbury School has been allocated funding to build stage 2 of the school which will provide an extra 200 student spaces. Johnsonville School has been allocated roll growth for four teaching spaces.

There are three state secondary schools in this area. These schools are all at or above capacity.

Onslow College has been allocated roll growth for 20 teaching spaces.

### 8.6 Open Space and Recreation

An analysis of the city's open space and recreation network is detailed in Appendix 2.4. An assessment of regional open space provision is in Appendix 1.6.

The Council provides an extensive parks and open space network across the city with a network of over 4200 hectares of reserves and over 365km of tracks.

The Council currently has one basic measure for open space provision; that dwellings in residential zoned areas are located within 600 metres or 10 minutes walk of an open space (a neighbourhood park, play space or other outdoor opportunity). An analysis of that target shows that 73% of the city's residential zoned land meet this target.

One limitation to the city-wide park network provision mapping is that it does not measure, for instance, the quality or size of the open space relative to the density of population or size of area it services. A small neighbourhood park, servicing an area of high density may not be providing an adequate open space function. This is an area of further refinement for the Council in how it measures the success of its open space provision.

Wellington City provides 18.8 hectares of open space per 1000 people. This exceeds the national median of 17.3 hectares. However, in terms of actively maintained parks, Wellington only provides 2 hectares per 1000 people compared to 8.8 hectares nationally, and 1.1 hectares of sports fields compared to a national median of 2.3 hectares.

Despite the large overall provision of open space, further analysis reveals that large portions of open space are hillsides and gullies that, while important for landscape and ecological reasons, have limited utility for recreation purposes. This is reflective of the geographical characteristics of the city.



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As further growth occurs in existing urban areas either new parks will be required, or investment will be required in existing parks to improve their quality and function. In addition, the District Plan will need to consider mechanisms to protect public open space quality alongside enabling increased residential housing density and in particular height.

The Council is planning a review of the existing open space and recreation strategy (Our Capital Spaces) to look at the existing network and provide the direction needed to better understand action and investment required to protect, improve and manage the parks and recreation networks in response to the new Spatial Plan (June 2021). Particular attention will need to be paid to the central area of the City and growth areas signalled in the Spatial Plan given the anticipated growth that will occur in the future. The Council will budget investment in the open space network through Long Term Plan and Annual Plan processes.

For new greenfield development, Reserves Agreements are in place that will see a network of reserve land vested to the Council over time, designed to meet the demand generated by the development. This is in lieu of development contribution payments for reserves. While it can be complex to negotiate and secure the right balance of new reserve land in a greenfield development, it is much easier than trying to acquire reserve land in existing urban areas to meet increased population growth.

Wellington City is well served by the range and quality of its sports and recreation facilities. The city has five indoor and two outdoor pools, five recreation centres and 44 sportsfields as well as 10 artificial sportsfields. There are 35 basketball half courts and a range of world-class community facilities including the ASB Sports Centre, which attracts over 860,000 visitors per year. There has been significant investment in major sport and recreation facilities in the last 10-15 years. This includes ASB Sports Centre, nine artificial sportsfields, Wellington Regional Aquatic Centre redevelopment, Keith Spry Pool redevelopment, Karori Park and pool redevelopments, Newtown Park redevelopment, Makara Peak Mountain Bike Park, and the walking/bike track network. Increased funding was recently approved to enable higher quality and more frequent playground renewal.

There are a wide range of demands on recreational facilities, and the nature of this demand changes. Older facilities can also be difficult and expensive to re-purpose for changing demands. The assessment notes that the development of a Regional Spaces and Places Plan is currently being completed to provide regional direction on provision of sport and active recreation. In response to this regional plan, the Council will need to consider at a local level, what the current network provides and where to direct future investment to meet the needs of the community. The Spatial Plan includes an action to develop a new Community Facilities Plan to ensure a robust, integrated and strategic decision-making approach across the Council's portfolio of community infrastructure assets.

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# 9 Conclusion

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This HBA has shown that:

## 9.1 Residential

- Wellington City's population is expected to grow by 70,698 people between 2021 and 2051.
- To cater for this population growth, Wellington City will need to provide for an estimated 36,621 new dwellings between 2021 and 2051.
- Under the current (operative) District Plan, Wellington City has a theoretical plan-enabled residential capacity of 104,941 dwellings.
- Once tested for economic feasibility, the feasible residential capacity falls to 37,875 dwellings, based on today's costs and sales values.
- And applying a realisation test suggests that of that feasible capacity, only 26,399 dwellings will likely be realised over the next 30 years.
- Contrasting that supply with the anticipated demand over the same time leads to an anticipated shortfall of 10,222 dwellings over the course of the next 30 years.
- The housing shortfall is expected to be more evident in stand-alone and terrace housing in the short and medium term. The long term shortage is expected to be in terraced housing. Capacity for apartments appears to be sufficient to meet projected 30 year demand.
- The city has experienced significant price increases in both house and rental costs. Such rises have significant effects on a range of sections of the community.

## 9.2 Infrastructure

- Wellington has a number of constraints across its three waters network that, without intervention, will have a detrimental effect on the ability to realise the development capacity available to the city.
- Constraints vary in scale and severity across the network, and across the different types of water reticulation.
- Roading infrastructure requires additional investment to keep pace with population growth and maintain appropriate levels of service.
- The Let's Get Wellington Moving project is a substantial long-term initiative that will have significant impacts on the city, and will provide additional opportunities to leverage development opportunities and support greater public transport initiatives.

- 
- Other community infrastructure is under review, with further work ongoing around the continued planning for open space protection and investment in response to city growth. Similarly, community infrastructure planning is underway.

Overall this HBA has identified that the Council needs to provide for additional residential development capacity to meet projected population growth. While theoretical plan-enabled capacity is high under the current District Plan settings, this capacity drops significantly when considering how economically feasible it is, or how likely it is to be realised. The Council can influence housing capacity by adjusting planning provisions to increase the theoretical plan-enabled capacity. By increasing plan-enabled capacity, this may increase feasibility and realisation rates which are influenced by the market. The timing of this HBA is therefore helpful to inform the review of the Wellington City District Plan (in progress). It will be through changes to the District Plan that the Council can have the greatest influence over housing affordability by providing for sufficient development capacity.

Therefore, while the sufficiency has been modelled on the operative District Plan for this HBA, the District Plan review will enable a greater amount of development potential. The findings of this HBA suggest that there needs to be planning intervention to increase the capacity for terrace type housing in the next 30 years. For the purpose of this HBA 'terrace housing' is a form of attached housing which may include lower rise apartments. Across the short and medium term periods, demand for stand-alone and terrace housing will not be met which reflects the assumption underpinning this HBA that there is already latent demand for this housing in the city. Therefore demand will continue to out-strip supply unless there is a significant increase in development rates. Changes currently being made to the District Plan to enable more housing capacity will be reflected in the next HBA when the new provisions can be modelled.

In regards to infrastructure, without planned investment, the current three waters infrastructure network has little capacity to accommodate additional growth in the city, and not in the identified key areas for population growth. The Council has committed to funding in the LTP to investigate and design upgrades to infrastructure, but this will need to be prioritised and will require a staged approach to increase capacity for housing. This is likely to present a barrier to development potential over the next 30 years. Aside from upgrades to the network which need to be planned for, budgeted and implemented, the Council will rely on localised solutions to progress development such as on-site wastewater storage tanks. Localised solutions can delay but do not replace the need for systemic upgrades.

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# 10 Next Actions

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The NPS-UD requires the Council to prepare an HBA every 3 years. In between the preparation of the next HBA, the Council will continue to monitor a range of indicators relating to the Wellington property market.

As noted above, the Council has recently published the Spatial Plan 2021, and is undertaking a full review of the Wellington City District Plan. The Council aims to notify a proposed District Plan for public submissions by mid 2022, as required by the NPS-UD.

Once notified, the adoption of the District Plan needs to take place within two years. Therefore, the next HBA (due before June 2024 to inform the 2024 long-term plan) will reflect the new District Plan.

Each future HBA will be an opportunity to further refine the methodology used and understand the assumptions and limitations of the data. As each HBA provides a snapshot in time, they are useful to analyse development trends through time and the implications of planning policy on the City's growth. This HBA, and future HBAs should be used to inform policy and planning decision making, in particular to improve housing realisation and affordability in the city.

Over time, gathering and building a more substantive data set of various housing measures and future housing needs will improve the accuracy of HBA assessments.

The NPS-UD has also introduced new requirements for a Future Development Strategy (FDS)<sup>61</sup>. The FDS must be produced at a regional level by all Tier 1 authorities (which includes Wellington City Council) to cover all the Wellington Urban Environment<sup>62</sup>. The first FDS is due in June 2024. Progress towards a joint regional strategy has already been made in the form of the Wellington Regional Growth Framework. This will provide a basis for a future FDS to be produced. The Council will continue to work with its neighbouring Councils on all matters of common interest.

The next HBA in 2024 will include a business assessment.

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<sup>61</sup> Clause 3.12 of the NPS-UD.

<sup>62</sup> NPD-UD Urban environment is Wellington, Upper Hutt, Lower Hutt, Porirua and Kāpiti. This differs slightly from the Wellington Region which includes the Wairarapa (Carterton, Masterton and South Wairarapa District Councils).

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# 11 List of Appendices

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- Appendix 1.1 Sense Partners population projections and housing demand methodology
- Appendix 1.2 Infill and redevelopment plan-enabled residential capacity modelling methodology
- Appendix 1.3 Wellington Regional Three Waters Capacity Assessment – 2021
- Appendix 1.4 Metlink public transport network overview and the role of public transport in responding to population growth
- Appendix 1.5 Assessment of the State Highway Network and land transport issues for the Wellington Region – Waka Kotahi
- Appendix 1.6 Overview of regional open space – Greater Wellington regional parks
- Appendix 1.7 Ministry of Education school roll information capture 2021
  
- Appendix 2.1 Wellington City Suburbs and SA2 by Catchment
- Appendix 2.2 Wellington City Property Economics Assessment of Residential Capacity
- Appendix 2.3 Assessment of Wellington City Road Network
- Appendix 2.4 Assessment of Wellington City Open Space and Recreation

# Appendix 2.1

## Wellington City Suburbs and SA2 by Catchment

## Appendix 2.1 Wellington City suburbs and SA2 by catchment

*This table provides a list of each suburb and SA2 in Wellington City and which catchment this has been allocated to for the purpose of this HBA.*

Catchment	Suburb	SA2
North Wellington	Takapu Valley	Takapu Valley-Horokiwi
	Horokiwi	
	Tawa	Linden Tawa Central Tawa North Tawa South
	Grenada North	Grenada North
	Churton Park	Churton Park North
	Glenside	Churton Park South
	Grenada Village	Grenada Village
	Paparangi	Paparangi
	Woodridge	Woodridge
	Newlands Ngauranga	Newlands North Newlands South
Johnsonville	Johnsonville Central Johnsonville North Johnsonville South Johnsonville West	
West Wellington	Broadmeadows	Broadmeadows
	Khandallah	Khandallah North Khandallah Reserve Khandallah South Onslow
	Ngaio	Ngaio North Ngaio South
	Crofton Downs	Crofton Downs
	Wadestown	Wadestown
	Wilton	Wilton
	Northland	Northland
	Kelburn	Kelburn Wellington Botanic Gardens Wellington University
	Karori	Karori East Karori North Karori Park Karori South

Catchment	Suburb	SA2
Wellington Central/CBD	Pipitea	Pipitea-Kaiwharawhara <sup>1</sup>
	Wellington Central	Wellington Central
	Te Aro	Courtenay Dixon Street Vivian East Vivian West
	Thorndon	Thorndon
Inner Wellington	Aro Valley	Highbury/Aro Valley
	Highbury	
	Oriental Bay	Oriental Bay
	Mount Victoria	Mount Victoria
	Mount Cook	Mount Cook East Mount Cook West
	Newtown	Newtown North Newtown South Newtown West
	Berhampore	Berhampore
South Wellington	Vogeltown	Kingston/Mornington/ Vogeltown
	Kingston	
	Mornington	
	Brooklyn	Brooklyn East Brooklyn North Brooklyn South
	Owhiro Bay	Owhiro Bay
	Island Bay	Island Bay East Island Bay West
	Southgate	Southgate
East Wellington	Melrose	Melrose
	Houghton Bay	Houghton Bay
	Seatoun	Seatoun
	Breaker Bay	Seatoun
	Maupuia	Maupuia

<sup>1</sup> The SA2 boundaries are defined by Stats NZ. The SA2 boundary for Pipitea-Kaiwharawhara comprises the suburbs of Kaiwharawhara and Pipitea. The suburb of Pipitea is considered part of the Wellington Central-CBD catchment whereas Kaiwharawhara suburb is considered to form part of the West Wellington catchment. For the purposes of this HBA the Pipitea-Kaiwharawhara SA2 has been included for Wellington Central to avoid duplication and Kaiwharawhara suburb has been excluded from the list of West Wellington suburbs in this table.



Catchment	Suburb	SA2
	Miramar	Miramar Central Miramar East Miramar North Miramar South
	Strathmore Park	Strathmore
	Rongotai	Rongotai
	Moa Point	
	Lyall Bay	Lyall Bay
	Kilbirnie	Kilbirnie Central Kilbirnie East
	Haitaitai	Evans Bay Haitaitai North Haitaitai South
	Roseneath	Roseneath
	Karaka Bays	Karaka Bays-Worser
Makara-Ohariu	Ohariu	
	Makara Beach	Makara/Makara Beach/Ohariu
	Makara	

# Appendix 2.2

## Wellington City Property Economics Assessment of Residential Capacity

# PROPERTY **E**CONOMICS



**WELLINGTON CITY**

**COMMERCIALLY FEASIBLE**

**RESIDENTIAL CAPACITY**

**ASSESSMENT**

**Client:** Wellington City Council

**Project No:** 51968

**Date:** October 2021



## SCHEDULE

Code	Date	Information / Comments	Project Leader
51968.4	October 2021	Report	Tim Heath / Phil Osborne

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## 1. INTRODUCTION

Property Economics has been engaged by Wellington City Council (**WCC**), as part of a wider region residential capacity project team, to undertake an assessment of the commercially feasible residential capacity (supply) of the Wellington City 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 WCC 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 both Property Economics and Wellington City Council in analysing the existing theoretical residential capacity of the City 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 GIS layers containing the residential sites within Wellington City that provided for infill, or comprehensive redevelopment. Theoretical residential capacity was calculated by WCC utilising current 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.

For the purposes of this capacity update, Property Economics has utilised the same theoretical capacity outputs as the previous HBA adjusted for any sites subsequently involved in subdivision.

Table 1 below outlines the theoretical capacity output including the difference between the original theoretical capacity outputs (termed 'Old') and the numbers adjusted for developed sites (termed 'New').

**TABLE 1 - WELLINGTON THEORETICAL RESIDENTIAL DEVELOPMENT CAPACITY BY SUBURB**

Suburb	Old	New	Difference	Suburb	Old	New	Difference
Aro Valley	450	440	-10	Moa Point	3	3	0
Berhampore	1,198	1,130	-68	Mornington	306	306	0
Breaker Bay	36	36	0	Mount Cook	3,249	3,245	-4
Broadmeadows	266	264	-2	Mount Victoria	1,042	1,015	-27
Brooklyn	2,116	2,103	-13	Newlands	4,526	4,479	-47
Churton Park	1,700	1,697	-3	Newtown	3,028	3,021	-7
Crofton Downs	485	482	-3	Ngaio	2,396	2,366	-30
Glenside	147	145	-2	Ngaurangi	44	28	-16
Grenada North	2,661	2,659	-2	Northland	851	841	-10
Grenada Village	1,417	1,281	-136	Oriental Bay	57	55	-2
Hataitai	935	929	-6	Owhiro Bay	281	281	0
Highbury	68	68	0	Paparangi	1,486	1,476	-10
Houghton Bay	186	186	0	Pipitea	3,533	3,533	0
Island Bay	2,932	2,895	-37	Rongotai	182	181	-1
Johnsonville	7,171	7,045	-126	Roseneath	80	80	0
Kaiwharawhara	23	23	0	Seatoun	757	730	-27
Karaka Bays	122	122	0	Southgate	376	373	-3
Karori	6,738	6,702	-36	Strathmore Park	1,981	1,977	-4
Kelburn	580	578	-2	Tawa	10,290	10,196	-94
Khandallah	2,596	2,583	-13	Te Aro	15,630	15,571	-59
Kilbirnie	3,410	3,381	-29	Thorndon	2,900	2,875	-25
Kingston	248	248	0	Vogeltown	264	263	-1
Lyll Bay	1,036	1,026	-10	Wadestown	743	739	-4
Maupuia	333	333	0	Wellington Central	6,624	6,624	0
Melrose	213	213	0	Wilton	655	654	-1
Miramar	4,047	4,009	-38	Woodridge	730	730	0
				<b>Total</b>	<b>103,128</b>	<b>102,220</b>	<b>-908</b>

Source: Property Economics, WCC



Table 1 shows there is theoretical capacity within Wellington for around 102,220 new dwellings (rounded) having adjusted for the recently developed sites.

It is important to note that Table 1 represents the sum of the maximum attainable yield of any dwelling typology (standalone home, terraced house or apartment) on an individual site basis.

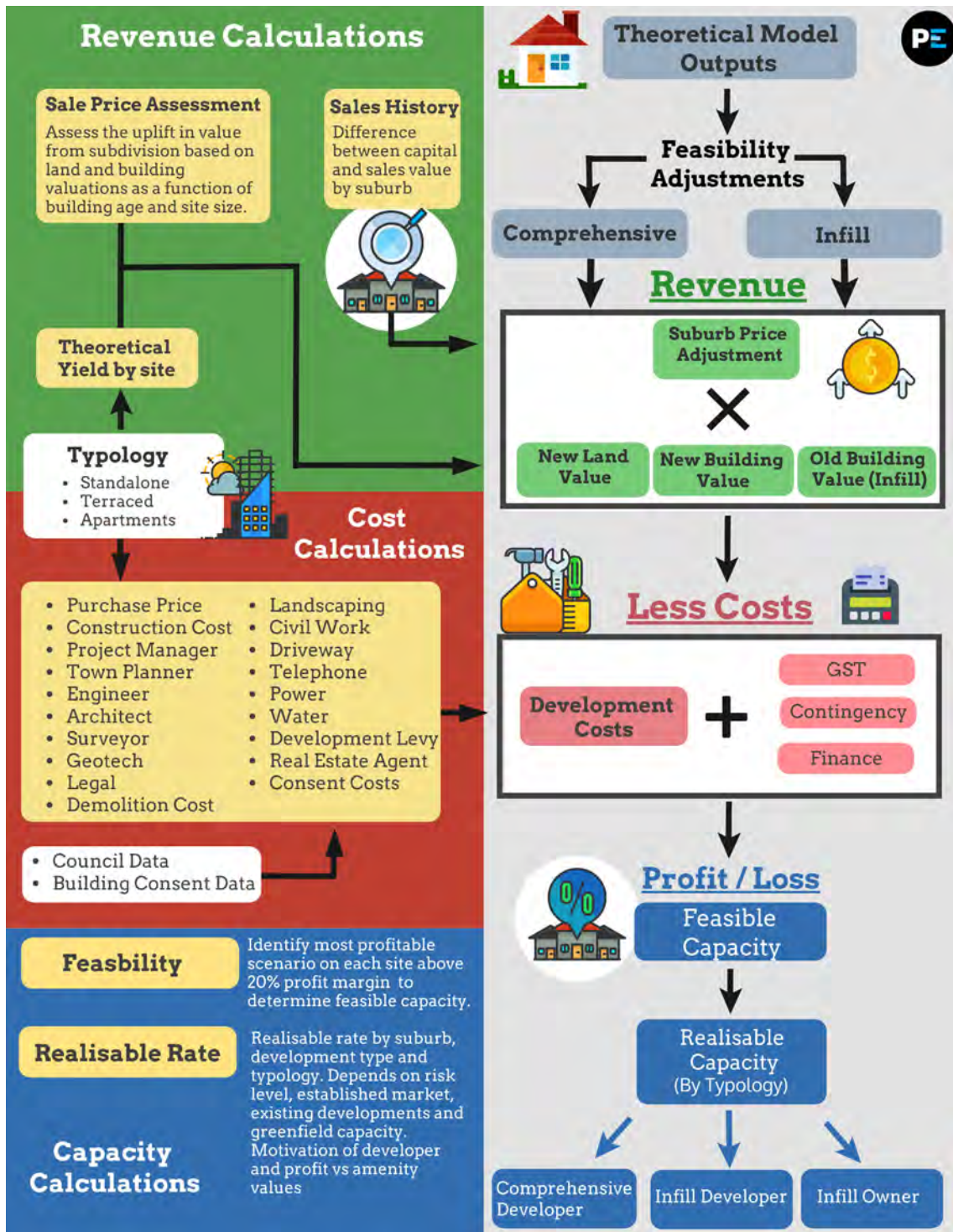
The theoretical capacity model outputs passed to Property Economics by WCC contained several different development scenarios on each site, therefore the theoretical yield represents the scenarios on each site where the development potential is the highest.



### 3. FEASIBLE CAPACITY MODELLING

A high-level overview of the model utilised by Property Economics in determining the feasible residential capacity for Wellington 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



Due to the large number of areas within Wellington, it has been considered appropriate to group them by a comparative 'suburb rating', with 1 being lower value and 5 higher value. All model inputs have been broken down and summarised by this suburb grouping. Table 2 below shows the allocation of suburbs to suburb groups.

**TABLE 2 - WELLINGTON SUBURB GROUPS**

<b>Suburb</b>	<b>Suburb Rating</b>	<b>Suburb</b>	<b>Suburb Rating</b>
Aro Valley	3	Mornington	3
Berhampore	2	Mount Cook	3
Breaker Bay	4	Mount Victoria	4
Broadmeadows	5	Newlands	3
Brooklyn	3	Newtown	3
Churton Park	3	Ngaio	4
Crofton Downs	4	Ngauranga	2
Glenside	3	Northland	3
Grenada North	1	Oriental Bay	5
Grenada Village	3	Owhiro Bay	2
Hataitai	4	Paparangi	2
Highbury	3	Pipitea	4
Houghton Bay	2	Rongotai	3
Island Bay	3	Roseneath	5
Johnsonville	3	Seatoun	4
Kaiwharawhara	4	Southgate	2
Karaka Bays	2	Strathmore Park	3
Karori	4	Tawa	3
Kelburn	4	Te Aro	4
Khandallah	5	Thorndon	4
Kilbirnie	3	Vogeltown	3
Kingston	3	Wadestown	4
Lyll Bay	3	Wellington Central	4
Maupuia	4	Wilton	3
Melrose	2	Woodridge	3
Miramar	3		

Source: Property Economics, WCC

### Land and Improvement Value per SQM

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

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

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

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

**TABLE 3 - WELLINGTON STANDALONE BUILD VALUE / SQM BY SUBURB RATING**

<b>Standalone</b>	<b>50</b>	<b>100</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
1	\$ 4,226	\$ 3,257	\$ 2,574	\$ 2,310		
2	\$ 5,179	\$ 4,087	\$ 3,539	\$ 3,384	\$ 3,192	\$ 3,222
3	\$ 4,773	\$ 4,207	\$ 3,690	\$ 3,325	\$ 3,037	\$ 3,053
4	\$ 4,746	\$ 4,953	\$ 4,463	\$ 4,268	\$ 4,281	\$ 4,360
5	\$ 5,529	\$ 5,126	\$ 4,851	\$ 4,814	\$ 4,767	\$ 4,722

Source: Property Economics, WCC

**TABLE 4 - WELLINGTON TERRACED BUILD VALUE / SQM BY SUBURB**

<b>Terraced</b>	<b>50</b>	<b>100</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
1	\$ 4,394	\$ 3,387	\$ 2,630	\$ 2,402		
2	\$ 5,050	\$ 3,987	\$ 3,485	\$ 3,345	\$ 3,165	\$ 3,270
3	\$ 4,831	\$ 4,157	\$ 3,626	\$ 3,300	\$ 3,042	\$ 3,042
4	\$ 5,261	\$ 5,075	\$ 4,540	\$ 4,312	\$ 4,349	\$ 4,392
5	\$ 6,257	\$ 5,295	\$ 4,938	\$ 5,004	\$ 4,922	\$ 4,906

Source: Property Economics, WCC

Due to limited availability of ratings data for apartment typologies, nominal values were used for a range of apartment sizes, with capital value determined by interpolating between these points, and scaling based on the average rating data across a suburb.

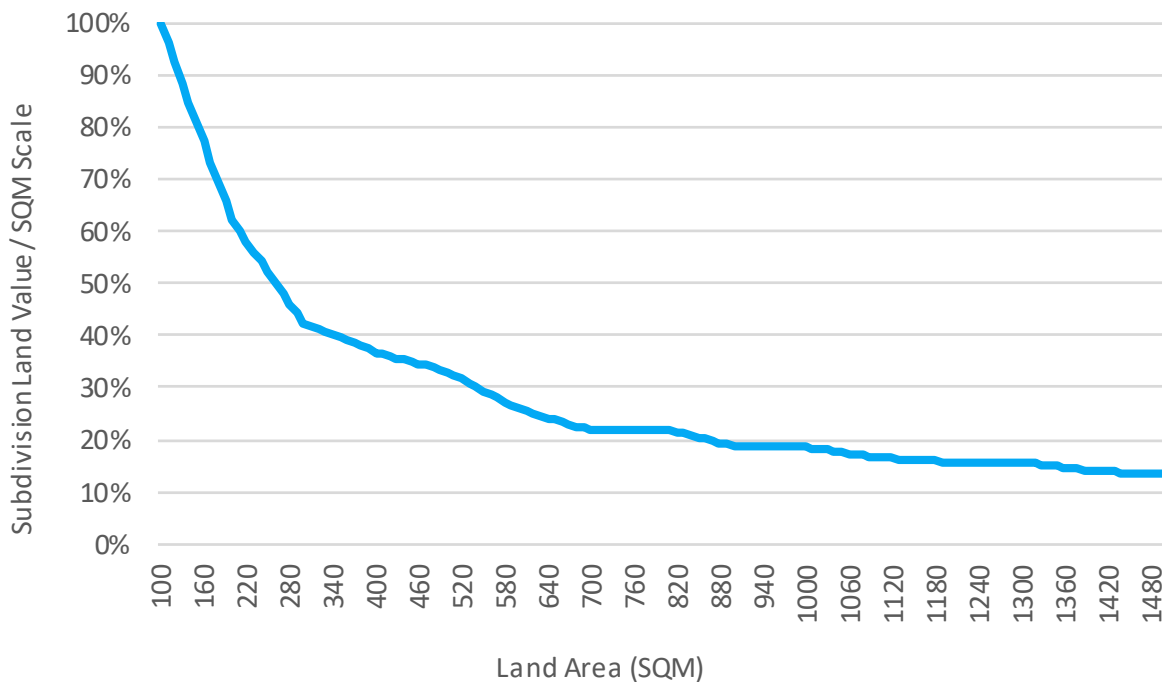
**TABLE 5 - WELLINGTON NOMINAL APARTMENT VALUES**

Apartments	25	50	75	100	125	150
3	\$ 443,752	\$ 547,739	\$ 686,389	\$ 902,590	\$ 1,068,969	\$ 1,223,702
4	\$ 516,872	\$ 637,994	\$ 799,490	\$ 1,051,316	\$ 1,245,111	\$ 1,425,341
5	\$ 568,559	\$ 701,793	\$ 902,005	\$ 1,156,448	\$ 1,369,622	\$ 1,567,875

Source: Property Economics, WCC

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 both standalone and terraced typologies, however as described above apartments were modelled using nominal capital values.

Figure 2 is indexed against a site size of 100sqm (representing a scale of 100%). At 1,000sqm the index is 20%, indicating that the average 1,000sqm site has a land value per sqm around 1/5<sup>th</sup> of that of a 100sqm site.

**FIGURE 2 - WELLINGTON LAND VALUE / SQM SCALE**

Source: Property Economics, WCC



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 ratings 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 Wellington 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.

Based on regressing the underlying land and improvement values against the most recent sales values (September 2020 – August 2021), it was found that land values had risen by about 54% on average while improvement values had risen by about 21%. Only a few of Wellington's suburbs exhibited a statistically significant difference in this trend but it was decided to hold these proportions to be consistent between all suburbs.

### Construction Costs

Suburb based differentials between constructions costs for new dwellings were found by analysing the value of recent building consents granted within Wellington cross referenced with QS cost to build averages for the different typologies in Wellington.

The historical building consent data shows that the average value of building consents varies across suburb within Wellington, 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. Note, this is only used for standalone and terraced dwellings, as apartments have been modelled using nominal capital values.

Due to data restrictions some suburbs were grouped by quality for this purpose. This, once again, neutralises suburb-based sales data where these average sales are based on higher quality (and therefore more expensive) builds.

Tables 6, 7 and 8 below show the average build cost by suburb rating for standalone, terraced and apartment typology types.

**TABLE 6 - WELLINGTON STANDALONE BUILD COST BY SUBURB RATING**

<b>Standalone</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
1	\$ 3,595	\$ 2,902	\$ 2,207	\$ 1,994	\$ 1,661	\$ 1,539	\$ -	\$ -
2	\$ 4,406	\$ 3,555	\$ 2,769	\$ 2,502	\$ 2,284	\$ 2,255	\$ 2,132	\$ 1,992
3	\$ 4,275	\$ 3,450	\$ 3,000	\$ 2,711	\$ 2,507	\$ 2,333	\$ 2,135	\$ 1,996
4	\$ 4,038	\$ 3,259	\$ 3,356	\$ 3,032	\$ 2,881	\$ 2,844	\$ 2,859	\$ 2,672
5	\$ 4,704	\$ 3,796	\$ 3,473	\$ 3,138	\$ 3,131	\$ 3,208	\$ 3,184	\$ 2,975

Source: Property Economics

**TABLE 7 - WELLINGTON TERRACED BUILD COST BY SUBURB RATING**

<b>Terraced</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
1	\$ 4,059	\$ 3,223	\$ 2,427	\$ 2,180	\$ 1,807	\$ 1,672	\$ -	\$ -
2	\$ 4,974	\$ 3,950	\$ 3,046	\$ 2,735	\$ 2,484	\$ 2,450	\$ 2,306	\$ 2,149
3	\$ 4,826	\$ 3,832	\$ 3,300	\$ 2,964	\$ 2,727	\$ 2,534	\$ 2,311	\$ 2,153
4	\$ 4,559	\$ 3,620	\$ 3,691	\$ 3,315	\$ 3,133	\$ 3,089	\$ 3,094	\$ 2,883
5	\$ 5,311	\$ 4,217	\$ 3,820	\$ 3,431	\$ 3,405	\$ 3,485	\$ 3,445	\$ 3,210

Source: Property Economics

**TABLE 8 - WELLINGTON APARTMENT BUILD COST BY SUBURB**

<b>Apartments</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>200</b>	<b>250</b>	<b>300</b>
3	\$ 5,539	\$ 4,686	\$ 4,470	\$ 4,155	\$ 3,932	\$ 3,749	\$ 3,534	\$ 3,382
4	\$ 5,864	\$ 4,960	\$ 5,000	\$ 4,647	\$ 4,518	\$ 4,571	\$ 4,733	\$ 4,528
5	\$ 6,453	\$ 5,458	\$ 5,175	\$ 4,810	\$ 4,911	\$ 5,156	\$ 5,269	\$ 5,042

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 9. Other costs are identified in Figure 1 but also include commercial interest at 8% p.a. and a 10% contingency on total costs (risk).

**TABLE 9 - WELLINGTON PER DWELLING DEVELOPMENT COSTS**

COMPREHENSIVE COSTS				INFILL COSTS			
	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, WCC

## 4. FEASIBILITY MODELLING OUTPUTS

### 4.1. FEASIBLE CAPACITY OUTPUTS

Property Economics has assessed the variables outlined above in the Wellington 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 10 below outlines a summary of the number of potential dwellings on sites where the ratios meet a profit level suitable to meet market expectations (20% for the purpose of this analysis).

Table 10 represents the subdivision undertaken by either an owner occupier or a developer, with the capacity representing the most profitable. This is an important difference as motivations and capital outlay are often different. These figures have removed all 'double ups' i.e., where multiple instances were tested on a specific site and represent the most profitable scenario for that site.

**TABLE 10: SUMMARY OF FEASIBLE CAPACITY BY TYPOLOGY**

Model Results	Theoretical	Feasible / Realisable			Total	% of Theoretical
		Apartment	Standalone	Terraced		
Feasible - Max Profit	102,220	17,568	15,673	1,913	35,154	34%

Source: Property Economics, WCC

If developments were to be undertaken by either a developer or owner occupier, there is potential for 35,154 additional dwellings within the Wellington market. As all development options have been considered in Table 10, this represents the total feasible capacity in the market. This level of feasible capacity represents a 34% feasibility rate on the theoretical capacity.

Table 11 following breaks down these feasible capacity estimate by suburb.

**TABLE 11 - WELLINGTON FEASIBLE RESIDENTIAL CAPACITY BY SUBURB - OWNER AND DEVELOPER**

Suburbs	Theoretical Capacity	Feasible Apartment	Feasible Standalone	Feasible Terraced	Total Feasible Capacity	Feasibility Rate
Aro Valley	440	17	156	31	204	46%
Berhampore	1130	31	388	2	421	37%
Breaker Bay	36		12	3	15	42%
Broadmeadows	264		38		38	14%
Brooklyn	2103	99	716		815	39%
Churton Park	1697		192		192	11%
Crofton Downs	482		69	7	76	16%
Glenside	145		45		45	31%
Grenada North	2659	88	6	12	106	4%
Grenada Village	1281		297	62	359	28%
Hataitai	929		321	93	414	45%
Highbury	68		23		23	34%
Houghton Bay	186		62		62	33%
Island Bay	2895	185	729		914	32%
Johnsonville	7045	541	1,604	13	2,158	31%
Kaiwharawhara	23		4		4	17%
Karaka Bays	122		65		65	53%
Karori	6702	18	1,650	653	2,321	35%
Kelburn	578	-	223	117	340	59%
Khandallah	2583	113	636	325	1,074	42%
Kilbirnie	3381	1,000	353	20	1,373	41%
Kingston	248	-	26		26	10%
Lyal Bay	1026	42	258	2	302	29%
Maupuia	333		64	8	72	22%
Melrose	213		92		92	43%
Miramar	4009	258	842		1,100	27%
Mornington	306		97		97	32%
Mount Cook	3245	1,704	139	4	1,847	57%
Mount Victoria	1015	40	170	17	227	22%
Newlands	4479	44	796		840	19%
Newtown	3021	905	590	8	1,503	50%
Ngaio	2366	-	596	194	790	33%
Ngauranga	28		1		1	4%
Northland	841	41	297		338	40%
Oriental Bay	55		32		32	58%
Owhiro Bay	281		88		88	31%
Paparangi	1476		224		224	15%
Pipitea	3533	1,948	1		1,949	55%
Rongotai	181		87		87	48%
Roseneath	80		38	21	59	74%
Seatoun	730		167	95	262	36%
Southgate	373		83		83	22%
Strathmore Park	1977		513	20	533	27%
Tawa	10196	50	2,046		2,096	21%
Te Aro	15571	6,104	38	35	6,177	40%
Thorndon	2875	807	160	69	1,036	36%
Vogelstown	263		77		77	29%
Wadestown	739		277	72	349	47%
Wellington Central	6624	3,485	1		3,486	53%
Wilton	654		187		187	29%
Woodridge	730	48	97	30	175	24%
<b>Grand Total</b>	<b>102,220</b>	<b>17,568</b>	<b>15,673</b>	<b>1,913</b>	<b>35,154</b>	<b>34%</b>

Source: Property Economics, WCC



## 4.2. REALISABLE CAPACITY OUTPUTS

On top of the feasible capacity modelling, practical considerations must be taken into account as to what is likely to be developed in the real world. 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 12 below shows the profit levels required for each combination of typology and development option to be considered realisable by the model.

**TABLE 12 - DEVELOPER REALISABLE PROFIT RATES**

	Comprehensive Developer	Infill Developer	Infill Owner
<b>Standalone</b>	<b>20%</b>	<b>17%</b>	<b>25%</b>
<b>Terraced</b>	<b>23%</b>	<b>20%</b>	<b>28%</b>
<b>Apartment</b>	<b>32%</b>	<b>28%</b>	<b>39%</b>

*Source: Property Economics, WCC, SNZ*

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

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.

Taking these market practicalities into consideration, Table 13 shows a summary of the realisable capacity within Wellington City while Table 14 following breaks down this capacity by suburb.

**TABLE 13: SUMMARY OF REALISABLE CAPACITY BY TYPOLOGY**

Model Results	Theoretical	Feasible / Realisable			Total	% of Theoretical
		Apartment	Standalone	Terraced		
Feasible - Max Profit	102,220	17,568	15,673	1,913	35,154	34%
Realisable	102,220	8,042	14,105	1,531	23,678	23%

Source: Property Economics, WCC

Table 13 shows that the realisable capacity across Wellington City is almost 23,680 new dwellings, representing a 23% realisation rate across the City. In essence, this represents a 67% realisation rate of the already calculated feasible capacity outlined in Table 11 above.

**TABLE 14 - WELLINGTON REALISABLE RESIDENTIAL DEVELOPMENT CAPACITY BY SUBURB**

Suburbs	Theoretical Capacity	Realisable Apartment	Realisable Standalone	Realisable Terraced	Total Realisable Capacity	Realisation Rate
Aro Valley	440	17	152	26	195	44%
Berhampore	1130	8	363	1	372	33%
Breaker Bay	36		11	2	13	36%
Broadmeadows	264		33	-	33	13%
Brooklyn	2103	15	644	-	659	31%
Churton Park	1697		179	-	179	11%
Crofton Downs	482		68	6	74	15%
Glenside	145		38	-	38	26%
Grenada North	2659	88	5	10	103	4%
Grenada Village	1281		254	46	300	23%
Hataitai	929		315	79	394	42%
Highbury	68		22	-	22	32%
Houghton Bay	186		61	-	61	33%
Island Bay	2895	51	617	-	668	23%
Johnsonville	7045	222	1363	9	1,594	23%
Kaiwharawhara	23		3	-	3	13%
Karaka Bays	122		63	-	63	52%
Karori	6702		1576	545	2,121	32%
Kelburn	578	-	214	98	312	54%
Khandallah	2583	13	564	252	829	32%
Kilbirnie	3381	555	236	11	802	24%
Kingston	248	-	25	-	25	10%
Lyllall Bay	1026		220	1	221	22%
Maupuia	333		62	6	68	20%
Melrose	213		89	-	89	42%
Miramar	4009	30	661	-	691	17%
Mornington	306		86	-	86	28%
Mount Cook	3245	1,465	120	3	1,588	49%
Mount Victoria	1015	-	137	12	149	15%
Newlands	4479	2	743	-	745	17%
Newtown	3021	658	489	5	1,152	38%
Ngaio	2366	-	576	163	739	31%
Ngauranga	28		0	-	-	0%
Northland	841	18	275	-	293	35%
Oriental Bay	55		31	-	31	56%
Owhiro Bay	281		85	-	85	30%
Paparangi	1476		212	-	212	14%
Pipitea	3533	345	0	-	345	10%
Rongotai	181		86	-	86	48%
Roseneath	80		37	18	55	69%
Seatoun	730		162	80	242	33%
Southgate	373		82	-	82	22%
Strathmore Park	1977		502	17	519	26%
Tawa	10196	-	1887	-	1,887	19%
Te Aro	15571	1,965	12	9	1,986	13%
Thorndon	2875	622	129	48	799	28%
Vogeltown	263		75	-	75	29%
Wadestown	739		270	61	331	45%
Wellington Central	6624	1,920	0	-	1,920	29%
Wilton	654		184	-	184	28%
Woodridge	730	48	87	23	158	22%
<b>Grand Total</b>	<b>102,220</b>	<b>8,042</b>	<b>14,105</b>	<b>1,531</b>	<b>23,679</b>	<b>23%</b>

Source: Property Economics, WCC

# Appendix 2.3

## Assessment of Wellington City Road Network

# Assessment of Wellington City Road Network

Under National Policy Statement on Urban Development 2020

Prepared to inform and support the Housing and Business Assessment for Wellington City Council under the National Policy Statement on Urban Development 2020.

May 2021

## Version Control

Version	Date	Notes
Draft 1.0	14/04/2021	First draft.
Draft 2.0	21/04/2021	Incorporating feedback from TS team.
Final 3.0	03/06/2021	Final draft - pdf
Final draft 4.0	10/06/2021	Incorporating feedback from PP team.

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## Summary

This paper presents an assessment of Wellington City Council's transport network's ability to meet the requirements of the National Policy Statement on Urban Development 2020 (NPS-UD).

The Council provides 980 kilometres of footpaths and accessways, 698 kilometres of roads, and 2.8 kilometres of bridges and tunnels. This infrastructure enables over 200,000 residents to move around the city every day. The Council's transport infrastructure has a replacement cost of \$1.5 billion. Overall, our transport infrastructure is in good condition, our current levels of service are largely meeting the needs of the city, and the service levels are considered sustainable and affordable. There will always be an ongoing requirement to invest in infrastructure maintenance, renewal and upgrades to improve network quality, accommodate population growth, and enhance the effectiveness of the transport network as a whole.

Between 2018 and 2048 the city's population is forecast to grow by around 73,000 residents, one fifth of which is expected to be in the central city, and over 22,000 jobs<sup>1</sup>, which are expected to be largely in the central city.

This growth will add to existing strains on the transport network and significant investment will be required to maintain acceptable levels of accessibility to support economic, social and recreational activities. The Council is working with Greater Wellington Regional Council and the NZ Transport Agency to develop a transport investment package under the Let's Get Wellington Moving programme. This is expected to provide for growth for the north, central, southern and eastern suburbs. The local share of funding to support this package is not yet finalised and therefore not fully provided for in the current Long-term Plan. The project is expected to provide limited transport improvements to support growth in the western suburbs (e.g. Karori).

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<sup>1</sup> Sense Partners June 2021 projections



## Purpose

This paper presents an assessment of Wellington City Council's road network's ability to meet the requirements of the National Policy Statement on Urban Development 2020 (NPS-UD). The NPS-UD requires an assessment of:

- whether development of land can be serviced with current development infrastructure; and
- whether development infrastructure is required to service future development identified in the Council's Long-term Plan, or Infrastructure Strategy.

The assessment is not contingent on the location of development capacity, but **assesses the infrastructure as it currently stands, and its potential to absorb further growth** over the period 2021 - 2051<sup>2</sup>. For the purpose of this paper, the scope of the transport network includes facilities for walking, cycling, public transport and motorised traffic.

## Overview

This document discusses the Wellington City local road network, forecast population growth and possible changes in travel demand. It then outlines asset and non-asset based solutions implemented by the Council to manage changes in demand, their implications for the transport network and the assessment of the constraints and ability of the transport network to absorb future growth.

The format of the document is:

- Wellington Context
- Recent Population and Transport Trends
- Projected Growth
- Projected Demand
- Strategic Responses
- Assessment of Existing and Anticipated constraints
- Assessments of the infrastructure as it currently stands, and its potential to absorb further growth

The Local Government Act 2002 (LGA 2002) requires that growth and demand be considered as part of asset management planning to ensure that future requirements are identified and planned for in advance. Understanding current demand and forecasting future demand is critical to determining what level of investment is needed to provide the agreed level of service to the community. Changes in demand may require adjustments to the asset base and to operations and capital work strategies. Any change in the asset base required to deliver services also affects future maintenance and renewals requirements. The Council will accommodate future growth and changes in demand through:

- Non asset solutions such as demand management strategies. These are discussed near the end of this Document.
- Optimised capital development projects, while considering wider goals and strategies. These wider goals include resilience, liveability, economic efficiency, and environmental sustainability, as set out in our Long-term Plan and Infrastructure Strategy.

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<sup>2</sup> Regional modelling and City transport planning is currently based on data that spans to 2043.

## Wellington Context Sense Partners June 2021 projections

### The Wellington Region

Growth is expected throughout the region with the population forecast to increase by 46% by 2048 to 768,000<sup>3</sup>. This growth is placing pressure on housing supply and rental affordability, resulting in some lower income residents relocating to regional towns in the Wairarapa and Horowhenua where rents and house prices are more affordable.

The region has the ninth<sup>4</sup> highest carbon emissions in New Zealand and is relatively well placed to reduce emissions given existing levels of public transport use, but the location of future growth needs to support reduction in private vehicle usage.

Impacts of climate change such as flooding are expected to be felt strongly in low lying areas. Erosion to coastal roads and infrastructure is likely to increase with storms, storm surges and sea level rise, threatening beaches and low-lying communities. More frequent and intense weather is expected to increase the risk of erosion and landslides.

Technological changes expected during the next decade will offer new travel choice that will reduce carbon emissions, the reliance on private transport and improve network management. These include the increase of alternative fuels, shared transport, on demand travel options, micro-mobility such as electric scooters and intelligent transport systems. The region will continue to play an important role in linking freight and tourism between the North and South Islands, but there could be changes in the location and movement of freight as Wellington transitions to a low-emissions economy.

### The Wellington City Community

Wellington City is composed of three principal areas: the central city area, the inner city area, and the outer city area (Figure 1). Each of these areas has different characteristics that influence travel patterns.

The central city area is the primary location of jobs within the city and the wider region and has 61% of all jobs in the city<sup>5</sup>. State highway one runs through the central city to the airport and 48 of the region's 87 bus routes stop in the area. As a result, many journeys in the city either Sense Partners June 2021 projections

<sup>3</sup> Sense Partners June 2021 projections

<sup>4</sup> [New data tracks regional greenhouse gas emissions in relation to regional GDP | Stats NZ](#)

<sup>5</sup> Greater Wellington Regional Council, 2013 WTSM Update - Derived from 2013 Census, Statistics New Zealand.

**211,222**

WELLINGTON CITY POPULATION  
2018

**6.2%**

WELLINGTON CITY GROWTH  
2013-2018

**4.3%** OF

NATIONAL POPULATION

**3.4%** OF

NATIONAL DEATHS &  
SERIOUS INJURIES (DSI)

**269** TOTAL DSI

2016-2020

**52.5%** OF

WELLINGTON CITY  
GREENHOUSE GAS EMISSIONS  
FROM TRANSPORT (2019)

**4%** INCREASE

IN TRANSPORT  
GREENHOUSE GAS EMISSIONS  
2001-2019

**9%** OF NATIONAL GDP

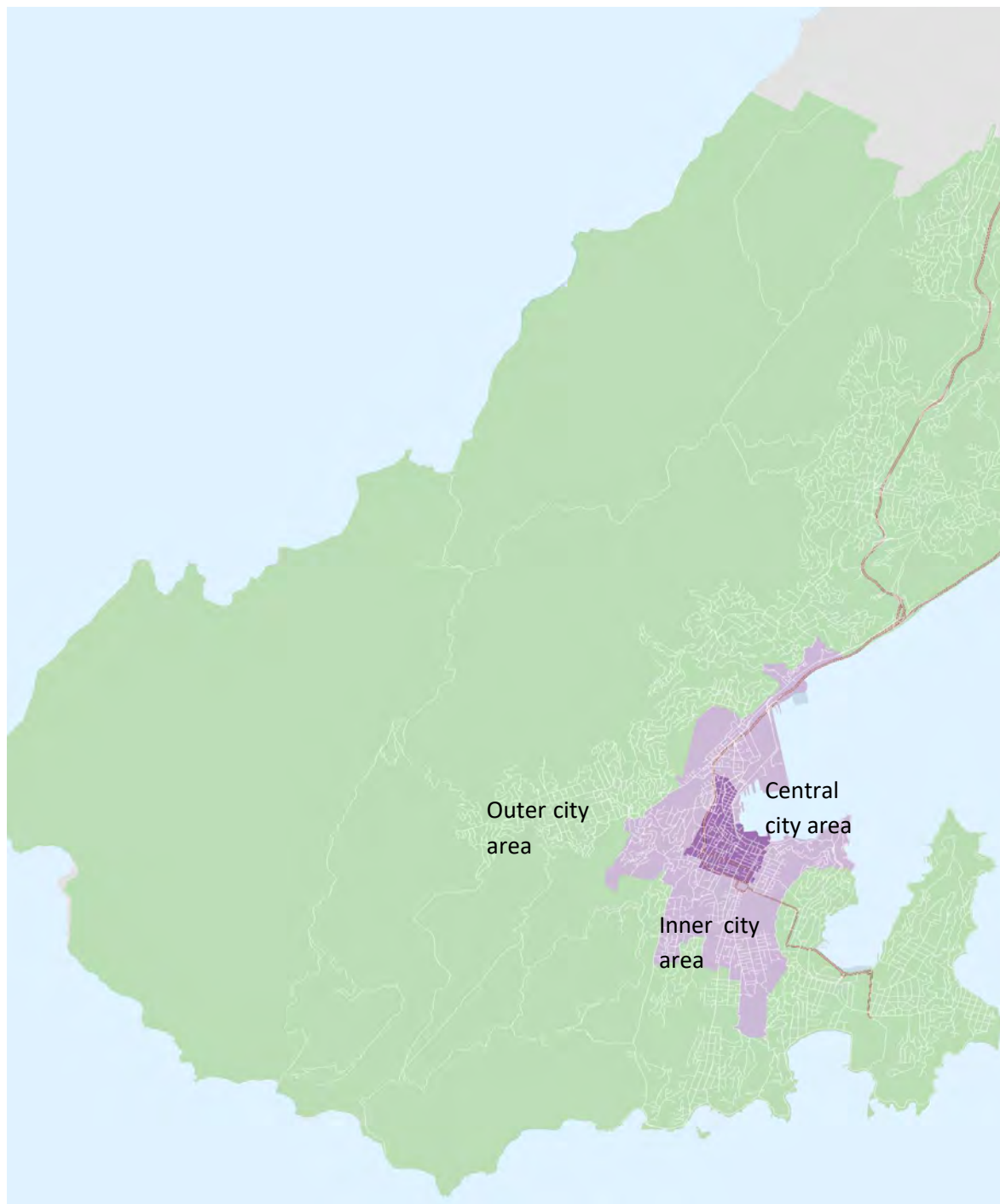
YEAR END MARCH 2019

**4.5%**

WELLINGTON CITY  
UNEMPLOYMENT RATE  
2018

begin or end in the central city or require people to move through the central city during their journey. Residents of the central city have the lowest car ownership and car commuting rates in the city, with around 66% of residents walking to work.

The inner city area consists of older suburbs which surround the central city. These suburbs were built in the early 1900s. In these suburbs, streets were originally designed with pedestrians in mind and did not anticipate the high rate of growth in private motor vehicles and therefore the houses often have limited off-street parking.



The outer city area consists of a variety of different neighbourhood types built over many decades. Some are older and share commonalities with inner residential neighbourhoods, while others were built between the 1940s and present day and are more car-oriented. These suburbs are characterised by lower density, larger lot sizes, hilly topography, predominantly off-street parking, and large distances between residential and commercial land uses. Wellington City has a population of over 210,000 people, is the country’s capital, and has the largest concentration of employment in New Zealand. The city is expected to add 73,000 more residents over the next 30 years, one fifth of which is expected to be in the central city, and over 22,000 jobs over the same period. As the city grows, there is an increasing need to make best use of limited space.

In order to accommodate growth while retaining and enhancing the qualities that attract people to Wellington, decisions around the allocation of public space are going to be critical. Decisions must support the aspirations of Wellingtonians around becoming a more people-centred, connected, eco city with a dynamic central city. It is also set in the context of Our City Tomorrow and Let’s Get Wellington Moving.

Wellington has the most sustainable transport network in New Zealand; it has the lowest rates of driving and the highest rates of walking and public transport use in the country. This is increasing, as eight out of ten new commuters in the city have chosen to walk, cycle, or take public transport to work over the last decade. If current travel and demographic trends continue, total car travel demand is likely to stay at a similar level that is it today. However, investment will still need to be made to accommodate this growth, adapt to changing travel patterns, and ensure that the transport network is reliable, safe, and resilient. The sustainable transport hierarchy, first adopted in the Urban Growth Plan 2015, places emphasis on encouraging greater use of walking, cycling and public transport (Figure 2).

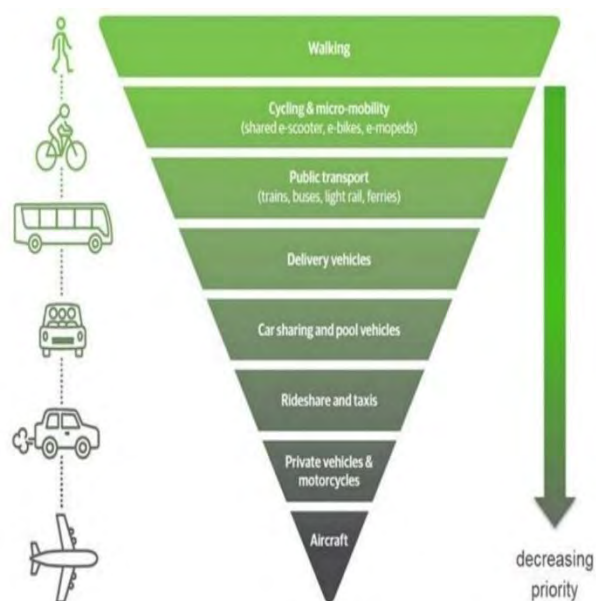


Figure 2: Sustainable Transport Hierarchy

A Draft Spatial Plan for Wellington City and the draft Long-term Plan 2021-31 set the strategic direction for our transport network development, which is to encourage walking, cycling and public transport over other modes of transport.

Figure 1: Wellington City Principle Areas

### The Local Road Network

The Council’s draft Transport Activity Management Plan (2020) provides a comprehensive summary of the state and performance of the city’s transport network and how Council intends to achieve target levels of service and strategic outcomes through managing and developing transport assets.

The Council’s transport assets are regularly inspected, and condition is recorded in various management systems, primarily the Road Asset Maintenance Management system (RAMM). Maintenance and renewal programmes are undertaken to ensure assets provide an acceptable level of service throughout their service lives.



The majority of the Council’s transport network assets are in good condition with maintenance and renewal programmes being adequately funded. Nine percent of the transport network retaining walls are in poor or very poor condition. Renewal funding has been increased in the current Long-term plan to address this situation.

Another issue identified in recent years is the seismic risk associated with tunnels in the city. All of the city’s four road tunnels have been strengthened for seismic performance.



Figure 3: WCC Transport asset improvements and management 2019/2020

### Key Demand Drivers

Changes in transport demand are affected by a number of variables, including population change and the extent and distribution of residential and commercial development. Like other cities, Wellington continues to be impacted by wider trends. One of these trends is the overall rate of travel change. From 1980 to 2004, the country saw an average increase in driving of around 3% per year, but from 2004 onward this trend has reversed. Relative to its peak in 2004, transport demand has fallen by 8% nationwide. Given this inconsistency with regard to trends in transport demand, future demand for transport in New Zealand is uncertain. The Ministry of Transport (the Ministry) has stated that traditional forecasting models alone cannot be relied upon to decide future transport investments. Instead, a range of potential future scenarios and analysis of demand drivers can be used to prepare for an uncertain future.

The Ministry of Transport has identified five key drivers of future transport demand for New Zealand:

1. Digital connectivity - decreases demand for trips as digital connections improve

2. Urbanisation - decreases vehicle kilometres travelled (VKT) per capita as urban residents travel less than rural residents
3. Fuel prices - increasing fuel prices increase travel costs and decrease demand
4. Fuel efficiency - increased fuel efficiency reduces travel costs and increases demand
5. Population ageing - decreasing demand as older people tend to travel less than younger people

Covid-19 has presented an additional driver of transport demand, by increasing opportunities for digital connectivity to replace physical trips, and potentially changing preferences towards different modes of travel. The changes in daily commuting brought about by the Covid-19 pandemic in Wellington have been relatively small in terms of daily vehicle movements. By week two of the post Covid-19 restrictions, traffic across the city was largely back to pre-lockdown levels. The impacts of having more people working from home than prior to the lockdown has not manifested in less vehicular traffic and there is no suggestion that it may in the future. Covid-19 appears to have had a more substantial impact of public transport demand, as public transport demand remains substantially lower than pre-Covid 19 levels.

Each of these factors will influence future demand for transport, although the extent to which each will occur is uncertain. This highlights the changing nature and uncertainty of future travel demand. In addition to these national drivers, travel demand in Wellington City will also be influenced by:

- The amount of population growth in the city and the region which influences the total amount of travel demand
- Changes in the distribution of population and employment within the city and the region
  - Growth closer to the central city generates lower than average travel demand whereas growth further out generates higher than average travel demand
  - Jobs in the central city tend to generate walking, cycling, and public transport commutes whereas jobs elsewhere tend to generate car commutes
  - Our own ageing demographics

### **Population and Transport Trends**

Wellington City has been experiencing steady growth over the past few decades. From 2006 to 2018, Wellington's population grew by just over 23,000 people<sup>6</sup>. During that period, 23% of this growth was in the CBD, 16% was in the inner suburbs, and 61% was in the outer suburbs. This growth has implications both for total transport demand and the distribution and dominant travel modes throughout the city.

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<sup>6</sup> Based on 2018 Census data

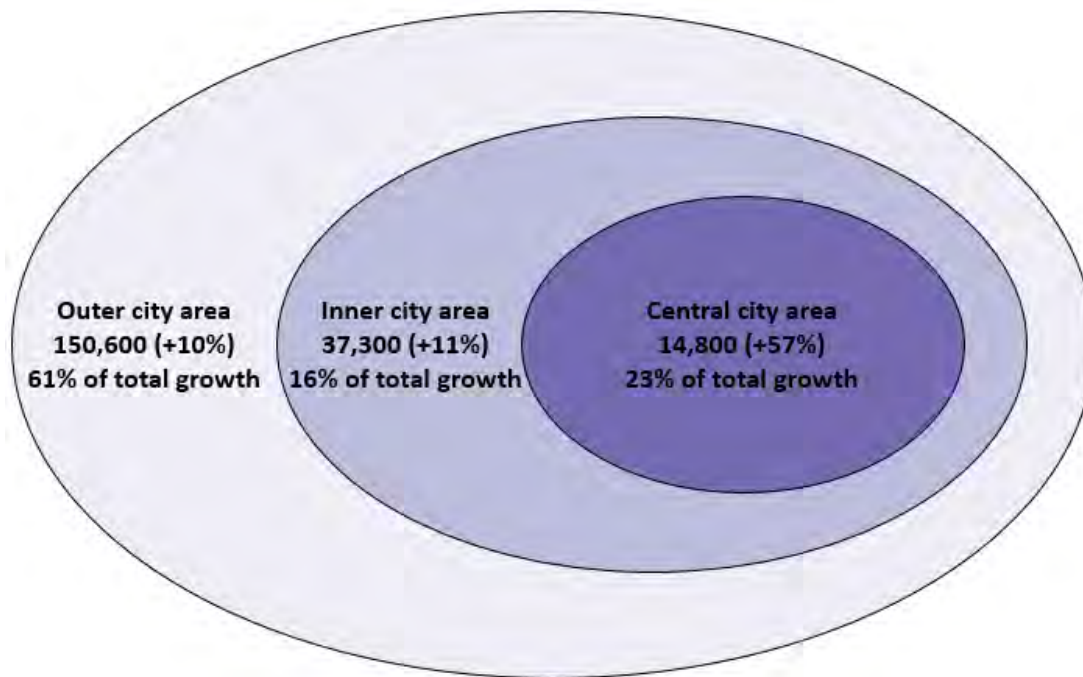


Figure 4: Percentage population growth across the city (2006-2018)

### Commuter Trips

Figure 5 and Figure 6 show the changing prevalence of commute modes for Wellington City residents from 2001 to 2018<sup>7</sup>.

- The percentage of people driving or carpooling to work has decreased while the percentage of people walking or cycling to work has increased significantly.
- The commute mode that saw the largest increase was walking. There were just over 11,000 additional walking commuters between 2001 and 2018 and the percentage of people walking to work rose from 14% to 19% over that time.
- Commutes by bicycle have become much more common, having risen from 2% of commutes in 2001 to 4% of commutes in 2018.
- Public transport trips have also risen significantly, from 16% of commutes to 21% of commutes in 2018.
- The frequency of car commuting has dropped from 48% of commutes in 2001 to 45% of commutes in 2018. Car commuting accounted for just 2% of new commute trips between 2013 and 2018. This is likely to be influenced by perceived and real difficulties in commuting by car with increased congestion and limited parking options, particularly following the November 2016 earthquake which resulted in the closure of three major carparking buildings.

<sup>7</sup> New Zealand Census, 2001, 2006, 2013, and 2018

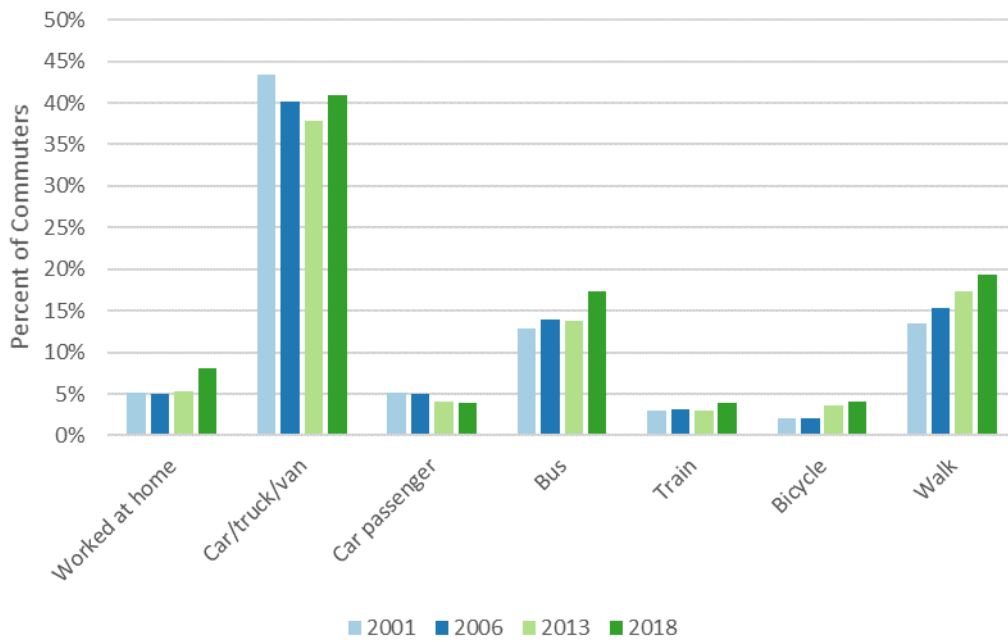


Figure 5: Commute Mode Share

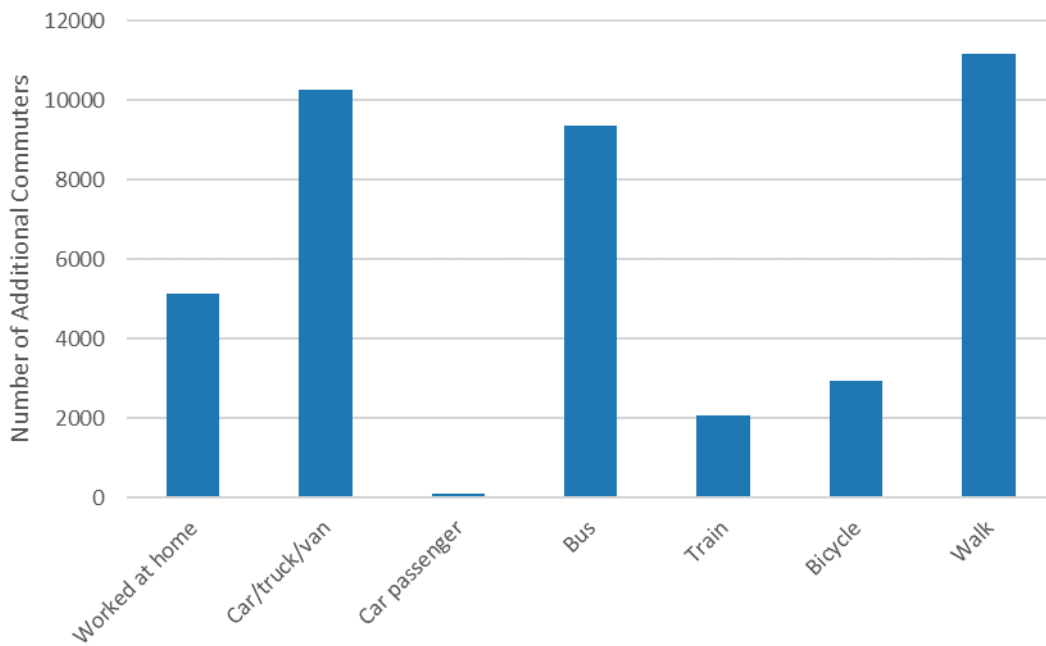


Figure 6: Change in Commute Trips

Travel time surveys are conducted several times a year for four major routes into and out of the city. Figure 7 illustrates survey results showing morning peak car commutes have been steadily increasing for commuters from Karori and Johnsonville, slightly increasing for commuters from Island Bay, and steadily decreasing for commuters from Miramar.



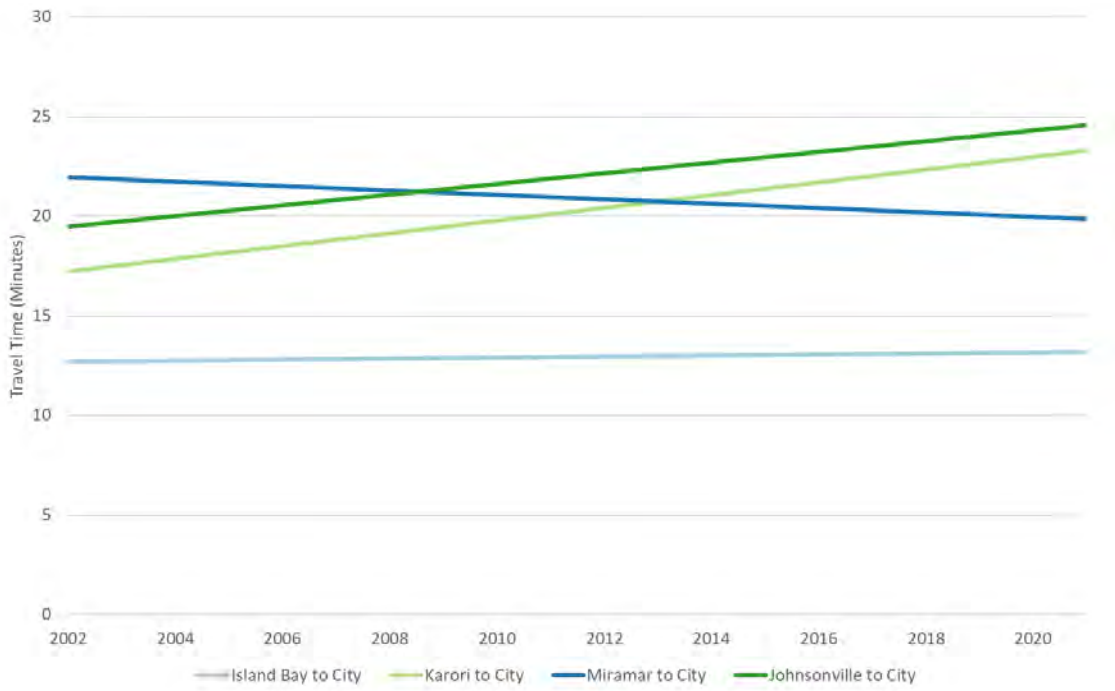


Figure 7: Inbound Morning Peak Travel Time Trends, 2002 to 2020

### Level of service

Public transport is an increasingly popular means of commuting to the central city and has grown from 16% of commuters in 2001 to 21% of commuters in 2018. Although public perception of levels of service are improving, just over a third (34%) of people in Wellington City think that public transport is reliable and of high quality, and a little under half (41%) think that it is affordable.

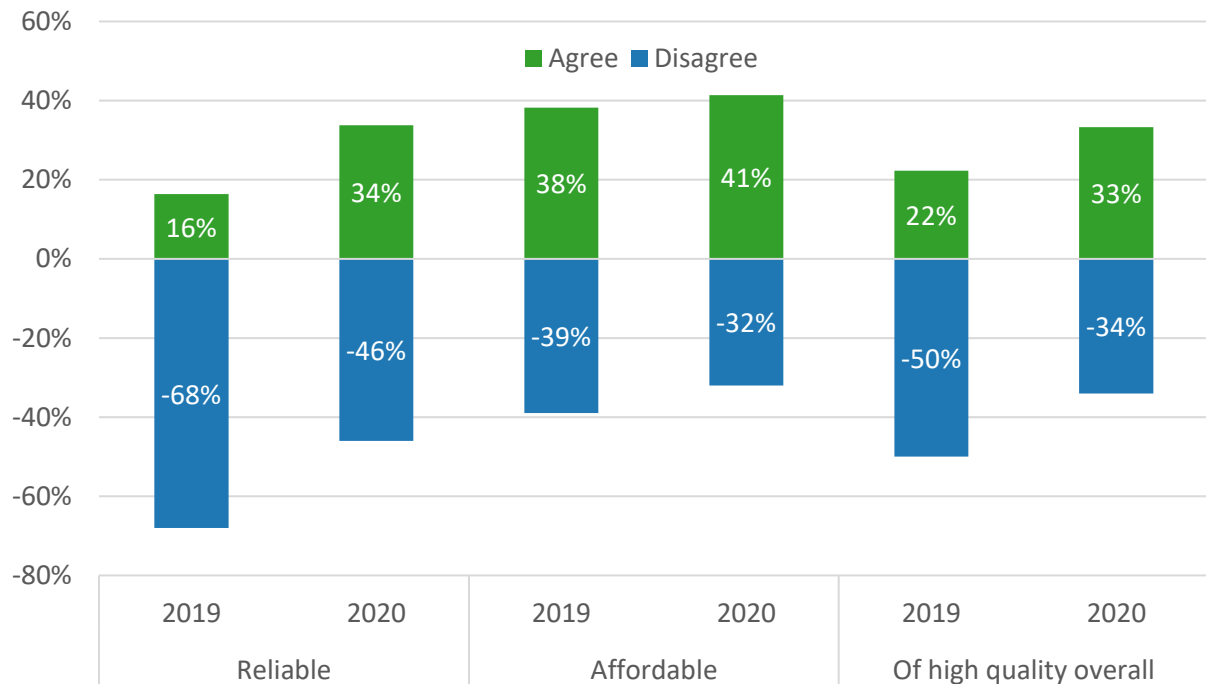


Figure 8: Level of agreement that public transport in Wellington is reliable, affordable and of high quality

Whilst walking is one of the most popular mode choices in Wellington City the level of satisfaction with Wellington's footpaths has fallen 9% from the 2019 level. Over the same period there has been a small increase (1%) in satisfaction with the provision of cycleways throughout the city.

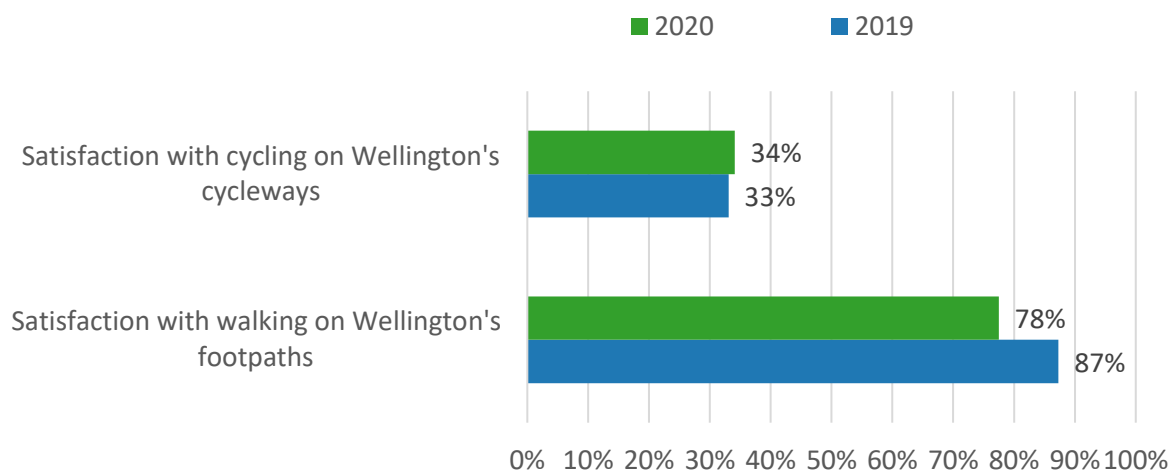


Figure 9: Level of satisfaction with cycling and walking around Wellington City

Perceptions around peak traffic volumes being acceptable in Wellington City have been steadily decreasing (Figure 10) and only a third of Wellington commuters believe that peak traffic volumes were acceptable in 2019.

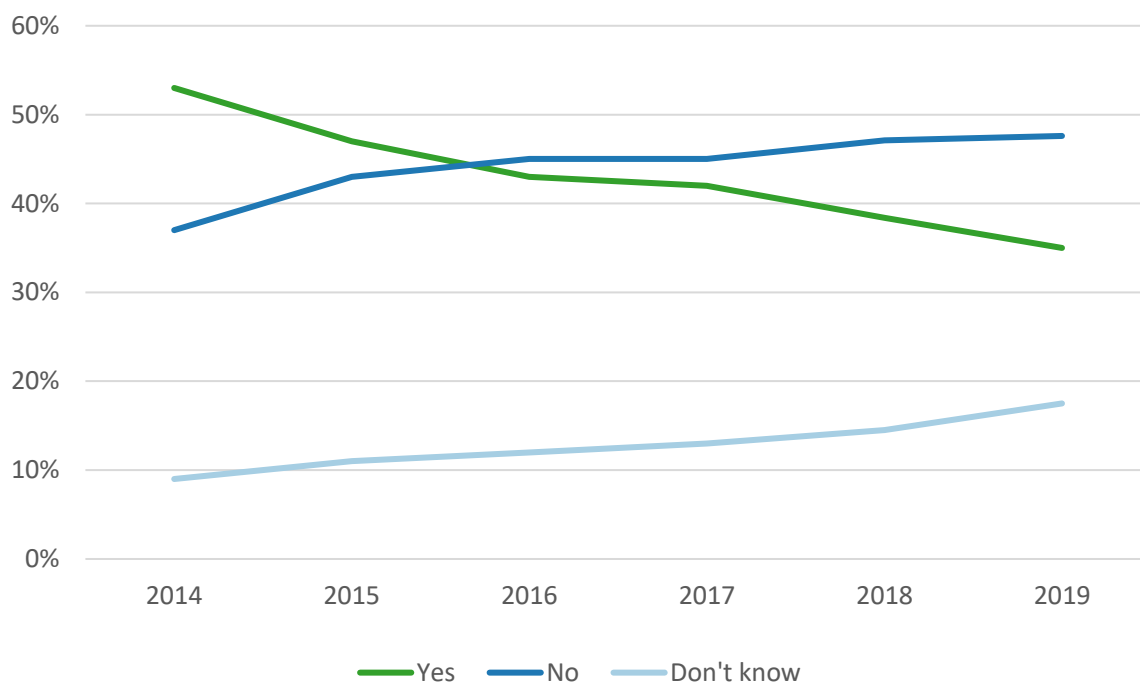


Figure 10: Belief that peak traffic volumes are acceptable

## Travel Preferences

Travel preferences can provide insight into travel demand and the extent to which the existing transport network allows people to travel by the mode that they would prefer. Figure 11 shows preferred and actual commute modes for Wellington city residents<sup>8</sup>.

- Almost twice as many people who drive as would prefer to use that mode, whereas many more people would prefer to walk or cycle than currently use those modes.
- 16% of people said they would prefer to cycle, while only 5% of people usually cycle for transport.
- 49% of people said they would prefer to walk while only 32% of people usually walk for transport.

An increasing preference towards walking and cycling may help to explain why walking and cycling rates have increased and driving rates have decreased in recent years. Despite recent increases in walking and cycling, stated preferences suggest that there is still significant unmet demand for these modes.

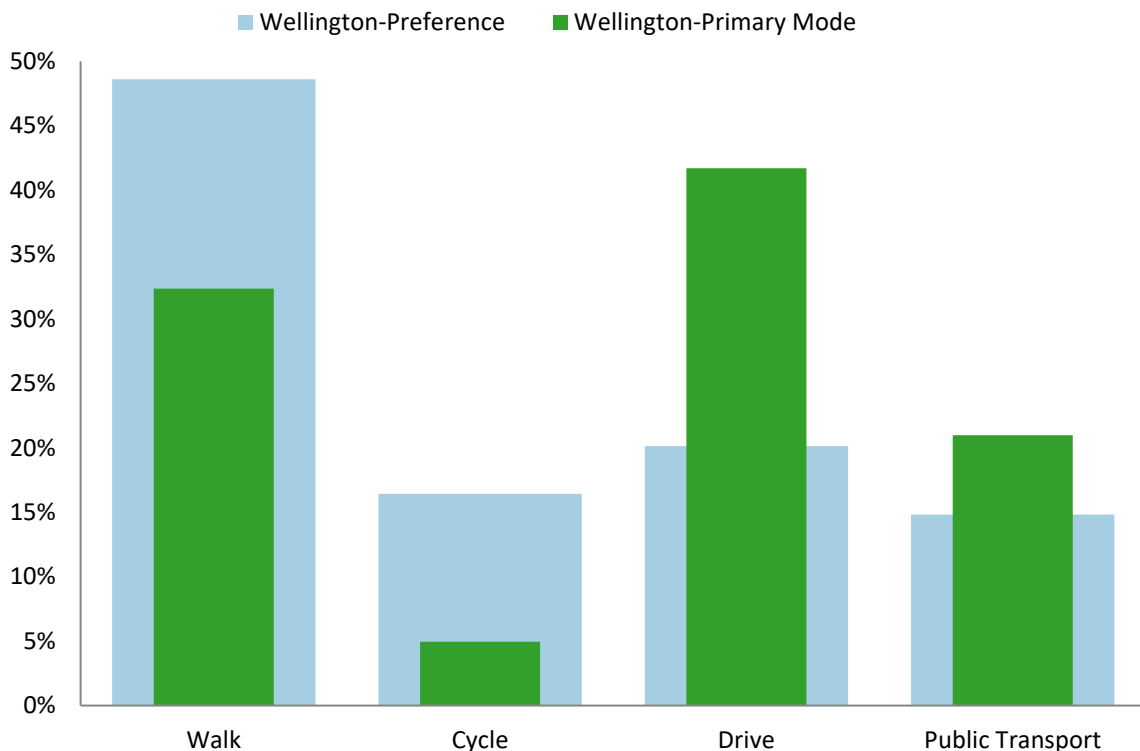


Figure 11: Residents Preferred and Actual Travel Mode

## Travel Trends by Location

Figure 12 shows commute mode share for Wellington City suburbs in 2018, sorted by distance to the central city. Suburbs close to the central city tend to commute by walking or cycling, and the prevalence of driving increases for suburbs further away from the city centre. The likelihood of car ownership is higher as well for households farther from the city centre.

<sup>8</sup> Dodge, 2016. <http://researcharchive.vuw.ac.nz/handle/10063/6211>

This shows that the location of growth within the city plays a strong role in determining travel demand for mode types. Additionally, for those who would prefer to walk and cycle, they seem much more likely to be able to do so if they live in centrally located neighbourhoods.

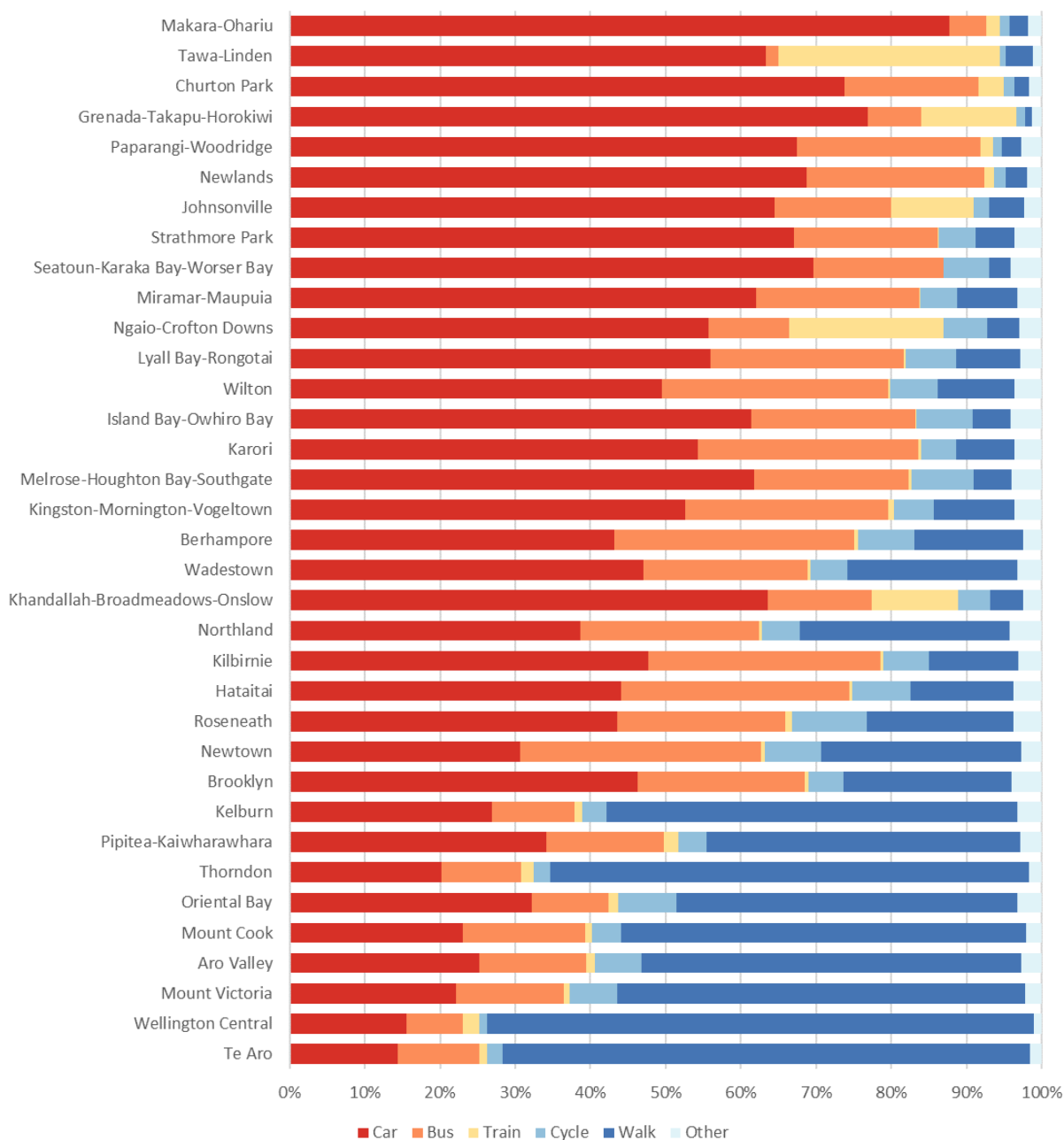


Figure 12: Commute Mode Share by Suburb, 2018 (by Distance to CBD)

### Vehicle Kilometres Travelled

Total vehicle kilometres travelled (VKT) on the local road network<sup>9</sup> provides an indication of demand on the network and influences both the amount of road maintenance and renewals needed and the capacity of the road network to accommodate future growth in demand. Figure 13 shows the percent change in total VKT on local roads in the past 10 years for Wellington City and New Zealand as a

<sup>9</sup> The local road network excludes state highways

whole<sup>10</sup>. Throughout the country, total travel on local roads was 12% higher in 2019/2020 than in 2010/2011. For Wellington City, total travel on local roads was 2% lower for the same time.



Figure 13: Change in Total VKT Relative to 2000/2010/01 2011 (Local Roads)

The amount of driving per person each year gives insight into trends in travel patterns, as well as the likely impact of future population growth on total travel demand. Figure 14 shows trends in per capita travel on local roads for New Zealand and Wellington City over the last 10 years. On an individual basis, people in Wellington City drive less than people in New Zealand as a whole. Additionally, the amount of driving Wellingtonians do has been trending down.

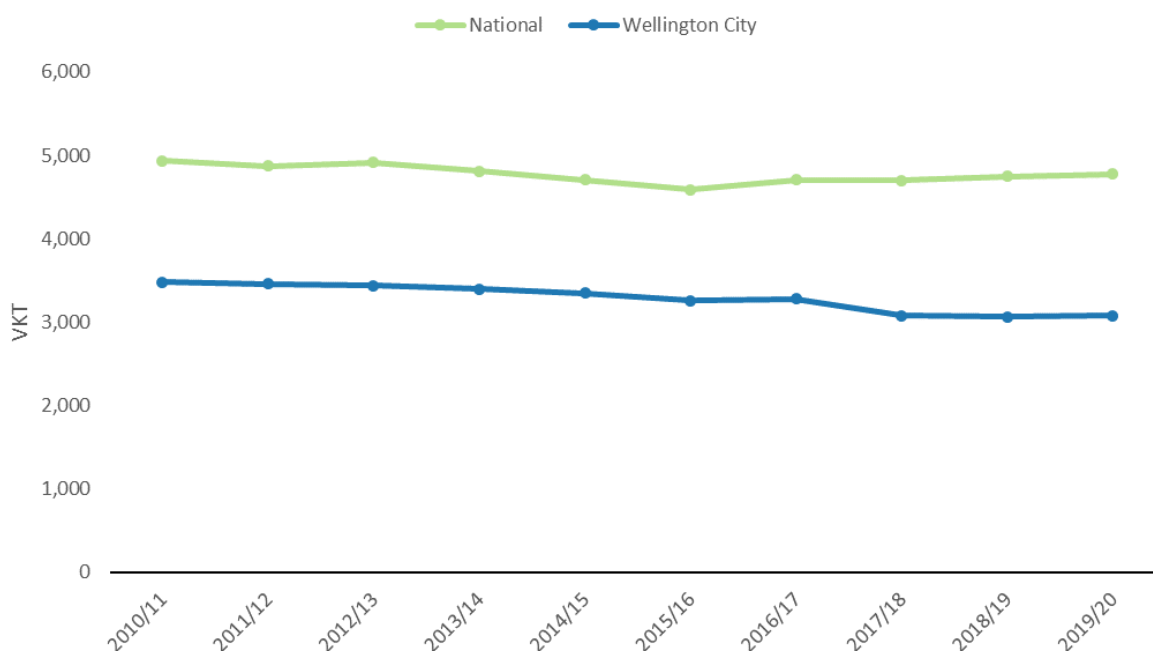


Figure 14: Vehicle Kilometres Travelled per Capita (Local Roads)

<sup>10</sup> <https://www.nzta.govt.nz/assets/userfiles/transport-data/VKT.xlsx>

## Projected Economic and Employment Trends

Wellington City has historically been a significant destination for overseas visitors to New Zealand, with visitors to the city accounting for 7.5% of international visitors to New Zealand. Prior to the advent of the Covid-19 pandemic, international tourism was growing significantly, with the number of international visitors more than doubling between 2000 and 2016<sup>11</sup>. International travel to New Zealand is expected to stall in the short term, but once travel restrictions across the world start to lift and borders open it is expected that tourism will start to return to normal levels and may even exceed the projections prior to Covid-19. If there is a significant uptake in international tourism, this will increase travel demand to and from the airport and around the city.

## Heavy Vehicle Travel

The transport network will continue to face significant demand resulting from the predicted growth in the forestry sector. Freight volumes from the Wairarapa are predicted to remain strong and grow. Total timber log production is expected to grow by 270% in the Wellington region between 2006 – 2031 increasing the demand on both the rail network and on the arterial road routes such as Aotea Quay north onto the State Highway network. Heavy vehicles significantly increase the pace of carriageway deterioration resulting in additional planned and reactive maintenance.

Figure 15 shows the future projected number of trips in Wellington City relative to 2013, as projected by the Wellington Strategic Transport Model. Heavy vehicle trips and public transport trips are projected to have the largest increases relative to 2013, growing by 42% and 25% respectively. This is significant for the transport network as these heavier vehicles can significantly impact the maintenance and renewals needed on the road network. We have started to see some of this damage evidence itself on the network from the double decker busses.

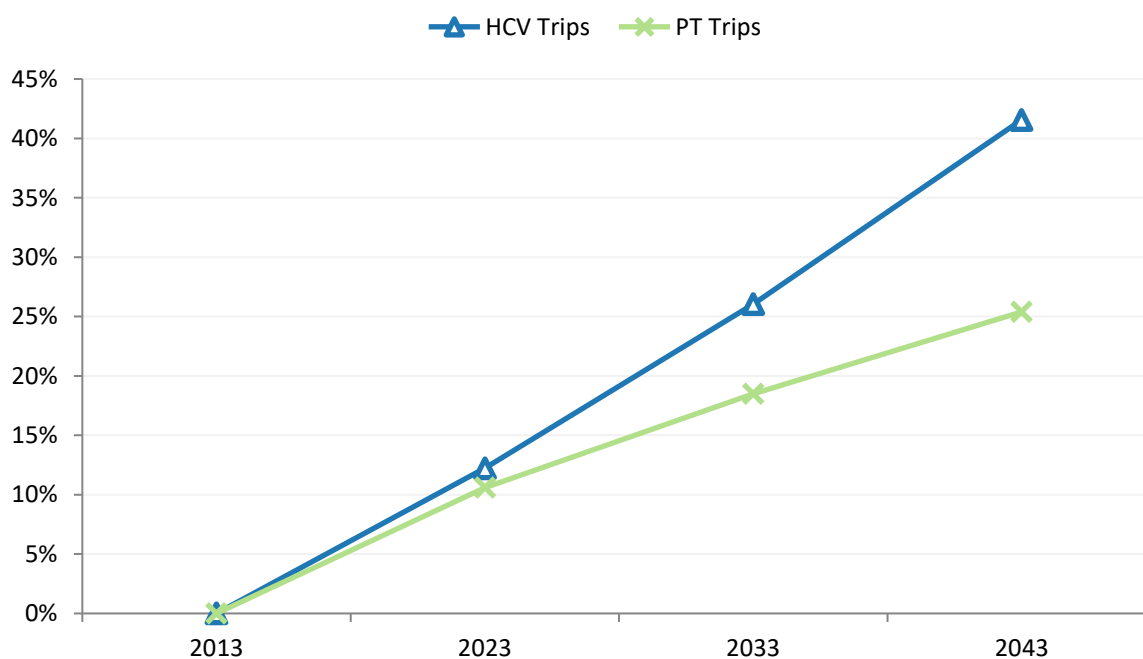


Figure 15: Projected Change in Heavy Vehicle Trips Relative to 2013

<sup>11</sup> Ministry of Business, Innovation, and Employment: International Travel

## Projected Population Growth

Wellington’s population is expected to grow by around 73,000 by 2048 relative to 2018 (2021 Sense Partners 50th percentile projection). Wellington is also expected to grow as an employment centre for the city and wider region. Both trends mean that there will be an increasing number of people who need to travel within, to, and from the city each day.

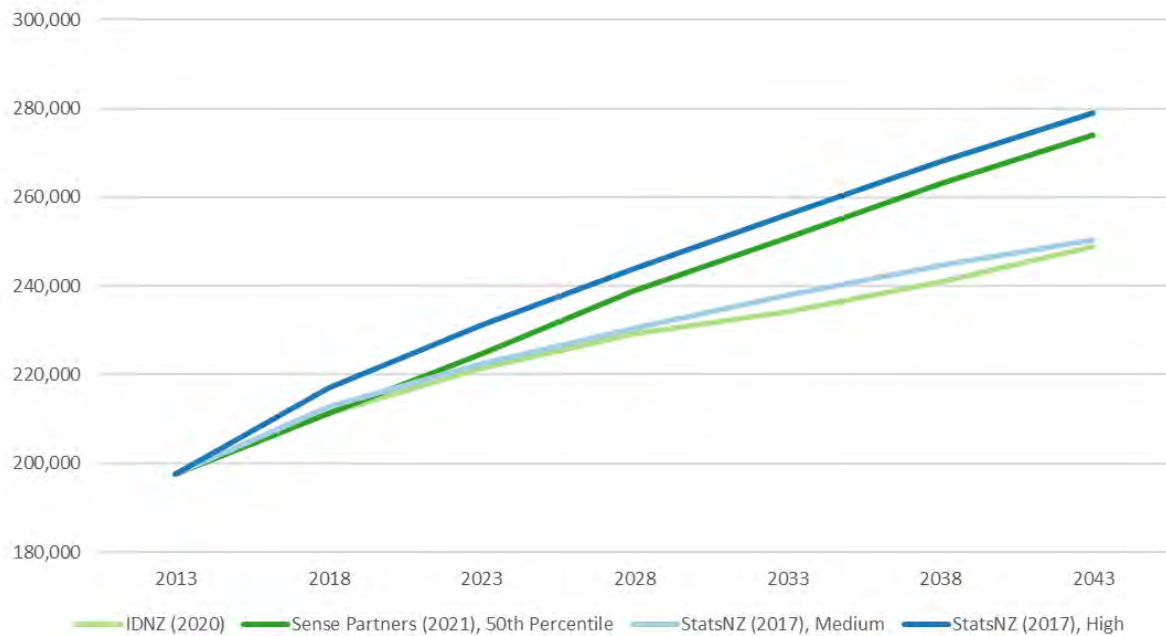


Figure 16: Population Forecasts for Wellington City

## Changing Demographics

As Wellington grows, it will also experience demographic changes that influence travel demand. Figure 17 shows the projected change in the distribution of household types in Wellington City. There is projected to be a decrease in the percentage of family households and an increase in single person and couple households. This is relevant for transport as census data shows single and couple households are more likely to live in centrally located one and two bedroom dwellings, where travel demand tends to be lower as compared to larger dwellings in further out suburbs.

Another significant demographic shift is the population’s age structure. Wellington population is expected to age significantly over the next 30 years, with an increasing proportion of the population over the age of 65 and a decreasing proportion of the population under the age of 19. This changing age structure is likely to have significant impacts on travel demand as those who are 65 and older travel about 45% less than those between age 20 and 64, particularly during the commuter rush hours.

As discussed earlier, residential location plays a strong role in determining both the distances travelled and the travel modes used. People living in inner suburbs and the central city drive less and are more likely to walk or cycle for transport as compared to people living further out.

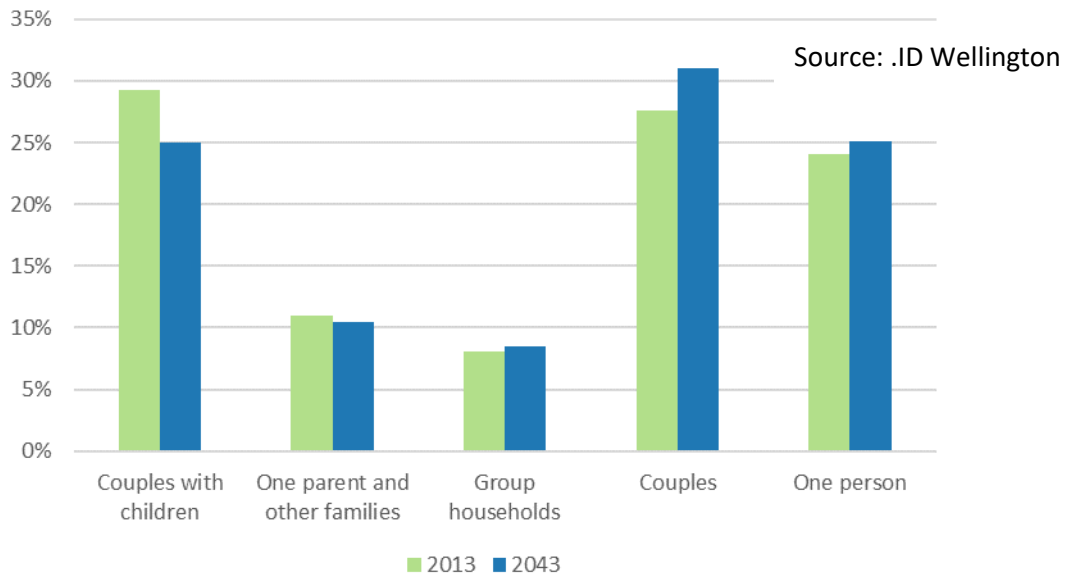


Figure 17: Household Types 2013 and 2043

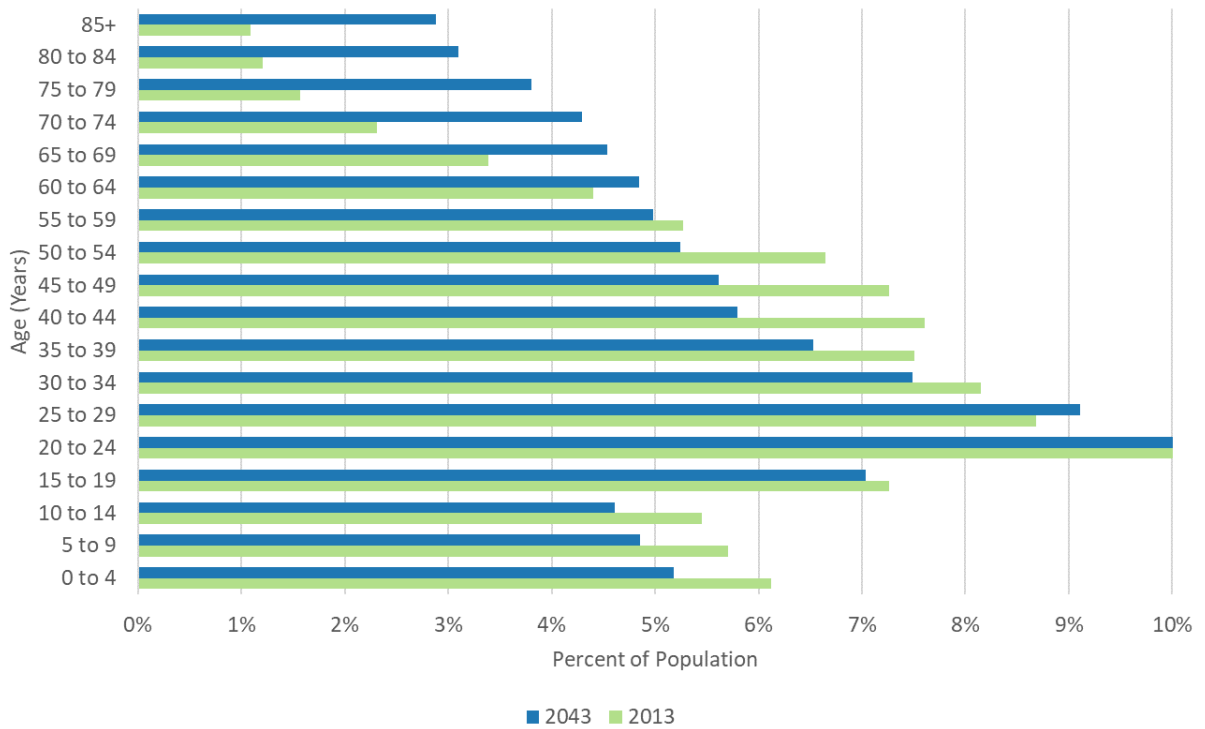


Figure 18: Wellington City Population Age Structure 2013 and 2043



### Changing Housing Density

Housing density also plays a role in determining travel demand, in addition to the impacts of living centrally. Figures 19 and 20 show projected population density by distance to the central city in comparison to 2013 density levels. The central city is expected to become significantly denser and other parts of the city will also see a small rise in density levels.

This changing density is significant for the transport network for two reasons: residents of denser areas tend to own fewer cars and travel by car less, and denser areas also use their assets more intensely due to higher concentrations of people and activity. For example, the projected increase in housing density in the central city could be expected to reduce car ownership rates by an additional 20% by 2043. For Wellington, this means that increased housing density will likely reduce car travel demand. However, it will also mean that population growth is largely accommodated through additional users on the existing transport network rather than through outward expansion and growth in the length of the transport network.

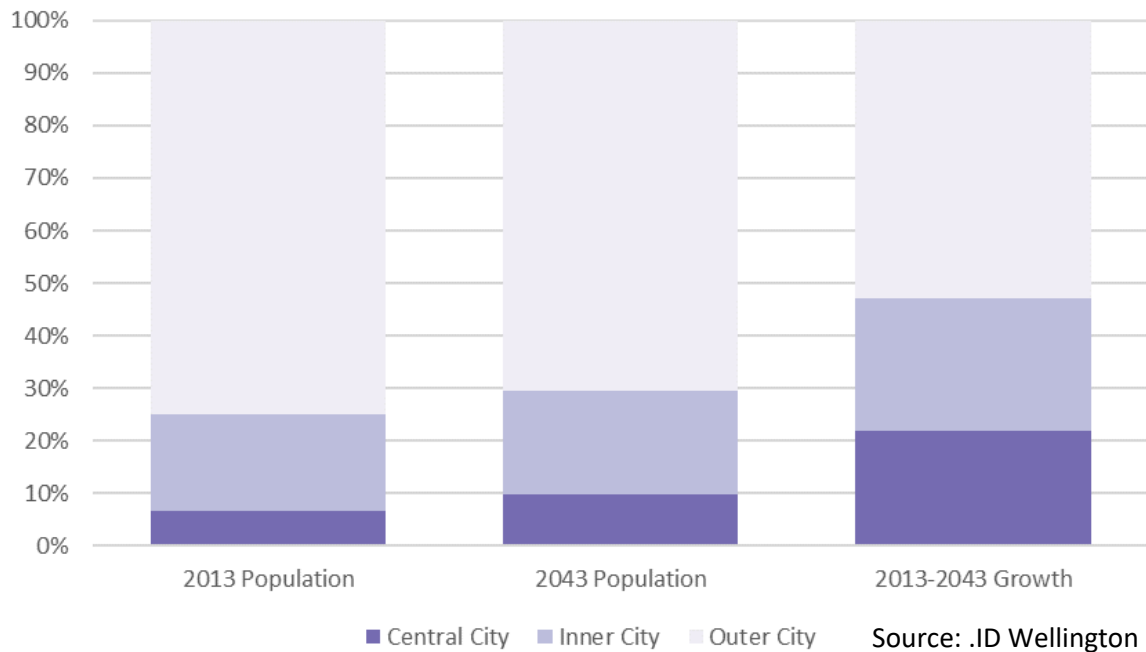


Figure19: Population Distribution

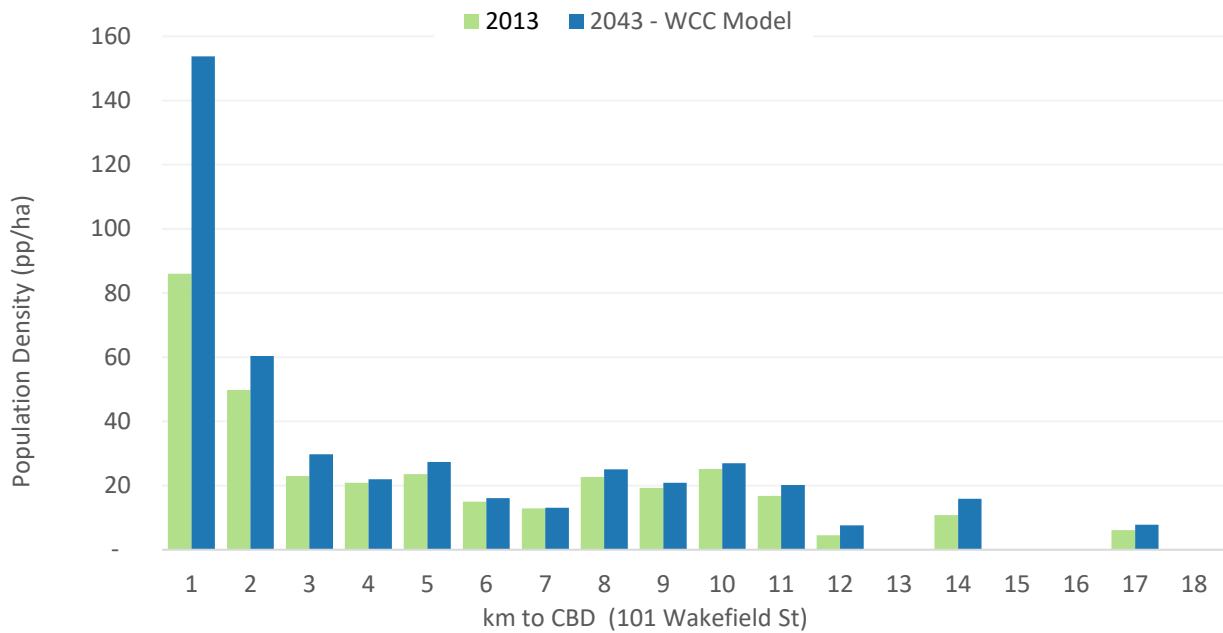


Figure 20: Projected Population Density by Distance to the CBD

### Impacts of Trends on Future Travel Demand

Even if people in the future have similar preferences and tend to get around in similar ways that they do today, demographic and behavioural trends will change travel patterns as population demographics and geographies change. Figure 21 shows the forecast impact of two trends, increasing population density and an aging population, on car travel demand per person at a neighbourhood level. Aging impacts travel patterns somewhat consistently across the city, and an aging population reduces average travel per person by around 9% in 2043 relative to 2013. This is a larger impact than is expected to be seen on a national level as Wellington City is expected to have a greater increase in its elderly population relative to the current population. An increasing elderly population is likely to increase demand for accessible transport infrastructure, as those over the age of 65 are much more likely to have a disability. Changes in population density have a very uneven impact across the city, as some areas are expected to have greater density than others as they experience greater increases in population. On average, increasing density is projected to decrease driving by 239 kilometres per person per year by 2043.

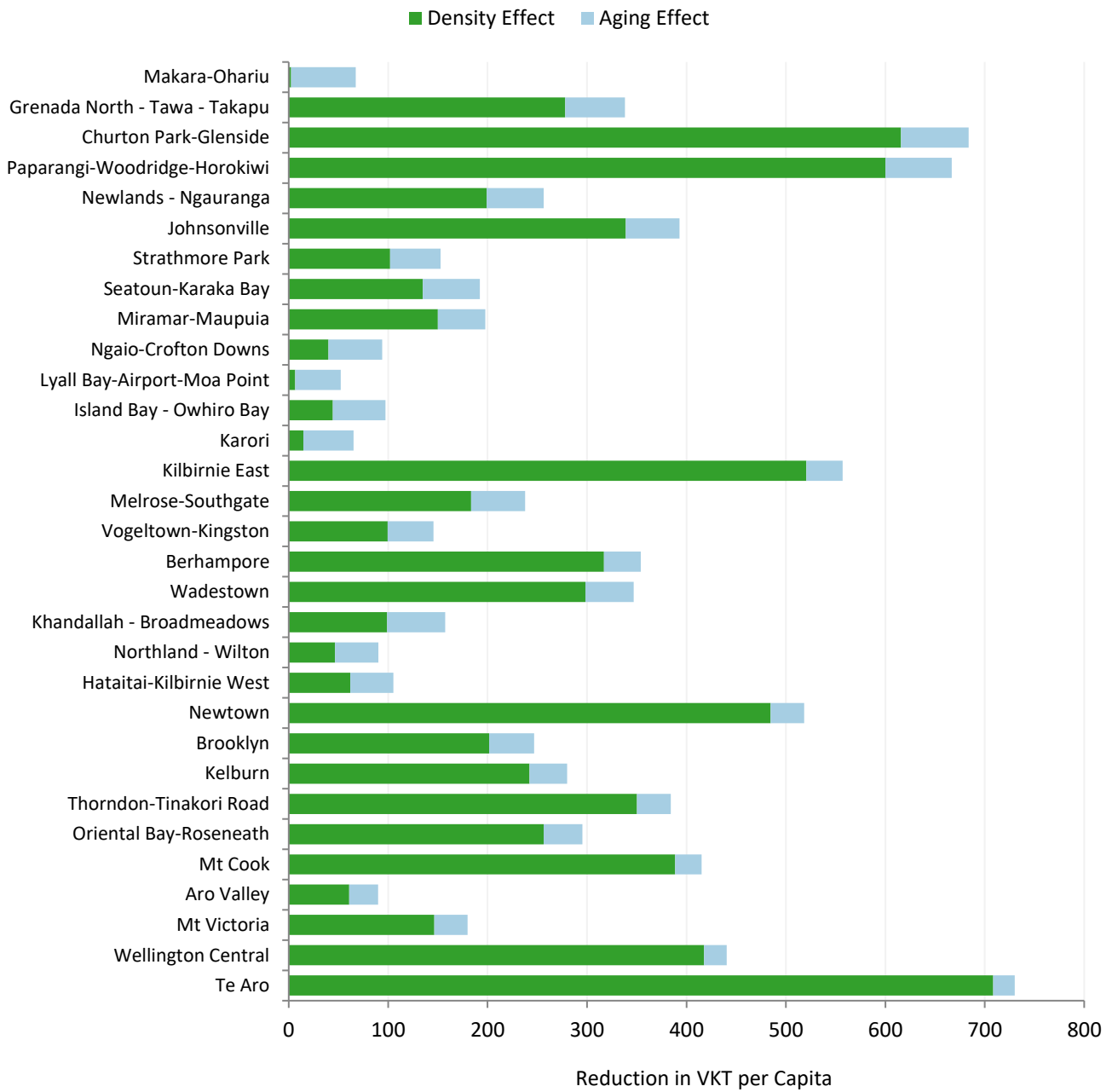


Figure 21: Forecast Reduction in VKT 2013-2043 (Due to Changes in Density & Age Structure)

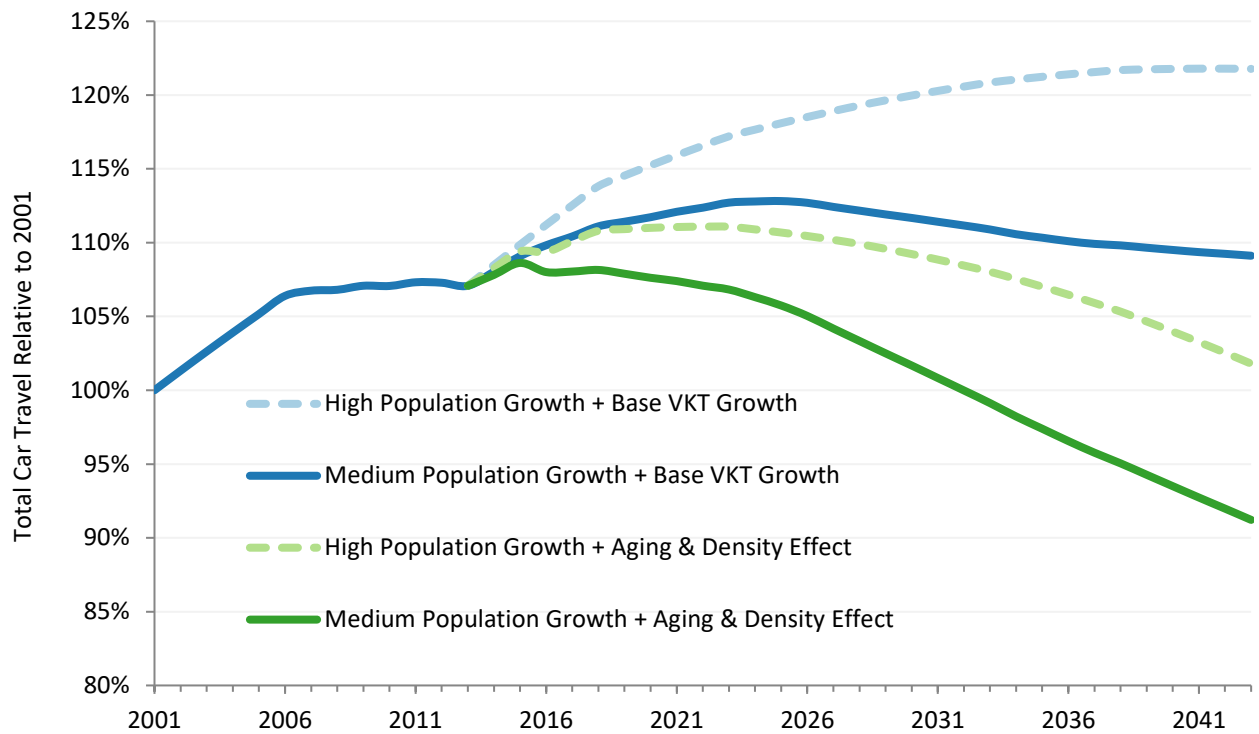


Figure 22: Total Car Kilometres Travelled on Local Road Network Relative to 2001

Figure 22 presents four possible scenarios of total car kilometres travelled per year on the local road network in Wellington City. These scenarios represent uncertainty regarding future changes in population growth and travel patterns. The dark blue line represents a medium population growth scenario, where travel patterns follow the trend of the past decade. The dark green line represents a medium growth scenario, where car travel per person decreases further due to population aging and increasing population density. The two dashed light blue and light green lines represent the base travel growth and reduced travel growth scenarios due to population aging and increased density under a high population growth scenario. The highest growth scenario sees a 21% increase in total car travel relative to 2001 while the lowest growth scenario sees a 9% decrease in total car travel relative to 2001.

The variability between these scenarios emphasises that transport demand is subject to significant uncertainty over the next 30 years. Other key demand drivers, including increasing digital connectivity, increasing fuel prices, and increasing fuel efficiency, autonomous vehicle impact and the advent of mobility as a service add additional uncertainty to future travel demand projections.

### Impacts on the Transport Network

Trends since 2000 show a decrease in driving per person and an increase in levels of commuting by walking, cycling, and public transport. Although Wellington’s population and employment levels have been increasing, the total amount of car travel, average journey times, and average travel speeds have remained relatively constant over the past decade. If recent trends continue over the next 30 years, total car travel demand is expected to stay at current levels or increase marginally as an increase in population is offset by continuing reduction in car travel per capita. This is consistent with the recent

plateauing of total car travel demand across the country. Following recent trends, we can also expect continued increases in levels of walking and cycling for transport in Wellington.

Although future overall traffic volume has plateaued, certain key corridors are becoming more heavily used by buses and other heavy vehicles. Increased volumes and vehicle loading create additional stress upon the road pavement structure, accelerating pavement defects such as cracking, rutting, shoving and reducing the asset life of both the pavement surface and structure. This is particularly a challenge given the large expected increases in heavy vehicles and public transport traffic volumes.

For roads that are expected to experience significant increases in traffic volumes, road reconstruction takes increased demand into account during the design process. There is a risk, however, that maintenance and renewal requirements will increase due to the increased demand on key transport corridors. These factors will be considered in the life cycle asset management processes.

### **Growth and Demand Strategic Responses**

Options for increasing transport capacity are limited by constrained corridors that must accommodate a variety of transport modes. Increasing demand for walking and cycling presents a growing challenge to provide safety and amenity for all modes. As a result, limited road space must be shared between transport modes. Future investments need to take into account the constrained nature of the network and strike a balance between several transport modes.

Increased traffic volumes are associated with a range of negative outcomes, including increased traffic congestion, increased travelling times, increased vehicle emissions, and increased costs for maintenance, renewal, and capital expenditure for the transport network. As a result, we will accommodate growth and demand through a variety of measures aimed at minimising these adverse outcomes. These measures include: development contributions, compact development policy, maintenance of the transport network, and pedestrian, cycling, and public transport improvements that encourage modal shift away from car travel and towards these modes.

### **Compact Development Policy**

Our Spatial Plan establishes a future framework ensuring a compact, resilient, vibrant and prosperous, inclusive and connected, and greener Wellington City. This blueprint sets out a plan of action for where and how we should grow and develop over the next 30 years. It will help shape our city by considering a range of topics relating to the City's growth including land use, transport, three waters infrastructure, natural hazards, heritage, and natural environment values. It encourages urban containment and intensification, particularly medium and higher density dwelling housing developments around key suburban centres and on key transport routes. This approach will mean that development is focused in areas that are near shops and other destinations, thus minimising trip distances and are in areas that are transit oriented and facilitate walking, cycling and public transport rather than car travel.

This approach will enable more people to live in the central city, where car travel demand is lowest and walking rates are the highest. This will both reduce travel demand on the transport network and ensure that our city is liveable and vibrant.

## **Development Contributions**

In accordance with LGA 2002, WCC have implemented a Development Contributions Policy. Development contributions are received from developers to fund infrastructure required as a result of such development. This minimises the adverse impacts of growth on the network to general ratepayers.

## **Capital Works Programme to Respond to Growth and Demand**

WCC implement a capital works programme to respond to growth and demand and to contribute to achieving our strategic priorities. These priorities have been identified by considering strategic priorities set out in the Government Policy Statement on Land Transport (GPS), the Council's Long-term Plan, and the Council's Spatial Plan.

Specific programmes are discussed below.

### **Walking and Cycling Improvements**

As the city grows, there will be increasing numbers of people on bicycles and an increasing number of pedestrians. There is evidence that there is an unmet demand for walking and cycling in the city, so service improvements in these areas can potentially decrease demand for driving as more people are able to walk and cycle for their transport needs. Meeting this demand for walking and cycling is a cost effective response to increasing travel demand, as travel by these modes is significantly less resource intensive than car travel. Given limited space, we need to manage and balance the needs of different users of the road corridor to maximise benefits while minimising costs.

We are in the process of implementing a significant cycleways programme that will provide connections between the suburbs and the central city and will thus allow more people to cycle to work and reduce reliance on car travel. Walking and cycling projects on key arterials and within the central city are expected to be delivered by Let's Get Wellington Moving, while projects elsewhere on the network will be delivered by Wellington City Council.

### **Public Transport**

We will continue to work with Greater Wellington Regional Council, as the city's public transport provider, to provide more frequent, reliable, connected, and affordable public transport services, including at weekends, with integrated fare options to enable a modal change to help reduce congestion.

We plan to create bus priority lanes over the next 10 years via the Let's Get Wellington Moving City Streets programme.

### **Roading Improvements**

Our overall strategic response to growth and demand is to accommodate growth via walking, cycling, and public transport, where possible, rather than providing increased road capacity. However, limited road capacity increases are sometimes required, and four types of roading improvements are provided for in our Long-term plan:

- New roads, providing linkages for greenfield developments in the northern growth areas of Lincolnshire, Woodridge, Tawa, and Stebbings into the existing transport network
- Intersection capacity upgrades, which allow existing intersections to be upgraded to accommodate increased demand from nearby northern growth areas
- Service lane improvements, to facilitate rear servicing thereby reducing conflicts on streets with high levels of walking activity
- Suburban town centre improvements associated with precinct planning works, to support intensification around urban centres

### **Te Atakura - First to Zero**

Wellington City Council is setting the zero carbon target for the whole city, not just the Council. Nearly 60% of our carbon emissions come from Transport, so changing the way we move around the city is critical. We're exploring opportunities in infrastructure investment through the Let's Get Wellington Moving project as well as a range of other initiatives. Key to success is expanding shared mobility options like carshare and bikeshare, some form of user charges to reflect the true cost of driving, electric vehicle charging stations, supporting the growth of active and public transport, and more.

The Te Atakura blueprint is a longlist of possible initiatives/actions we could take to cut carbon, and help us reach the goal. Zero Carbon Capital will stand as its own set of initiatives and projects, separately funded and executed from other ongoing transport and planning projects such as Let's Get Wellington Moving and Planning for Growth

### **Let's Get Wellington Moving**

We are working with Waka Kotahi and Greater Wellington Regional Council on the Let's Get Wellington Moving project to develop a strategic response to transport issues in Wellington, which will form the core component of capital improvements in the City over the next 30 years.

The 'Let's Get Wellington Moving' (LGWM) programme is working with the people of Wellington to develop a transport system that supports their aspirations for how the city looks, feels, and functions. LGWM will support Wellington's growth while making it safer and easier to move people with fewer cars.

LGWM is about improving the outcomes of liveability, economic growth and productivity, safety and resilience. The core focus of the programme is the area from Ngauranga Gorge to Miramar including the Wellington Urban Motorway, access to the port, and connections to the central city, Wellington Hospital, and the airport. It includes all the ways we get to and around our city, and how the city develops alongside its transport system.

The Let's Get Wellington Moving programme of works is being managed via a separate business case process and so the details associated with LGWM strategies, planning and resulting work programmes are excluded from this plan. We have included a high-level summary of the programme in this Section.

The LGWM Programme is divided into the following work packages:

- Early Delivery
- City Streets
- Mass Rapid Transit and Public Transport
- Travel Demand Management
- State Highway

Our level of involvement and responsibility with the projects that make up the LGWM programme will vary depending on the core delivery responsibilities allocated between the LGWM partners. However, we will deliver much of the physical works that impact our asset base including those in the Early Delivery and City Streets work packages shown in Figure 23.

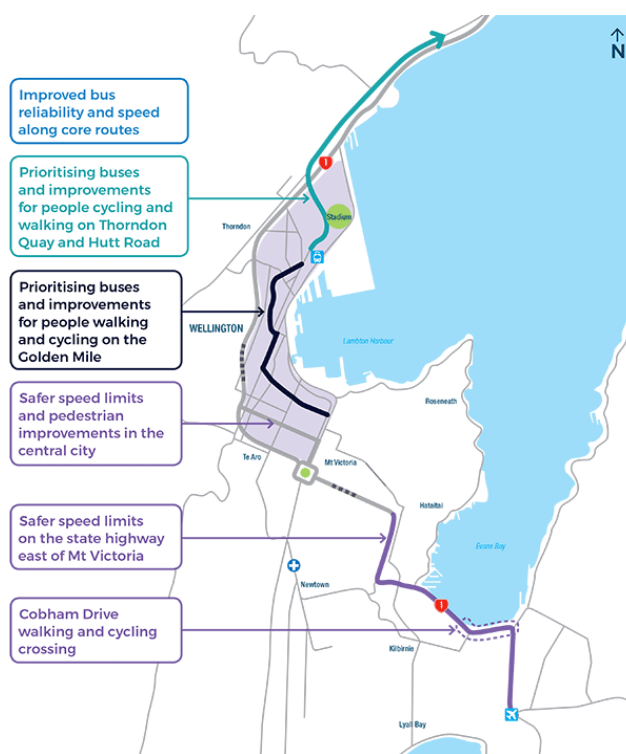


Figure 23: Early Delivery Work Package

The City Streets work package will make changes to roads and streets within the central city and consider the best allocation of space to move more people with fewer vehicles and improve access for all modes. This will include a connected and safe central city cycleway network, integrated with the wider cycleway network and improvements on main walking routes, like wider footpaths, improved crossings and priority, shelter, signage and lighting. It will also incorporate improvements to bus priority to and from the city on 8 core routes, illustrated in Figure 24.



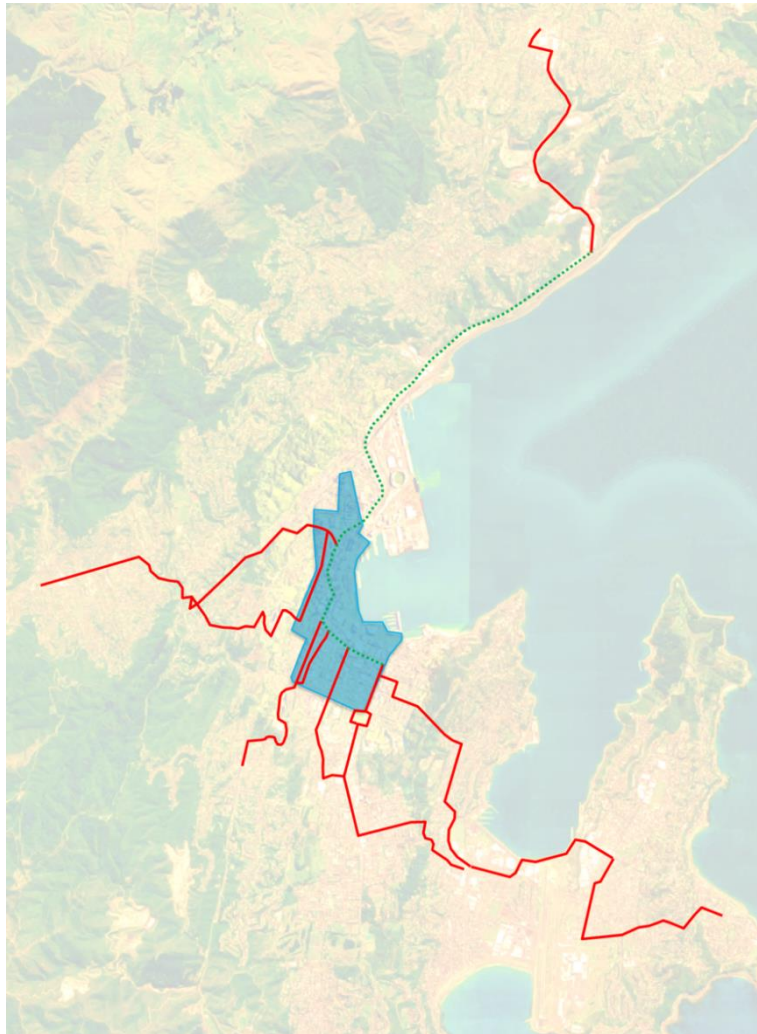


Figure 24: City Streets Core Routes

Later LGWM works will be delivered using another fit-for-purpose delivery contract, in accordance with the LTP to be published later this year. It is anticipated that this future LGWM programme would be delivered through our Capital Works future delivery model. The current model (panel suppliers) has reached the end of its term. We are currently exploring options via a Procurement Strategy to create a new Capital Works delivery model.

### **Assessment of Existing and Anticipated Constraints**

Overall, our transport infrastructure is in good condition, our current levels of service are largely meeting the needs of the city, and the service levels are considered to be sustainable and affordable. There will always be an ongoing requirement to invest in infrastructure maintenance, renewal and upgrades to improve network quality, accommodate population growth, and enhance the effectiveness of the transport network as a whole. However, the large amount of activity on the city's constrained transport system is starting to impact on Wellington's liveability, and its economic growth and productivity.

Wellington's transport problems include:

- Growing traffic congestion and unreliable journey times
- Poor and declining levels of service
- Safety issues, especially for cycling and walking
- Vulnerability to disruption from unplanned events

The very constrained nature of most of the city's main transport corridors means that in general corridor widening to expand capacity is unrealistic.

Greater Wellington Regional Council has reviewed outputs from the Wellington Transport Strategic Model (WTSM) and provided a high level summary of a 2036 High Growth future scenario to inform this analysis<sup>12</sup> (refer Attachment 1). By 2031, the model indicates morning peak transport demands increasing by 21 percent for car trips and 41 percent for public transport trips overall, and for trips to the CBD car trips increasing by 15 percent and public transport trips by 58 percent.

The analysis examined forecast demands on key corridors. It showed:

- at an aggregate level there is forecast to be a 20 percent increase in persons using key corridors into Wellington City on a daily basis between 2013 and 2036 under a high growth scenario
- public transport passenger volumes on the selected corridors are forecast to increase by over 40 percent (inbound) compared to a 16 percent forecast increase in persons in cars, a function of:
  - the forecast assumptions (continuation of recent trend with growth in trips to CBD accommodated by public transport and active modes)
  - a constrained road network (particularly at peak times)
  - parking capacity constraint in Wellington CBD
- public transport growth is forecast to be particularly strong from the north, with 40 percent growth in bus passenger along Hutt Road and a 50 percent increase in rail passengers heading into the CBD

These forecast transport demands have been taken into account by the Let's Get Wellington Moving programme. The strategic response to growth pressures is to focus on moving more people with fewer vehicles and encouraging urban development alongside transport investment. Before doing anything else we will:

- Find ways to get more out of the existing transport system and make it safer to use
- Encourage people to walk, use public transport, and cycle for more trips, and make fewer trips by car

We will do this by delivering on our strategic interventions:

- Encourage mode shift to walking, cycling, and public transport
- Enable mode shift with key changes to walking, cycling and public transport infrastructure, and land use policies

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<sup>12</sup> Wellington City NPS Analysis, Greater Wellington Regional Council.

- Create dedicated/priority routes to support key changes
- Reduce road space for general traffic on dedicated/priority routes
- Manage the network to limit increases in general traffic and operate the network safely and efficiently

## **Assessment of whether development capacity is serviced with transport infrastructure**

Overall, our transport infrastructure is in good condition, our current levels of service are largely meeting the needs of the city, and service levels are considered to be sustainable and affordable. At an aggregate level there is forecast to be a 20 percent increase in persons using key corridors into Wellington City on a daily basis between 2013 and 2036 under a high growth scenario. Most key corridors are already at or near capacity at peak times, leaving little capacity to service development capacity through private vehicle travel at peak times. In addition, the public transport network is at or near capacity at peak times, leaving limited headroom for growth in travel to the central city by public transport at peak times.

Wellington's options for increasing transport capacity are limited by constrained corridors that must accommodate a variety of transport modes. Furthermore, increased traffic volumes are associated with a range of negative outcomes, including increased traffic congestion, increased travelling times, increased vehicle emissions, and increased costs for maintenance, renewal, and capital expenditure for the transport network. Due to these factors, we will accommodate growth and demand through a variety of measures aimed at minimising traffic volumes and increasing uptake of walking, cycling, and public transport. Recent trends in Wellington of reducing vehicle kilometres during continued population growth demonstrate that our approach is effective and that growth can successfully be accommodated without substantial increases in traffic volumes and car-based travel.

While our strategic approach focuses on travel demand management rather than infrastructure provision, a number of infrastructure upgrades will still be required to service development capacity with adequate transport infrastructure. Key infrastructure improvements that are needed to service future development include:

- Pedestrian amenity improvements in the central city and suburban centres, to enable high density development in these areas and support mode shift to walking and public transport
- Cycling routes between the central city and the north, south, east, and west. These are required to support the ongoing growth of cycling that enables access to employment growth in the central city and reduces demand on the road network
- Public transport reliability and capacity improvements, including:
  - bus priority measures on key corridors
  - a second public transport spine in the central city
  - high capacity vehicles on the east-west corridor (Miramar to Karori)
- New roads and intersection upgrades, providing linkages for greenfield developments in the northern growth areas of Lincolnshire, Woodridge, Tawa, and Stebbings into the existing transport network

When the following infrastructure improvements are delivered, we anticipate they will be adequate to service anticipated future development.

## Assessment of whether development infrastructure required to service development is identified in the Council’s Long-term Plan, or Infrastructure Strategy

Wellington is using a hybrid transport planning and delivery model whereby some of the required infrastructure improvements will be delivered by the Council and most will be provided via the Let’s Get Wellington Moving alliance. Let’s Get Wellington Moving is focused on the corridor from Ngauranga to Wellington airport. Depending on the investment package, growth in transport demands from the north, centre, south and east will be provided for to varying degrees. The table below outlines the delivery model for each required infrastructure improvement and its status in the draft Long-term plan 2021-31. The large-scale investment likely to be necessary to support Wellington City Council’s share of the Let’s Get Wellington Moving is yet to be determined and fully provided for.

Table 1

Infrastructure improvement required to service development capacity	Status in Long-term plan 2021-31
Pedestrian amenity improvements in the central city and suburban centres	The funding included in the Long-term Plan covers the WCC share of the cost of planned improvements on the Golden Mile. Central city streets are expected to be delivered via LGWM, but funding for these portions has not been finalised. Pedestrian amenity improvements required to support growth in suburban centres have not been fully scoped and will be incorporated into the next Long-term plan.
Cycling routes between the central city and the north, south, east, and west.	The \$226m full programme is currently expected to be approved in the final LTP 2021-31. Significant portions of the network are expected to be delivered via LGWM, but funding for these portions has not been finalised.
Bus priority measures on key corridors	The funding included in the Long-term Plan covers the WCC share of the cost of planned improvements on Thorndon Quay, Hutt Road, and the Golden Mile. The remaining corridors are expected to be delivered via LGWM, but funding for these portions has not been finalised.
A second public transport spine in the central city	This is expected to be delivered via LGWM, but funding for has not been finalised.
High capacity vehicles on the east-west corridor (Miramar to Karori)	This is expected to be delivered via LGWM, but funding for has not been finalised.
New roads and intersection upgrades, providing linkages for greenfield developments	Currently identified needs are fully funded in the draft Long-term Plan 2021-31.

## Attachments

1. Wellington City NPS Analysis, GWRC, 29 January 2019



## FILE NOTE

DATE 29<sup>th</sup> January 2019  
AUTHOR Andrew Ford  
SUBJECT Wellington City NPS Analysis

### Overview

Wellington City Council (WCC) are developing inputs to the National Policy Statement (NPS) on Urban Development Capacity (UDC).

One component of this assessment is future forecasts of vehicle traffic and public transport patronage on local roads, to be used to inform the development of the NPS on UDC and identify constraints that may justify further investigation and possible future investment.

This note provides a high level summary of a 2036 High Growth future scenario to inform the analysis

### Background and assumptions

The modelling work has been undertaken using the following scenarios:

- WTSM and WPTM 2013 – base model
- WTSM and WPTM 2036 - trend future, high population growth

At a high level, the forecast assumptions are as follows:

- **Trend future** – Model parameters and outcomes reflect a continuation of recent trend growth with reference to commuter trips to Wellington CBD in the AM peak (all future growth in peak hour trips to Wellington CBD assigned to active modes or PT)
- **High population and employment growth** – As summarised in Table 1, assumes a 35% increase in population within Wellington City and 32% increase in employment:
  - 100% growth in population within CBD (~25,000 additional residents)
  - Over 20,000 additional residents in northern Wellington, with 10,000 to 15,000 additional residents in Wellington's southern and eastern suburbs
- **No additional highway infrastructure** (compared to base year) apart from Mackays to Peka Peka Expressway and Transmission Gully
- **Bus network** assumed to be current 2018 bus network (as implemented in July 2018)
- **Rail network** assumed to be current 2018 rail network and frequencies

**Table 2 Population and employment growth – high growth-redistributed scenario**

	Population		Employment	
	Base	2036	Base	2036
WCC – CBD	26,500	50,000	93,500	124,000
WCC - Northern suburbs	62,500	85,000	15,500	18,500
WCC - Southern suburbs	40,500	55,500	11,000	14,000
WCC - Eastern suburbs	40,000	50,500	11,500	16,000
WCC - Western suburbs	31,000	33,500	5,000	6,500
<b>Wellington City Total</b>	<b>200,500</b>	<b>274,500</b>	<b>136,500</b>	<b>179,000</b>
Kapiti	50,500	63,000	14,000	16,500
Porirua	53,500	67,500	15,000	17,500
Lower Hutt	101,000	107,000	40,500	42,500
Upper Hutt	41,500	50,000	11,500	13,000
Wairarapa	42,500	44,000	17,500	17,000
<b>Total</b>	<b>489,500</b>	<b>606,000</b>	<b>235,000</b>	<b>285,500</b>

**Model limitations**

There are a number of limitations that should be borne in mind when interpreting the model outputs:

- All forecasts contain an inherent level of uncertainty, and are dependent on the eventuation of a series of assumptions and relationships made at one point in time; outputs should therefore be interpreted as being indicative of a range within which the outcome might sit, with the range increasing the farther into that future that you are forecasting
- WTSM does not model and account for capacity constraints on public transport; therefore additional analysis is recommended to understand whether the public transport network (as modelled) has the capacity to carry the forecast demand
- WTSM has a very coarse representation of active modes (walking and cycling) and it is recommended that simplified analysis outside of WTSM be used to develop estimates of future walking and cycling numbers
- WTSM models a 2hr period and has a relatively simplistic method of modelling intersection delays; as a result, WTSM will probably underestimate the level of congestion and increase in delays generated by the forecast increases in traffic volumes, particularly during the peak of the peak
- WTSM and WPTM are strategic models, calibrated and validated in 2013 to a level that is appropriate for their given strategic purpose; at an individual link level, observed car and PT passenger volumes might not exactly reflect reality, therefore it is recommended that when interpreting outputs the focus should be the relative difference between base / option as opposed to absolute numbers or absolute differences
- Both WTSM and WPTM have a 2013 base year; between 2013 and 2018, there has been rapid population growth and increases in traffic and PT volumes (particularly rail), therefore it is recommended that this recent growth should again be borne in mind when interpreting model forecasts

- The underlying relationships upon which WTSM is based are 17 years old, with an update planning for the next couple of years; therefore WTSM outputs should be interpreted with caution, particularly in relation to the following observation:
  - WTSM over-estimates base and forecast growth in car trips within Wellington CBD (and indeed shorter distance car trips in general), with these trips assigned by the model as car trips whereas in reality they are more likely to be walking trips

## Model results

This section presents results from the modelling work as follows:

- High level metrics covering Wellington region
- More detailed corridor analysis (daily figures, in persons)

## High level metrics

**Table 2** below summarises the high level metrics extracted from WTSM for the model runs in question. The table presents the following for the AM peak and annually respectively:

- car trips (vehicles), PT trips (passengers), car and PT mode share
- car trips to CBD (vehicles), PT trips to CBD (passengers), car and PT mode share to CBD

For the car and PT trips, the percentage increase is the forecast change (growth) between base 2013 and 2036 (high growth). For car and PT mode share, the percentage increase reflects the percentage point change between 2013 and 2036 forecast (i.e. car mode share decreasing from 93.2% to 92.6% is a 0.6 percentage point decrease).

**Table 3 High level summary – WTSM outputs, 2013 and 2036 (High)**

	AM peak				Annual (000s)		
	Base 2013	2036 High	% increase		Base 2013	2036 High	% increase
	90801	70100	70100		90801	70100	70100
Car Trips	164,528	198,999	21%		397,198	497,504	25%
PT Trips	31,954	45,042	41%		29,102	39,728	37%
Car Mode Share	83.7%	81.5%	-2.2%		93.2%	92.6%	-0.6%
PT Mode Share	16.3%	18.5%	2.2%		6.8%	7.4%	0.6%
Car Trips to CBD <sup>13</sup>	28,077	32,333	15%		53,089	70,455	33%
PT Trips to CBD	18,473	29,205	58%		8,490	13,219	56%
Car Mode Share to CBD	60.3%	52.5%	-7.8%		86.2%	84.2%	-2.0%
PT Mode Share to CBD	39.7%	47.5%	7.8%		13.8%	15.8%	2.0%

<sup>13</sup> Includes car trips within CBD; previous analysis has shown that WTSM overestimates car trips within the CBD (both in the base and future), therefore the increase in car trips to the CBD is likely to be lower than forecast by the model; this limitation should be borne in mind when interpreting this high level information, it is estimated that the forecast % increase in car trips to the CBD(excluding car trips where the origin is also in the CBD) would be around 15% between 2013 and 2036



Car veh.km	1,421,839	1,645,662	16%		2,760,583	3,361,367	22%
Car veh.hr	32,811	39,841	21%		59,114	74,804	27%
PT pax.km	511,839	759,856	48%		407,490	605,018	48%

The model outputs show the following:

- there is forecast to be a 25% increase in regional annual car trips and ~40% in regional annual PT trips between 2013 and 2036
- focussing on Wellington CBD in the AM peak, there is forecast to be a 15% (see Note 1) increase in car trips to the CBD and a 60% increase in PT trips to the CBD
- across the regional, car vehicle kilometres and car vehicle hours are forecast to increase by between 20% and 30% whilst PT passenger kilometres are forecast to increase by around 50%

### High level metrics

**Table 3** below provides an estimate of daily car and PT trips (in persons, by direction) along key corridors into Wellington City for the 2013 base and 2036 high growth scenario.

The estimates have been obtained from WTSM (car vehicles) and WPTM (PT passengers) and aggregated across all modes and expressed as persons (assumed vehicle occupancy in 2013 and 2036 of 1.35).

**Table 4 Daily Car and PT volumes for key corridors in Wellington City, 2013 and 2036 high growth (persons, 000s)**

		2013			2036 High			% change		
		Car vehicles (000s)	PT pax (000s)	Total persons (000s)	Car persons (000s)	PT pax (000s)	Total persons (000s)	Car persons	PT pax	Persons
SH1 @ Ngaio	IB	41.6	1.2	57.3	48.0	1.7	66.4	15%	42%	16%
	OB	38.2	0.9	52.4	46.9	1.0	64.3	23%	11%	23%
Rail @ Wellington Station	IB	0.0	14.9	14.9	0.0	22.2	22.2		49%	49%
	OB	0.0	11.7	11.7	0.0	15.6	15.6		33%	33%
Hutt Rd @ Ngaio Gorge	IB	13.7	4.2	22.8	15.2	6.0	26.6	11%	43%	17%
	OB	12.3	2.9	19.6	12.7	4.1	21.3	3%	41%	9%
Wadestown Rd @ Tinakori	IB	5.8	0.6	8.4	6.8	0.7	9.9	17%	17%	18%
	OB	5.3	0.3	7.5	6.3	0.4	8.9	19%	33%	19%
Glenmore @ Bowen	IB	9.6	2.0	15.0	11.0	2.7	17.6	15%	35%	17%
	OB	8.6	1.3	13.0	9.6	1.6	14.5	12%	23%	12%
Kelburn Parade @ Kelburn	IB	4.4	1.4	7.4	4.6	1.2	7.4	5%	-14%	0%
	OB	6.1	2.1	10.3	7.2	0.8	10.5	18%	-62%	2%
Brooklyn @ ICB	IB	3.0	0.9	4.9	3.3	1.7	6.2	10%	89%	27%
	OB	5.8	1.4	9.2	6.0	1.2	9.4	3%	-14%	2%
Wallace St @ Webb	IB	7.7	2.2	12.6	10.6	3.1	17.4	38%	41%	38%
	OB	14.1	1.7	20.7	16.1	2.3	24.0	14%	35%	16%
Adelaide Rd @ Basin	IB	13.9	3.9	22.6	17.6	4.0	27.8	27%	3%	23%
	OB	8.0	2.6	13.4	11.4	2.7	18.1	43%	4%	35%
Mt Vic Tunnel	IB	18.0	0.0	24.2	19.0	0.0	25.7	6%		6%
	OB	19.1	0.0	25.8	19.9	0.0	26.8	4%		4%
Bus Tunnel	IB	0.0	2.8	2.8	0.0	4.9	4.9		75%	75%
	OB	0.0	1.9	1.9	0.0	3.1	3.1		63%	63%
Oriental @ Chaffers	IB	6.3	0.5	9.0	7.3	0.7	10.5	16%	40%	17%
	OB	6.1	0.4	8.6	7.7	0.4	10.9	26%	0%	27%
	IB	<b>124.0</b>	<b>34.6</b>	<b>201.9</b>	<b>143.4</b>	<b>48.9</b>	<b>242.6</b>	<b>16%</b>	<b>41%</b>	<b>20%</b>
	OB	<b>123.6</b>	<b>27.2</b>	<b>194.1</b>	<b>143.8</b>	<b>33.2</b>	<b>227.4</b>	<b>16%</b>	<b>22%</b>	<b>17%</b>
<b>Total</b>		<b>247.6</b>	<b>61.8</b>	<b>396.0</b>	<b>287.2</b>	<b>82.1</b>	<b>470.0</b>	<b>16%</b>	<b>33%</b>	<b>19%</b>

In summary, the outputs show the following:

- at an aggregate level there is forecast to be a 20% increase in persons using the corridors in question on a daily basis between 2013 and 2036 under a high growth scenario
- PT passengers volumes on the selected corridors are forecast to increase by over 40% (inbound) compared to only a 16% forecast increase in persons in cars on the corridors in question, a function of
  - the forecast assumptions (continuation of recent trend with growth in trips to CBD accommodated by PT and active modes)
  - a constrained highway network (particularly at peak times)
  - parking capacity constraint in Wellington CBD
- PT growth is forecast to be particularly strong from the north, with 40% growth in bus passenger along Hutt Road and a 50% increase in rail passengers heading into the CBD

Whilst the overall forecast growth in people crossing the cordon (~20%) is less than the forecast growth in population within Wellington City (~35%) there are a number of explanations for this:

- A significant proportion of population growth is forecast to occur within Wellington CBD, with the increase in trips (mainly walking) generated by this growth not captured by corridor volumes

- Population growth in areas outside of Wellington CBD will generate shorter distance local trips that do not impinge on the CBD

Whilst difficult to accurately estimate from WTSM, high level model metrics suggest a 25% to 30% increase in annual car trips and 45% to 50% increase in annual PT trips to / from and within Wellington City between 2013 and 2036 under a high growth scenario.

# Appendix 2.4

## Assessment of Wellington City Open Space and Recreation

## National Policy Statement – Urban Development

### Open Space and Recreation

28<sup>th</sup> October 2021

## 1 PURPOSE

This paper sets out the current issues and opportunities in planning for and delivery of parks, open space and recreation outcomes in Wellington City. Urban development capacity assessment requires consideration of open space and recreation facilities and assets as part of the infrastructure that will support urban development.

## 2 SETTING THE SCENE

### 2.1 Parks, Recreation and the Natural Environment in Wellington

Wellington City has an estimated population of 219,016 in 2021. The city has a strong natural environment setting underpinning the character of the city and the quality of life and identity of the people who live and work in Wellington.

There is over 4200ha of reserve land in Wellington City across a range of different types of open space with a broad range of associated values. Wellington has a 2500ha Outer Green Belt reserves network at its western edge and a harbour and coastal open space network, that coupled with the Wellington Town Belt and suburban and city parks, provide potential to support a growing city set in a natural environment.

The city is a “Natural Capital” due to the natural environment and the nature-driven attractions and is a national leader in natural environment management. Natural capital is the stock of natural assets, which includes biodiversity as well as earth, air, and water. Cities depend on a healthy natural environment that continuously provides a range of benefits, known as ‘ecosystem services’. Healthy ecosystems are the foundation for sustainable cities, influencing and affecting human well-being and most economic activity. These include for example the provision of drinking water, air quality, carbon sequestration, stabilising land and managing water flows in rain events. They also include human health associated with interaction with the natural environment and opportunity to build community and sense of place.

Residents in Wellington consistently agree that Wellington’s connection with nature improves residents’ quality of life<sup>1</sup>. *Our Natural Capital* is Wellington’s award winning biodiversity strategy that guides the ongoing protection and enhancement of the cities ‘natural capital’ so that it can thrive both for its own sake and continue to support the function of the city and the people and communities who live here. Wellington is well placed to build on the integration of natural environment systems into planning for change and growth across the city and take maximum advantage of an ‘ecosystem services’ approach to urban planning and the range of benefits that approach can provide.

The range of parks, open spaces and associated recreation facilities in Wellington and the proximity of people to this network contribute to making Wellington a unique place to live, work and play. The open space and recreation network in Wellington is a point of difference and will support the city in maintaining high measures of economic, environmental and social success.

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<sup>1</sup> Annual WCC residents monitoring survey has respondents agree or disagree with this statement and levels of agreement are consistently over 90%

It is important that the network of open space and recreation facilities grows and improves in response to the changing needs of the city and society. As the population increases there will be increased pressure on capacity of some sport and recreation facilities (for example sportsfields and neighbourhood parks). Planning for growth must identify how the parks and open spaces and recreation facilities network will respond and what information is needed to drive any change. Do we need more or should/could the existing ones be improved to support increased use and changing community needs? Where is there opportunity for integration of the parks network into transport and other infrastructure networks (such as stormwater)?

Wellington City Council invests in the natural environment, open spaces and facilities. These contribute to a range of health, social, environmental and economic benefits, many of which are not measured or accounted for in considering this investment alongside other priorities.

The existing open space and recreation strategy (*Our Capital Spaces*) needs review now that a new Spatial Plan has been adopted for the city. The new Strategy will look at the existing network of spaces, places and programmes and identify focus areas for action and investment to ensure the network best meet the needs of Wellingtonians as the city grows and changes. Natural environment protection, management and investment will also be considered. This will inform the next Long-Term Plan, Asset Management Plans and work programmes.

The Community Facilities Policy will also be reviewed beginning in 2021, to ensure there is a long-term investment plan in place that enables these facilities to deliver intended outcomes for the community. Again, this will result in increased investment identified in the next Long-Term plan.

## 2.2 **'Four Capitals' as a measure of success and the role of Parks**, Open Spaces and Sport and Recreation spaces, places and programmes

At a central government level The Treasury Living Standards Framework (LSF) sets the scene for a broader set of measures across four 'capitals' being used to understand long-term wellbeing alongside traditional, more narrowly focussed measures of economic success such as GDP for example.

There is ongoing interest in how the natural environment and parks and recreation areas fit with this framework and how outcomes can be measured given the existing and well understood contribution these spaces and places make to social, human, natural and financial/physical capital, as described in the LSF.

As the primary providers of significant areas of parks, open spaces and recreation and sports facilities and programmes, local authorities have potential for high impact in contributing to the long-term wellbeing of the country across the 'four capitals'.

## 2.3 **Wellington City Council's strategic direction**

In Wellington City, Wellington 2040, the new Spatial Plan, the current Long-Term Plan, the Let's Get Wellington Moving work and the new Social Framework all include multiple focus areas that capture Council's strategic direction.

A well located, high quality, multifunctional parks and open space network leads or contributes to success across all of these focus areas and will enable city growth that aligns with both national and local aspirations for 'long term wellbeing' in the broadest sense.

Wellington's strategic direction around parks and open spaces, recreation and the natural environment is set through *Our Capital Spaces* (the Open Spaces and Recreation Framework) and *Our Natural Capital* (Biodiversity Strategy). There are also eight Reserve Management Plans, prepared as required by the Reserves Act (1977) and the Wellington Town Belt Act (2016), that cover all the existing parks across the city. The management plans include objectives and policies around

landscape, recreation, ecology and indigenous biodiversity, culture and history and community groups and partnerships as they relate to the parks.

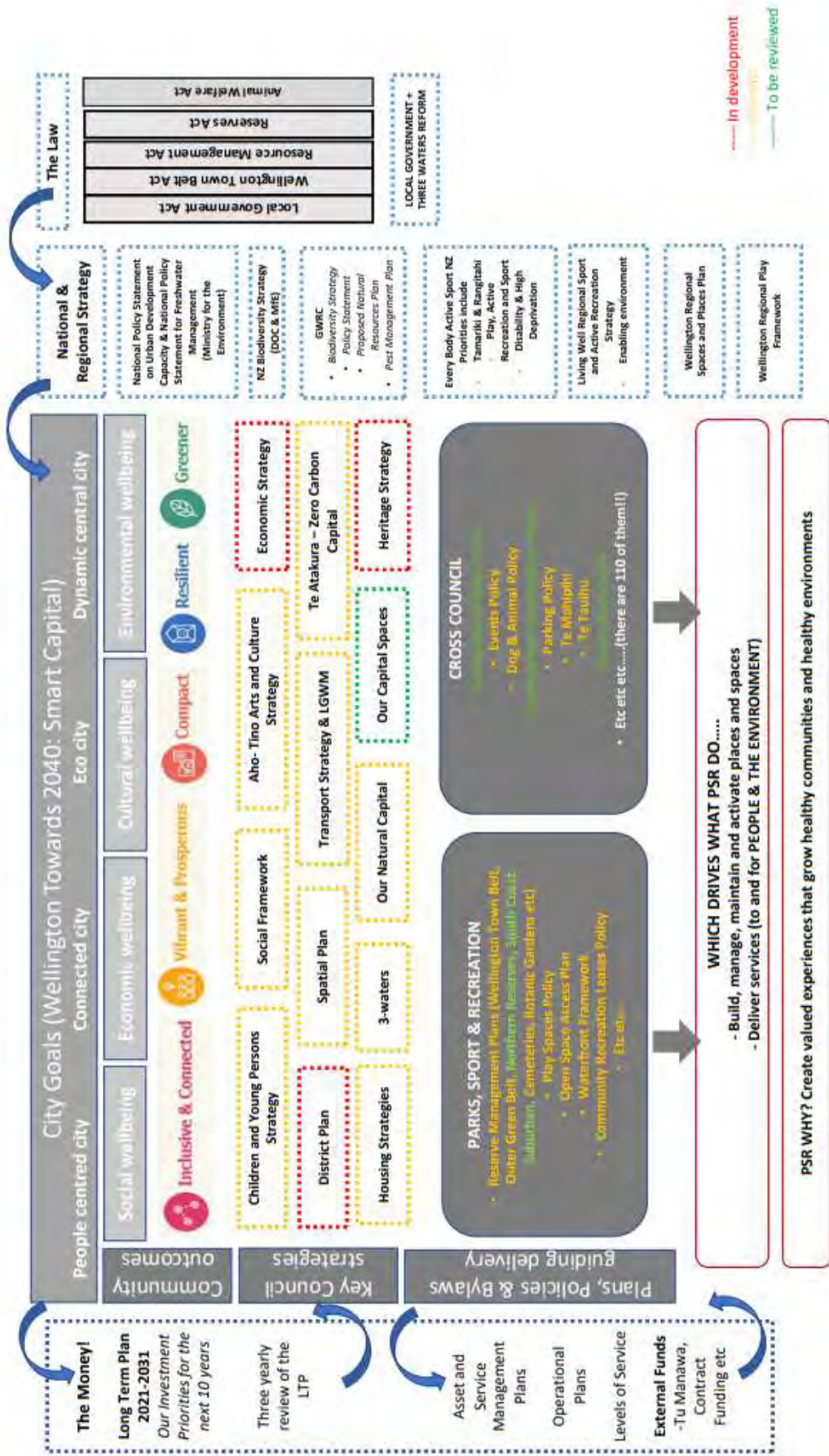
There is limited information around planning to respond to growth in most of the reserve management plans. *Our Capital Spaces* review will provide the direction needed to better understand action and investment required to improve and manage the parks and recreation networks in response to the new Spatial Plan. The most recent plans reviewed and published are the Outer Green Belt Management Plan (2019) and Cemeteries Management Plan (2020), both of which specifically describe the role of those areas (and parks and recreation in a general sense) in supporting population growth, community change and natural environment protection and management. Both outline an intention to acquire more land and continue investment in these areas.

Our Capital Spaces will need to consider investment required in response to the new areas of most change identified in the Draft District Plan in response to national policy statements driving development density. In particular, the central city, suburban centres and green field areas. As land becomes more valuable and development more intensive, the public parks network will need protection and investment to ensure it meets the needs of the changing urban form and community. Access to high quality outdoor park spaces and a network of community facilities will be a key part of the infrastructure investment needed to support city growth.

*Our Natural Capital* is Wellington's biodiversity strategy. The Strategy guides the ongoing protection and enhancement of the cities 'natural capital' so that it can thrive both for its own sake and continue to support the function of the city and the people and communities who live here.

The Councils Play Spaces Policy and the Open Space Access Plan (a tracks network plan) outline planning and provision of these aspects of the parks network across the city. Other Council policies and plans also determine how places and spaces are provided for, used and managed (eg the Community and Recreation Leases Policy) and Asset Management Plans determine investment and funding and levels of service. The current strategic fit of open space and recreation planning is captured in the diagram below.

All of the plans and policies are under continuous rolling review. This can lead to plans becoming quickly out of date in times of rapid change or pace of development and city growth.





## 3 OPEN SPACE AND RECREATION PROVISION

### 3.1 Open Space

Wellington City currently has a network of over 4200ha of reserves and a total of 365km of tracks. Our Capital Spaces, the Open Space and Recreation Strategy for Wellington, has only one very basic measure of provision with a guide of *600m or 10 minutes' walk to one or more neighbourhood park, play space, or other outdoor recreation opportunity such as a track link*. This measure is set against an outcome that *open spaces and outdoor recreation opportunities are close to where people live*. Analysis of existing urban areas in Wellington shows the 73% of areas zoned for residential development meet this provision target<sup>2</sup>. New housing areas will require provision of open space as they develop and it is increasingly difficult to get quality open space through the subdivision and development process. This provision target does not consider population density.

The city wide park network provision mapping does not take account of open space quality. In considering provision there is a measure of geographic spread but the measures are not fine grained enough to capture the different types of open space and the quality of those. This is particularly important in areas of population growth as it would be possible to have met the current provision target but the provision being 'counted' is a small neighbourhood park that does not have capacity to provide a useful space for a higher population density or was never developed for neighbourhood park use or to service the current community.

There are national statistics for parks provision based on population<sup>3</sup>. Wellington City has 18.8ha of open space/1000 residents (national median 17.3ha) however the city has 2ha/1000 residents of actively maintained parks (national median 8.8ha) and 1.1 ha of sports parks/1000 residents (national median 2.3ha). These are not provision targets but provide useful national comparison that show Wellington City is under provisioned in certain types of parks. These parks are the ones that provide for a high-quality urban form where there is more intensive residential development as anticipated in the new Spatial Plan and that will be enabled in the new District Plan. This is an area that will need significant investment as the city grows to ensure residents have access to high quality parks space. In addition, the District Plan will need to carefully manage potential for effects of adjacent higher density development on the quality of the parks.

Analysis of geographical spread and area per head of population reflects that while Wellington City has a good overall area of parks, a large portion of those are hillsides, gullies and other areas that while they have significant landscape and ecological values they often have limited use for recreation purposes. This is a unique characteristic of the Wellington parks network. It means that the neighbourhood and community park type spaces have to work very hard to provide for the recreation and amenity needs of residents and as the city grows new parks and investment in existing parks will be required to improve the quality of existing parks network<sup>4</sup>. It also means the walking track network plays an important role in meeting the recreation needs of city residents and that the city is well placed to make the most of the high quality landscape and ecological function of the parks network.

As with provision measures based on geographic spread, population measures do not take account of the different types of reserves and the spectrum of values they provide across ecology, human health and wellbeing, economy and social and cultural outcomes. More work is required on provision of different types of open space and what these provide as a network of spaces with a range of values (eg nature for nature sake, ecosystem services to the city and people, recreation, human health and wellbeing, climate change resilience and economy). We don't have measures that determine what

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<sup>2</sup> Network analysis that includes all Wellington Town Belt, neighbourhood and community parks but excludes track connection points as they are so variable in quality that including them would not provide an accurate assessment of actual provision of open space and recreation opportunity for the general population.

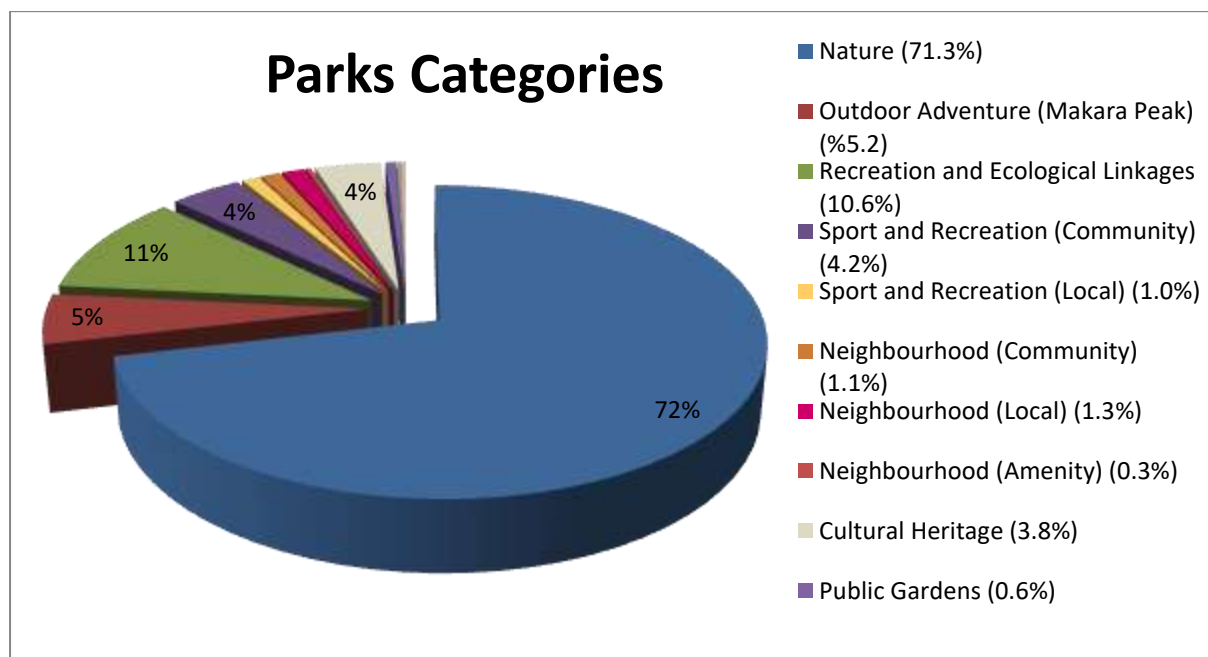
<sup>3</sup> Yardstick collects data from participating Local Authorities.

<sup>4</sup> Quality improvements can include for example purchase of land to increase the size and/or layout of the park, redesign, increase in facilities and increase in maintenance.

open space provision (either geographic spread measures or population based measures) would maximise the value of the parks network across the different parts of the city as it changes.

The graphic below (Figure 1 – Open Space by Category) shows the high proportion of the open space network that is in the 'nature' category. As described, this is a point of difference in Wellington and provides for the ongoing development of a city with a natural landscape setting and potential to capitalise on ecosystem services that these places provide. There is however an issue with the quantity and quality of flat useable open space for recreation. While the Outer Green Belt and the Wellington Town Belt provide a good foundation, the network of sports fields, community parks and neighbourhood parks is compromised by the quantity, location and current quality of many of those spaces. For example, a high number of the city's sports fields are located in gullies that have been filled by historic landfill and left a flat space that was turned into a park. Many of these have ongoing management, maintenance and capacity issues related to that history.

Many of the neighbourhood parks are the result of residential development over the years and provision of open space based on negotiations over development approval. They are not always well located or of a quality that can meet the needs of the neighbourhood as it grows and changes. Opportunities to improve city and suburban parks through purchase of additional land and/or redesign and higher maintenance requirements will need to be considered in response to growth scenarios.



**Figure 1 – Open Space by Category**

Wellington City Council funds some redevelopment of parks and open spaces that will help meet the needs of population growth in specific areas. The current Long Term Plan includes two significant park redevelopments. There is however no ongoing funding for any other open space improvement projects associated with population growth or urban intensification<sup>5</sup>. This is because there is currently no clarity, as described above, about what the response needs to be to provide for population growth and no estimate of what that might cost over time. We do not currently know how many new parks are required and/or what improvements are needed to the existing parks network and where the focus areas should be across the city. The new *Green Network Plan* for the central city and *Our Capital Spaces* strategy review will consider provision of and investment in parks. The Long Term Plan cycles

<sup>5</sup> There is significant funding for formal playground renewals, a portion of which will be used for general park improvements when each playground is renewed over time.

enable ongoing investment proposals to be considered that enable the parks network to evolve over time to meet the needs of the community.

The parks provision and funding response associated with greenfields development will be different to suburban infill which in turn will be different again to inner city residential development. Planning to inform Development Contributions has not been completed to consider funding for parks purchase and development and/or increased maintenance costs across the city in response to population growth.

There is currently no clear policy direction in relation to what type of green open spaces the inner city needs, where and what the function of each might be. These spaces also generally need high levels of maintenance and renewal to ensure they can cope with high levels of use and meet expectations for the way the inner city parks look and function. The new Green Network Plan clarifies the issues and opportunities for change in central city parks planning but focuses primarily on the need for 'greening' the city. Land for parks is a significant (and costly) issue that requires further work as part of Our Capital Spaces review and parks provision generally across the city. Similar work is required to understand provision of sports and recreation spaces and places in the inner city in response to predicted residential population growth and the existing high (and growing) number of working commuters who spend their day in Wellington City but do not necessarily live there. The Community Facilities Planning work beginning in 2021 will consider this.

The development of the Suburban Reserves Management Plan in 2015 included a detailed analysis of park category and provision and identified gaps in the parks network. The planning did not include the northern growth areas of the city and did not anticipate the current population growth predictions, 'priority areas' identified in the new Spatial Plan, or national policy statement requirements for significant changes to housing density and height. Geographical measures (as per Our Capital Spaces) were applied and not population measures or specific response to different development densities. No additional funding was allocated for the purchase of new or redevelopment of existing reserves through that management plan process. Suburban Reserves provision and funding will need review across the city in response to growth scenarios and changes to the District Plan settings.

Wellington City Council purchases new reserve land as it becomes available subject to case by case assessment of the land and where purchase is supported by existing policy direction. For example, 32 hectares of land was purchased in 2018 for addition to the Outer Green Belt Reserves. Purchase of that land was supported by policy direction provided in the Outer Green Belt Management Plan.

Open space is also provided for through Structure Planning process. The recent Special Housing Area developments have resulted in under provision of high quality parks and open spaces in areas that have been developed to a higher residential density than traditional housing development and with no requirement for provision of open space or Development Contributions portion allocated for open space provision.

There has been allocation of future funding for the greenfield development area at Lincolnshire Farms for a community park and tracks network. The other northern growth areas at Woodridge and Stebbings Valley have Reserves Agreements in place that will see the reserves network vested to Council over time in partnership with the developer (and in lieu of development contributions payments for reserves). Again, these agreements did not anticipate the significant changes in housing density now anticipated.

Finally, land value, scarcity of land and rapidly changing housing legislation is becoming a significant threat to the existing parks network. The need for legislated and regulated protection mechanisms is required alongside the legislation and regulatory framework that enables housing density change, to ensure parks networks are protected and invested in over time as part of the core infrastructure of the city. Land for parks, in particular in existing urban areas, is difficult to find and expensive buy. The existing parks networks need a high level of protection and investment planning to ensure it can deliver the full range of values as the communities that need them change and grow.

As Councils look for land to deliver a whole range of community outcomes – from 3-waters services through to buildings for community facilities and even land for housing availability - the parks network requires protection and investment so that it can deliver as critical city infrastructure in its own right.

### 3.2 Recreation facilities

Community and recreation facilities in Wellington offer a wide mix of different type, scale and quality of facility providing for an increasingly diverse and rapidly changing mix of activities. Keeping up with community needs and recreation trends and provision of spaces, places and programmes that meet these needs is a challenge for Councils nationally as the key providers. This issue is compounded by the existing facilities network comprising often aging facilities that are not evenly spread throughout communities and that were not necessarily built to provide for mixed or changing use. There is a national issue with the equity of provision of recreation spaces and places and the funding of these. Schools play a key role in provision of community sports and recreation spaces and places.

People in the Wellington region are some of the most active in New Zealand with 77% participating in active recreation or sport weekly. Although participation is high, duration of time spent needs to improve to achieve the health benefits associated with participation (including physical and mental health measures).

Wellington city and region is well served by the range and quality of its sport and recreation facilities. There is over 4200ha of reserves and a network of 365km of tracks across the city with 74% of suburban area population located within a ten minute walk of a playground. Wellington has five indoor and two outdoor pools, five recreation centres, 44 natural and 10 artificial sportsfields. There are 35 basketball half courts and a range of world-class community facilities including the ASB Sports Centre, which attracts over 860,000 visitors per year.

There has been significant investment in major sport and recreation facilities in the last 10-15 years. This includes ASB Sports Centre, nine artificial sportsfields, Wellington Regional Aquatic Centre redevelopment, Keith Spry Pool redevelopment, Karori Park and pool redevelopments, Newtown Park redevelopment, Makara Peak Mountain Bike Park, and the walking/bike track network. Increased funding was recently approved to enable higher quality and more frequent playground renewal.

Wellington City Council has a Play Spaces Policy that outlines a network plan developed through analysis of provision of formal playgrounds. The network provides for 74% of the urban area being serviced by the proposed playgrounds network. School provision is in addition to this, with evidence to suggest that schools encourage community use of their grounds outside of school hours. As with open space, playground provision will need to increase if new areas of residential development are identified through any District Plan change or other central Government legislation changes to provide for housing outside of existing urban or zoned areas.

The Wellington Regional Sport and Active Recreation Strategy provides strategic direction for planning for spaces, places and programmes across the region. A Regional Spaces and Places Plan is currently being completed to provide regional direction on provision. In response, Wellington City Council will need to consider at a more local level what the current network of spaces and places provides and where to direct future investment to meet the needs of the community. This will include how to respond to population growth alongside changing trends in recreation participation and in the context of the existing network of spaces and places.

Planning a response to population growth for the Wellington City sport and recreation spaces and places is incredibly complex as the network of spaces and places must also respond to changing community needs and trends in participation. An increase of 50,000 people to Wellington does not necessarily equate to three more tennis courts for example as it might be that there is already an oversupply and/or that data shows that less and less people are playing tennis in the future. It also doesn't account for the fact that there may be lots of tennis courts in the city but that they are not evenly spread across the city. It might also be the case that there are lots of courts but they are all in

need of significant repair or renewal work that is currently not funded. This kind of analysis needs to occur across all of the different facilities and activities and yields different results for each.

There is a range of provision models for sport and recreation facilities from privately owned through to Council owned and managed. The Council also leases space to clubs where they have developed their own facilities for community use.

Intensification of the central city population will put additional pressure on Freyberg Pool, which is the main aquatic facility for the CBD. This facility is currently at functional capacity at daily peak periods and has resiliency issues. There is also minimal indoor provision for traditional recreation activity spaces in or near the CBD, and all are currently managed by the private sector (for example indoor football and netball). The private sector is also the key provider in the CBD of other recreation activities such as yoga, cross-fit and pilates for example. Access to the waterfront and Wellington Town Belt for recreation (both formal and informal) is a key part of provision for inner city residents, workers and visitors.

The regional strategy outlines a set of principles to consider when planning for recreation and sport spaces and places:

- Decision based on need and demand analysis
- Resilience to natural disaster
- Financial sustainability of each facility
- Multi use where appropriate
- Accessibility (income, age, gender, ethnicity, religion and ability)
- Partnership/Collaboration
- Adaptability/Functionality
- Community return on investment
- Avoiding overprovision/duplication
- Appropriate ongoing maintenance

The provision of community sport and recreation spaces requires alignment with planning for schools in green fields development areas. Schools are a significant provider of sport and recreation spaces, facilities and programmes and partnerships with local authorities are a very effective way of meeting community need.

There is a need to carry out more work to understand how best to manage the existing sport and recreation facilities and where to direct investment. Provision for city growth will need to be considered in that work.

## 4 OPPORTUNITIES

Wellington is in the enviable position of having a well-established open spaces network with high value across a range of measures. The Outer Green Belt reserves for example are valued by the people of Wellington, not separate from the city, but a vital part of it – a living, functioning, natural and cultural landscape providing a wide variety of tangible and intangible benefits for the city. These benefits include large areas required to support biodiversity, space for a range of recreation and leisure activities close to the city for residents and visitors, protection of the headwaters of many of the city's streams, and the landscapes that are a key part of the character of Wellington and residents sense of place and identity.

A well planned and well managed network of open spaces will support multiple outcomes for city growth. They provide environmental protection, biodiversity, recreation and leisure, 'lungs' of the city, resilience (community/people & land & infrastructure), community resource, health, wellbeing and economic advantage, and sense of place and identity. In allocating land for various uses in any spatial planning exercise, open space provision often represents a high return on investment.

There needs to be a focus on ongoing protection of the natural environment in Wellington as a key part of what makes the city unique. In addition, there is a need to better plan for and fund improvements to the existing community and neighbourhood parks to ensure they can meet the needs of the community as it changes and grows over time.

The Regional Sport and Recreation Strategy has highlighted the need to do more work at a local level to understand the implications of population growth on the current network of spaces and places provided by the Council. This is a complex area of work across a huge range of spaces, places, and programmes and across a range of different sports codes and activities, each with different networks of facilities and changing participation trends.

#### 4.1 Strategy, Policy & planning review and development to support planning for growth

The new Spatial Plan outlines the need to review a range of strategies, policies and plans to deliver the outcomes identified in the Spatial Plan. This includes open space and community facilities planning and investment, and investment in natural environment outcomes. The Spatial Plan includes the following Actions in relation to strategy, policy and action plans that will all inform the next Long-Term Plan:

- *Develop a new Community Facilities Plan that will provide a plan for future investment in existing and new community facilities and partnership projects to respond to city growth and changing community needs. The plan will inform future LTP's and Council's finance strategy and will ensure a robust, integrated and strategic decision-making approach across the Council's portfolio of community infrastructure assets.*
- *Review Our Capital Spaces - An Open Space and Recreation Framework for Wellington: 2013-23, to align with the City's growth projections and Spatial Plan including an assessment and evaluation of the suitability of the City's current parks and open space network to support future growth and demand.*
- *Develop a Green Network Plan for the Central City and investigate opportunities to expand the green network beyond the central city and consider the potential to sequester carbon as one of a range of green network outcomes.*
- *Conduct an audit of street trees in suburban areas and develop a programme of investment for the maintenance of existing street trees and planting of new street trees.*

The District Plan drafting will also consider parks and recreation facilities provision in green field development areas as part of the necessary 'infrastructure' to support future urban development. Work has been completed on provision metrics that will be included in the Draft District Plan to ensure a network of parks and facilities is delivered over time to meet the needs of the new community and natural environment features are incorporated into structure plans and subdivision design. Further work is required to ensure effects of private land development on public open space are suitably managed.