Housing and Business Development

Capacity Assessment

Porirua City Council

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Executive Summary

The National Policy Statement on Urban Development Capacity (NPS-UDC) directs local authorities to provide sufficient development capacity to meet the future demand for housing and business growth, and to prepare a Housing and Business Land Capacity Assessment (HBA) to help meet their obligations under the NPS.

This HBA for Porirua presents a number of key findings. Overall, Porirua has an inadequate supply of housing to meet long term future demand based on high growth population projections. In particular, there is a shortage of standalone houses in the long term. Identifying and enabling an adequate supply of greenfield land for housing, along with areas suitable for further infill and medium density housing, will help address this issue.

Housing affordability is also getting worse in Porirua. The current undersupply of housing is contributing to increasing rents and house sale prices, which are increasing faster than incomes are rising. This is exacerbated by a declining number of existing houses for sale.

Porirua has sufficient business floorspace capacity for commercial and industrial activities under medium growth scenarios, however the location and accessibility of the existing capacity is unlikely to meet future market requirements. Additional land is therefore proposed to be rezoned for industrial and commercial use to meet long term demand. The supply of retail capacity has been assessed as being adequate in the short and medium term, although there is considered to be insufficient floorspace in the long term.

Porirua has constraints within its three waters networks which will need to be addressed to enable housing and business growth. In particular, Porirua's wastewater and water supply networks will not be able to meet required levels of service for the increasing population. The stormwater network also has some constraints although these can be partly mitigated through a range of alternative measures. Significant investment will be required to address three waters infrastructure constraints to enable long term residential and business growth.

There are existing pressures on some of Porirua's arterial roads and on parts of the two state highways (SH1 and SH 58), although these are not considered to constrain long term housing and business growth. Once the Transmission Gully Motorway (TGM) is open, the northern part of Porirua's primary roading network will have capacity to accommodate growth in traffic volumes. Further investment in public transport and active transport infrastructure will also be required to meet the needs of the future population.

This HBA does not fully consider the constraints and opportunities identified through the District Plan review, or the provisions in the Proposed Natural Resources Plan affecting greenfield development. These factors, along with the rapid changes occurring in Porirua, mean the HBA report cannot be considered in isolation. The City's response to growth will therefore need to be agile to ensure an adequate supply of suitably zoned land for housing and business use that is serviced by infrastructure.

1.0 Background

The NPS-UDC came into effect in December 2016. It directs local authorities to provide sufficient development capacity[91] to meet the projected demand for housing and business growth.

The NPS-UDC has four sets of policies that guide local authorities depending on whether they are a low, medium or high growth council. The Ministry for Environment (MfE) used Statistics New Zealand's 2016 population projections to determine each local authority's growth classification.

Porirua is classified as a medium growth council and as such is guided by the following policies:

a. Policies on outcomes for planning decisions: PA1-PA4
b. Policies on evidence and monitoring to support planning decisions: PB1-PB7
c. Policies on responsive planning: PC1-PC4
d. Policies on coordinated planning evidence and decision making: PD1-PD2

This report gives effect to policies on evidence and monitoring to support planning decisions (PB1-PB7[92]). It provides evidence and forms the basis for further work to give effect to the other policies listed above.

This is the first HBA report produced by Porirua City Council (PCC). PCC worked collaboratively with other councils in the Wellington Region in preparing evidence to produce this report, and it feeds into the Wellington Regional HBA report. The analysis and findings of this report, and the scenarios outlined with respect to housing demand, are based on projections at a fixed point in time and are required to be updated every three years.

91. This is the amount of development enabled by zoning and regulations in plans that is supported by infrastructure. This development can be 'outwards' (on greenfield sites) and/or 'upwards' (by intensifying existing urban environments).

92. Refer the MfE guidelines for the National Policy Statement on Urban Development Capacity

2.0 Introduction

Porirua is one of four cities that constitute the Wellington metropolitan area. In 2018, Porirua's population was 56,600. Differing population growth scenarios suggest that at a minimum there will be 11,800 additional people living in the City by 2048, and at a maximum there will be 29,400 additional people by 2048. Although each of the scenarios are based on different population projections and associated housing capacity over the short, medium and long term, there are consistent themes through all projections that are central to the commentary on Porirua's growth.

PCC needs to ensure that there is sufficient housing available to cater for the increasing population, and that there is sufficient land available for business growth. PCC will need to invest in infrastructure to service this growth, especially three waters and transport infrastructure, and will need to find ways to fund it. Additional amenities and community infrastructure will also need to be provided to meet the needs of a growing population.

Based on assessment and modelling work, this report estimates the demand for housing and business land for the next three, 10 and 30 years, and the capacity required to meet this demand. It also discusses the key constraints faced in providing for housing and business needs.

This HBA report also provides evidence to assist PCC in its District Plan review, Long Term Plan (LTP) and 30-year infrastructure strategy and implementing the Porirua Growth Strategy.

3.0 Links to other documents

3.1 Overview

The HBA report helps determine if there is sufficient residential and business capacity to meet future demand. If the HBA concludes that there is a shortfall of residential or business capacity, then under the NPS-UDC the Council will need to provide additional development capacity to address this shortfall. How the Council provides for that shortfall is not addressed by the HBA but will be addressed by the following key documents:

3.2 District Plan

The Porirua District Plan became operative in 1999. It guides and controls the location of development and its associated form throughout the city. It contains objectives, policies and rules that seek to achieve sustainable management.

Porirua's needs and challenges have changed since 1999 for a variety of reasons. This includes increasing growth pressures and the increased value placed on the health of Te Awarua-o-Porirua (Porirua Harbour).

PCC is reviewing its District Plan so that it can continue to meet its obligations under the Resource Management Act 1991 (RMA). The RMA directs councils to review their district plans every 10-years, taking into account changes in legislation, national and regional policy statements, national environmental standards and other regulatory and non-regulatory matters. The HBA is therefore timely and provides part of the evidence base to support the District Plan review. The Proposed District Plan is expected to be notified in 2020.

It is acknowledged that through the District Plan review process many additional constraints and opportunities for housing and business growth will materialize. These will have the potential to fundamentally alter the availability of land, both greenfield and intensification, to achieve the growth scenarios presented in this report. The analysis, assessments and findings of this report must therefore be considered as only one source of evidence supporting the District Plan review.

3.3 Porirua Growth strategy 2048

The Growth Strategy is a guiding framework for growth in Porirua, and was adopted on 20 March 2019. It helps shape and influence 'why' and 'where' the city will physically develop over the next 30 years and beyond[93]. Figure 4.1 sets out a possible future spatial framework for the City, although it is recognised that there are constraints that may inhibit this framework being realised within the 30-year timeframe.

Within the existing urban area, the Growth Strategy has a strong focus on compact, more intensive housing development centred around public transport hubs and established urban centres. It therefore promotes more efficient use of already developed urban land, which is also a key factor in creating more affordable housing. It also supports investment in multi-modal transport options to support higher residential densities and reduce reliance on private vehicles.

The Growth Strategy also identifies new greenfield areas suitable for residential purposes. These include the Northern Growth Area (NGA) situated on the eastern side of State Highway 1 between Plimmerton and Pukerua Bay, and Judgeford Hills, to the east of the James Cook intersection with TGM. These sites are being further considered through the District Plan review.

93. It is based on six growth principles:
    - A diverse and inclusive city;
    - A harbour-centered city;
    - A compact and livable city;
    - A connected and active city;
    - A city of opportunities and prosperity;
    - A resilient city.

To accommodate business growth, the Growth Strategy has also identified a greenfield area in Judgeford adjacent to SH58 as future potential buisness land. This is being considered as a potential Future Urban Zone (FUZ) through the District Plan review. Potential medium term employment areas have also been identified near the TGM Interchange at Waitangirua, and between the James Cook intersection and TGM. There is also a smaller commercial area proposed within the NGA at Plimmerton.

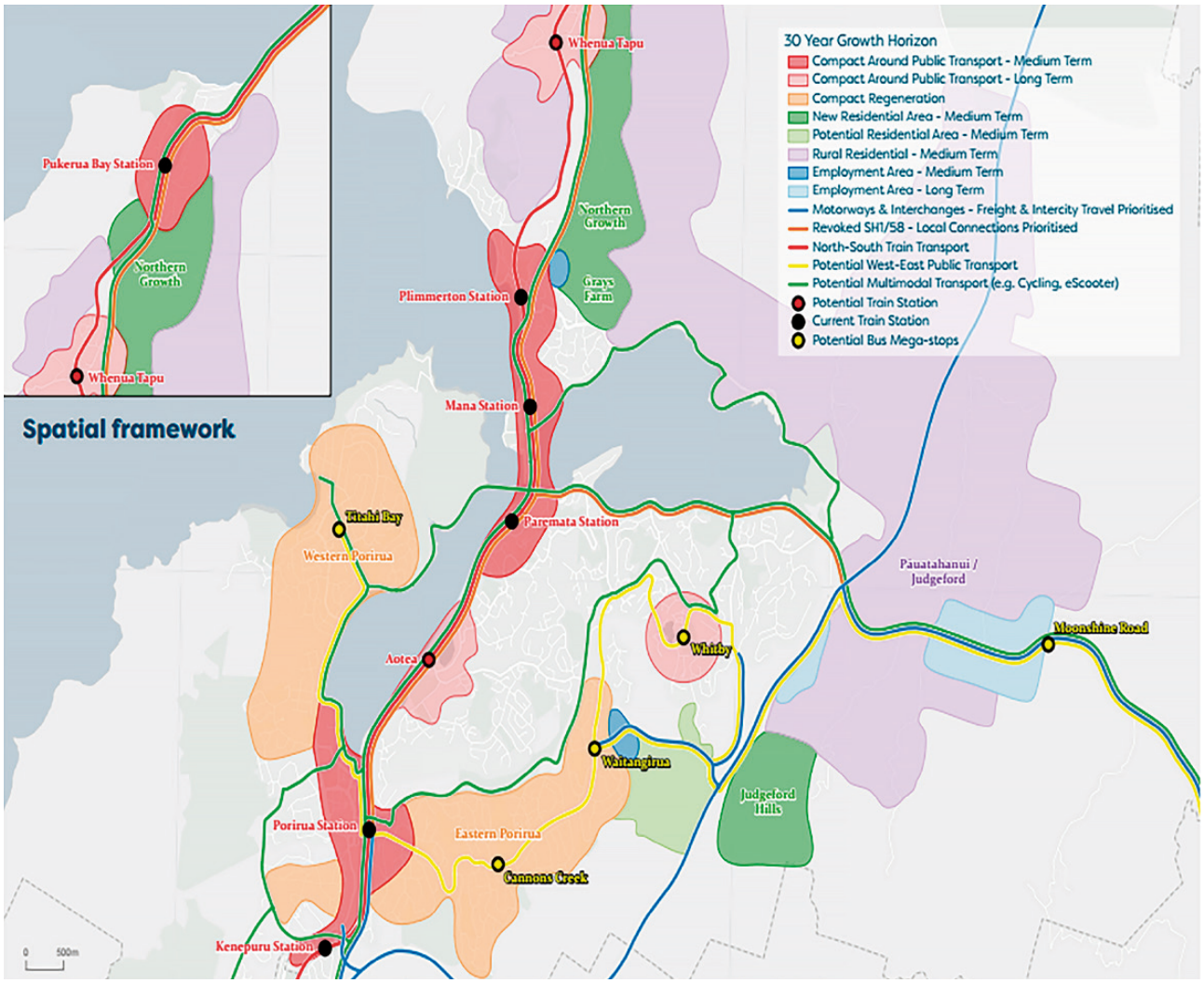

Figure 4.1: Growth Strategy 30-year Spatial framework

3.4 Long-term plan 2018-2028 and 30-year Infrastructure Strategy

Porirua's long-term plan (LTP) is a strategic Council document, and a requirement under the Local Government Act 1974 (LGA). It sets out PCC's future priorities and how these will be funded, with infrastructure a key priority. The LTP has allocated a total of $773 million for infrastructure over the next 20-years, which is intended to meet expected levels of service and to fund infrastructure.

PCC will need to reset its LTP however to meet expected growth in the City as most of the residential and business growth areas identified in the 30-year Spatial Framework are not adequately serviced by infrastructure. The review of the 2021-2031 LTP will be preceded by a review of the Infrastructure Strategy in April 2020.

The Porirua Development, incorporating the regeneration of Eastern Porirua, was announced in November 2018 and costs related to this project were not taken into account when preparing the Infrastructure Strategy and the LTP in early 2018. The upgrade of the wastewater network in particular will be a major investment for the City, and the LTP will need to be revised as a result.

Developer agreements are one tool that assist PCC provide infrastructure to enable growth so that it does not have to be fully funded through the LTP.

4.0 Housing Trends

4.1 Overview

This section is in two parts:

- Part 1 discusses historical housing demand and supply trends.
- Part 2 discusses housing demand and capacity assessment results for future potential scenarios.

4.2 Housing demand trends

To help understand historical demand pressure in Porirua's housing market, housing trends are analysed in terms of median dwelling sales prices, average rents and total house sales. Housing and rental affordability in Porirua are also compared with the Wellington Region and nationally. Longer historical time series are also considered, although the focus is on how indicators have moved in the past three years as these are considered a more reliable predictor of short-term demand.

4.2.1 Median dwelling sales prices

From 1994 median dwelling sales prices[94] in Porirua trended steadily upwards until mid-2010, and from March 2011 to March 2012 they declined as a result of the Global Financial Crisis (GFC). Median sale prices grew gradually again from mid-2012 before accelerating in mid-2014 to September 2018, growing by 50% over this four-year period.

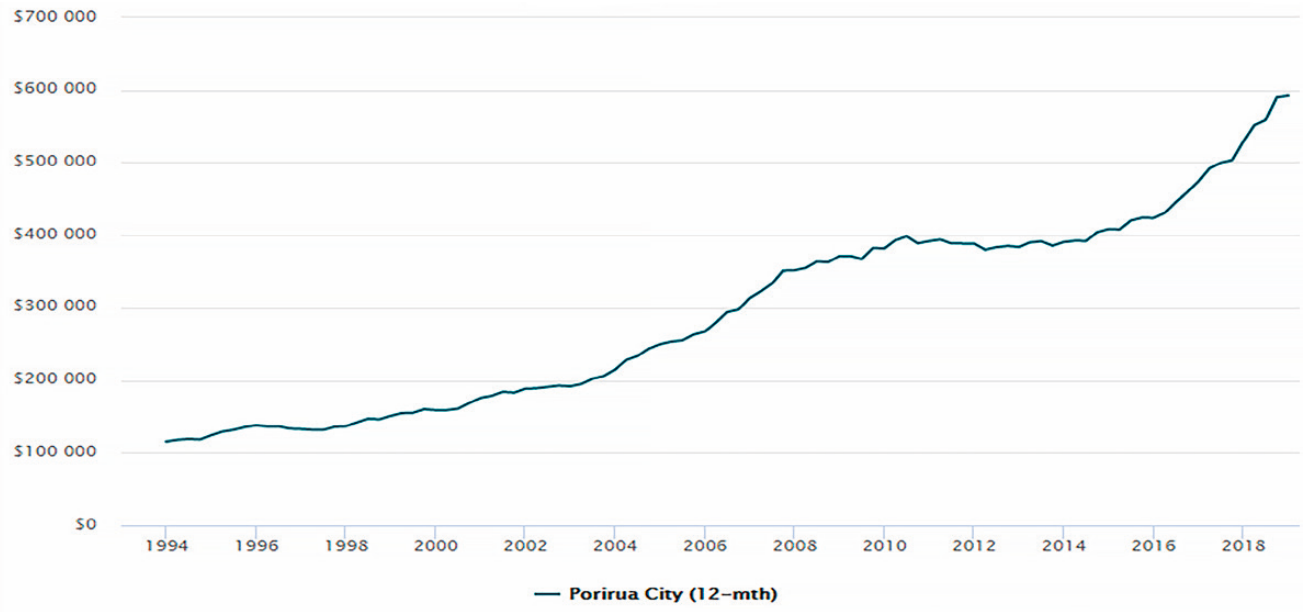

Figure 4.2: 12 month rolling dwelling sales prices (actual)

94. This indicator shows the median prices of residential dwellings sold in each quarter of a year. It is not adjusted for size and quality of dwellings. The prices are presented in nominal terms and not adjusted for inflation.

4.2.2 Median dwelling sales price by wards

Porirua is divided into three wards, which are identified in Map 1 below:

Map 1: Porirua City Ward Boundaries

The Northern Ward has historically had the highest median sales prices, followed by the Western Ward and Eastern Ward. However, since September 2018, median sales prices in the Eastern Ward have surged ahead of the Western Ward, growing at a rate of 61% compared to 42% in the Western Ward and 38% in the Northern Ward.

One of the reasons for the sharp increase in median dwelling sales price in the Eastern and Western Wards is the relative affordability of houses compared to the Northern Ward and other parts of the Wellington Region, and their subsequent attractiveness to first home buyers and investors. This has resulted in higher demand for properties which has in turn led to increased median sales prices.

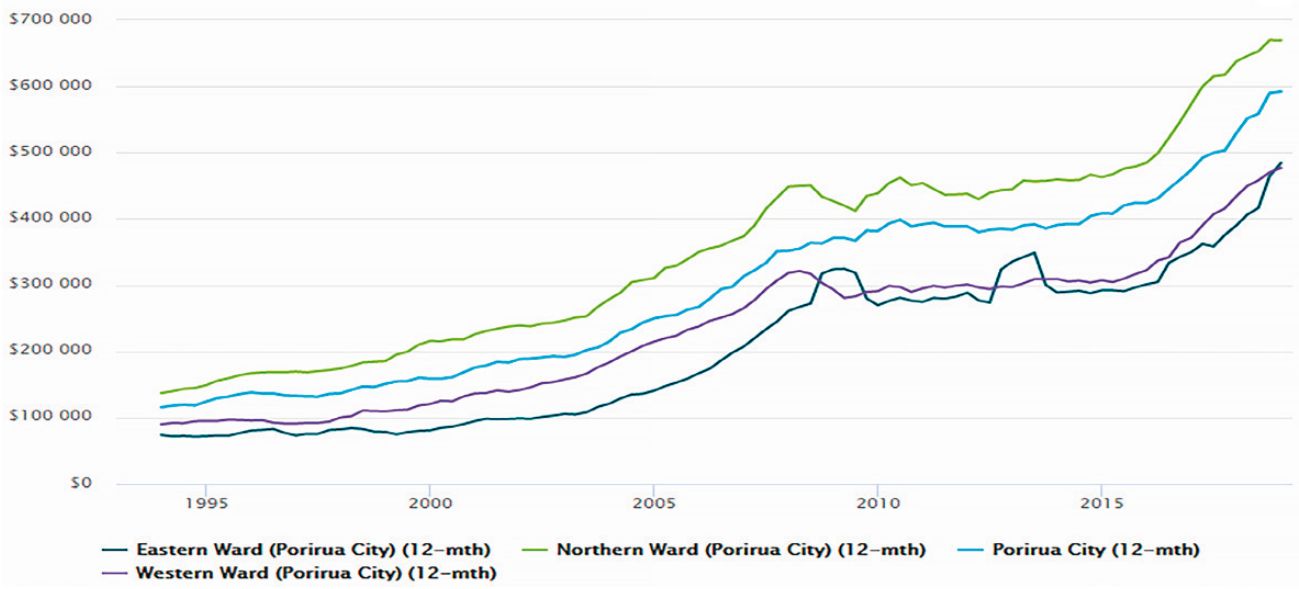

Figure 4.3: Median dwelling sales price by wards

4.2.3 Average rent[95]

In line with the increase in median dwelling sales prices, average rents in Porirua also increased by 23% between 2015 and 2018. This compares with an increase of 40% in median dwelling sales prices but only a 4.45% increase in inflation over the same period.[96]

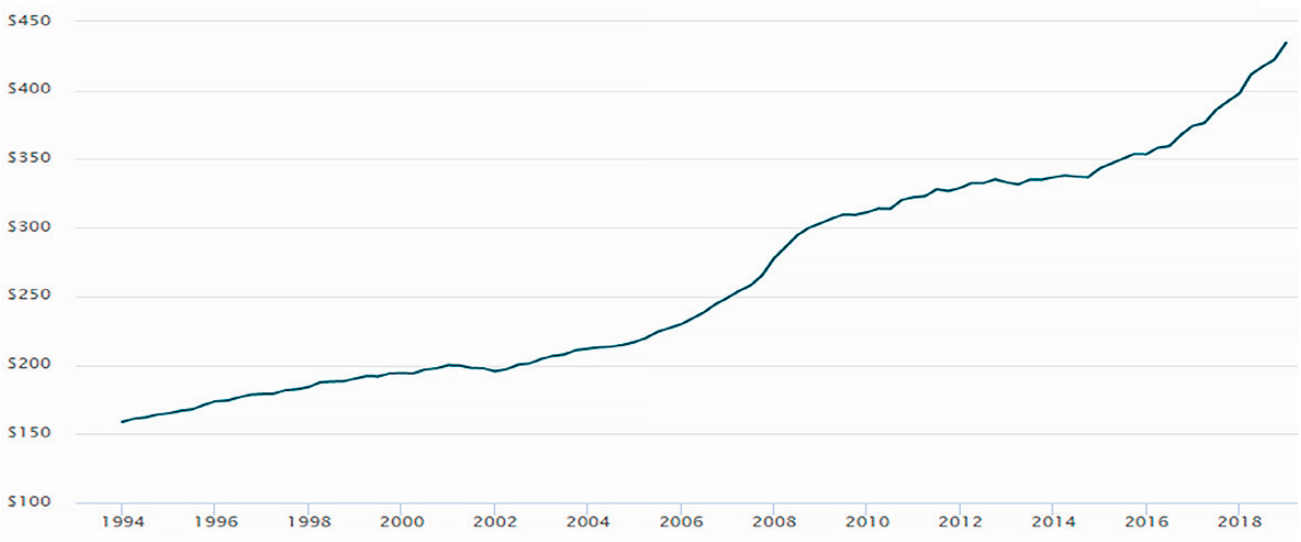

Figure 4.4: Porirua average rent ($/week)

95. This is average rent per week in nominal terms. It has not been adjusted for general price inflation. The data is collected from new rental bonds lodged with MBIE. The data is for private rental bonds only and excludes social housing.

96. Reserve Bank of NZ, annual inflation figures 2015 - 2018

4.2.4 Average rent by wards

Porirua's rental market has followed a similar trend to the housing market. Between 2015 and 2018 average rent increased the most in the Eastern Ward (28%) compared to the Western Ward (21%) and Northern Ward (19%). This can be linked to population growth and an increasing demand for rental properties in the Eastern Ward due to higher rents in other parts of the City and region.

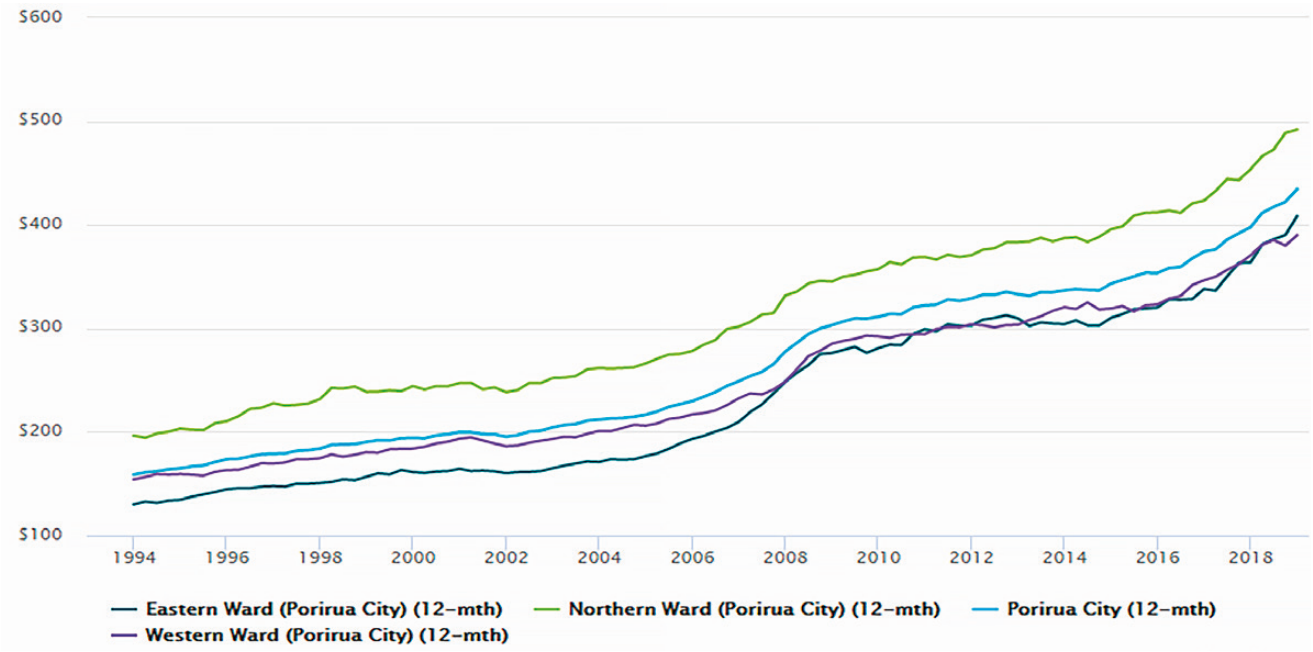

Figure 4.5: Average rent by wards ($/week)

4.3 Affordability measures

There a number of measures to calculate housing affordability. PCC tracks housing and rental affordability using MBIE's Housing Affordability Measure (HAM) and HAM rent indices.

4.3.1 MBIE's Housing Affordability Measure Buy

HAM buy[97] for Porir has been generally above 80%. Porirua recorded the highest HAM buy in September 2007 (90%) and the lowest in March 2016 (81%). Since March 2016, HAM buy has risen steadily, reaching 84% in March 2018. This means that 84% of first home buyer households in Porirua had insufficient income left to meet other expenses after meeting their mortgage payments.

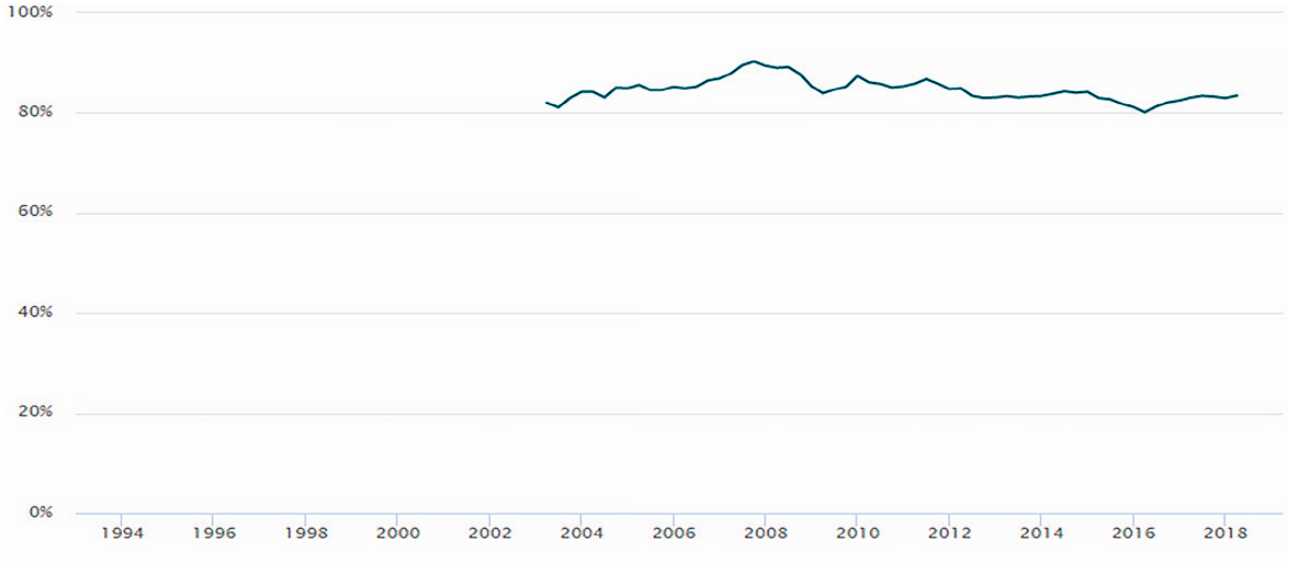

Figure 4.6 HAM Buy: share of first home buyer households with below average income after housing costs

97. It measures trends in housing affordability for the first home buyer household. For potential home-owning households, HAM Buy calculates what their residual income would be after housing costs if they were to buy a modest first home in the area in which they currently live. Affordability is affected by dwelling prices, mortgage interest rates and the incomes of rental households. Average income is determined using the average New Zealand household, both homeowners and renters, nation-wide, in June 2013. A higher number on the chart indicates more households are below the average and a lower level of affordability.

4.3.2 MBIE's HAM rent

Porirua's HAM rent has generally been above 65%. Over the March 2003 to March 2018 period, Porirua recorded the highest HAM rent in December 2003 (76%) and the lowest in June 2009 (67%). HAM rent for Porirua has been on a downward trend since June 2013, falling from 72% in June 2013 to 65% in March 2018. This means that at the end of March 2018, 65% of renting households in Porirua had insufficient income left for other expenses after paying their rent.

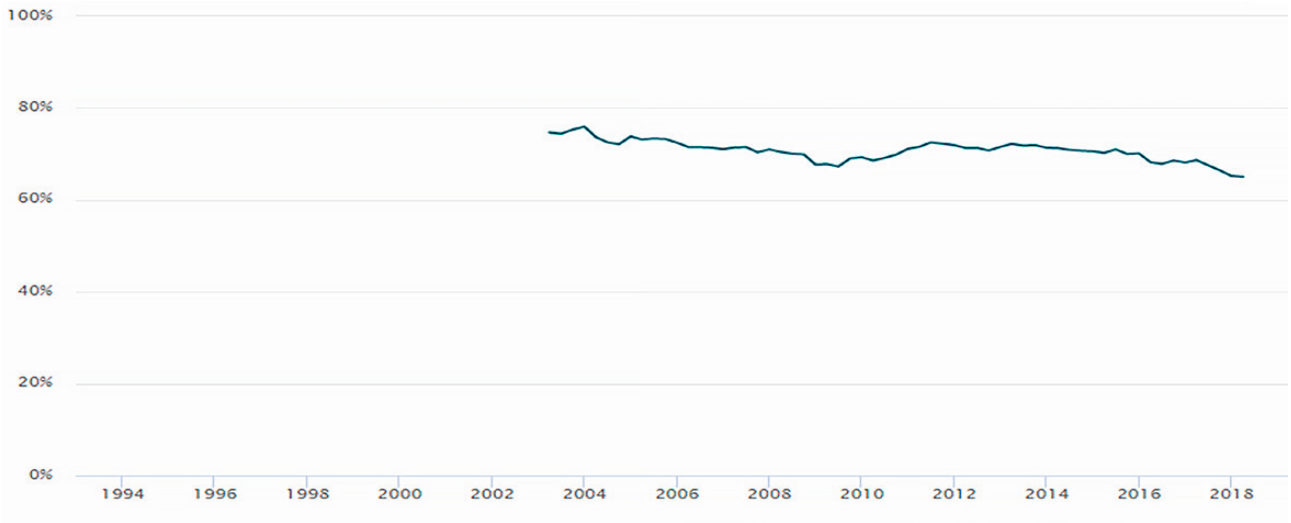

Figure 4.7: Ham rent: share of renting households with below average incomer after housing costs

Overall, based on the HAM Buy and HAM rent indices, only 35% of households are able to pay rent and still have sufficient income left to meet other expenses, compared to 16% of households that can meet their mortgage payments and still have sufficient income to meet other expenses. This suggests that renting is more affordable in Porirua compared to meeting mortgage payments, although both indictors point towards housing unaffordability in the City.

A compounding factor is that rental property owners are increasingly choosing to let their properties for short term accommodation (such as Airbnb). This reduces the number of long term rental properties available and places further upward pressure on rents.

4.3.3 Dwelling sales

Historic quarter on quarter dwelling sales and annual dwelling sales numbers have been analysed and overall show volatility with no clear trends evident. Dwelling sales declined sharply in 2016 and remain on a downward trend due to limited supply, partly attributable to slow current rates of house building as the supply of residential land diminishes.

The trend in Porirua is consistent with the decline in dwelling sales in the Wellington Region over this period. Nationally dwelling sales declined in 2017 but recovered in 2018.

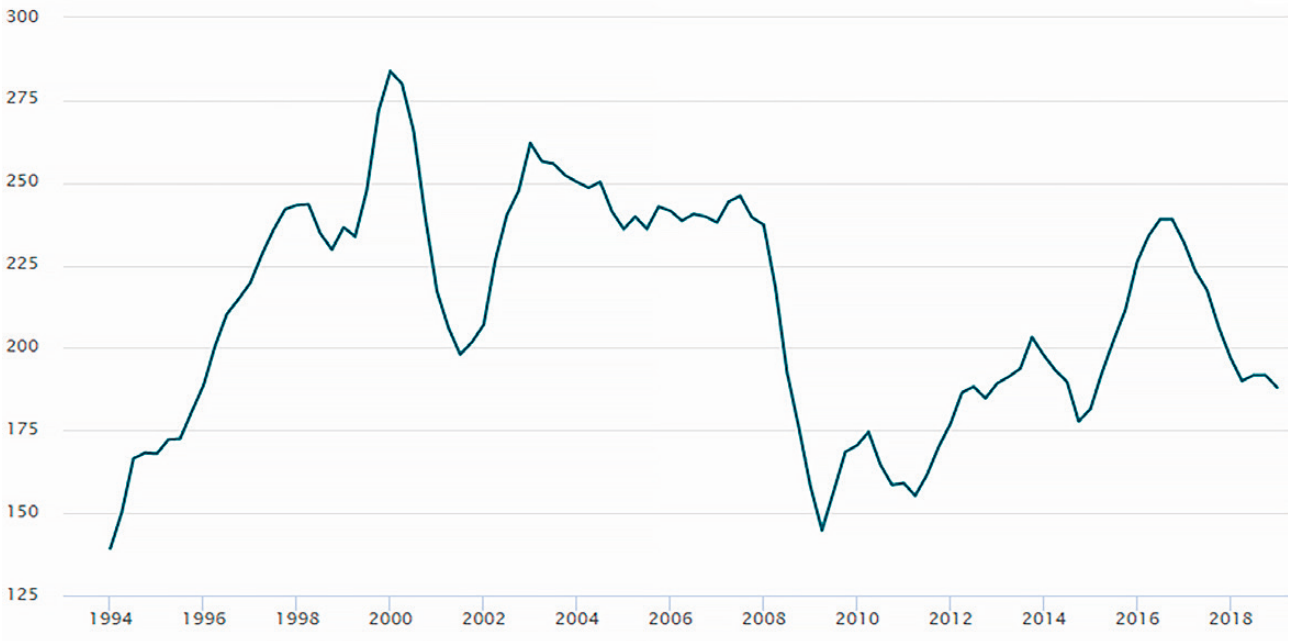

Figure 4.8: Dwelling sales (quarterly)

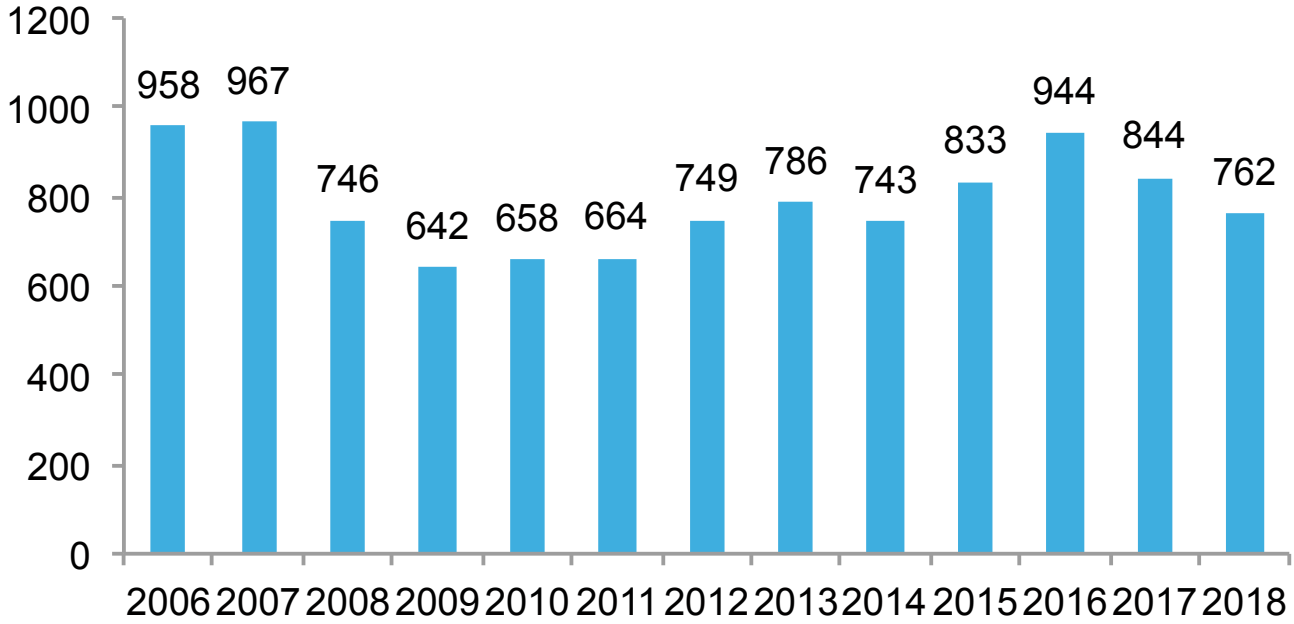

Figure 4.9: Dwelling sales (annual)

4.4 Housing supply trends

4.4.1 Resource consents

Resource consents provide useful information on likely upcoming house building activity. Table 4.1 shows the total number of resource consents[98] that the Council has issued by ward over the past five years:

Year	Eastern ward	Western ward	Northern ward	Total
2013	25	12	95	132
2014	33	20	130	183
2015	30	24	110	164
2016	47	14	142	203
2017	53	19	141	213
2018	57	42	109	208

Table 4.1: Resource consents issued by wards

PCC granted the highest number of resource consents in the Northern Ward, followed by the Eastern Ward and Western Ward. Resource consents granted in the Northern Ward were primarily linked to increased residential subdivision activity in parts of Whitby, including Navigation Heights, Silverwood, Brookside Discovery Drive and Adventure Drive.

Land use and subdivision consents for new dwellings are expected to increase in the Northern ward over the next 30-years as major greenfield housing developments come on line, particularly in the Northern Growth Area. The Eastern Porirua Regeneration Project is also anticipated to result in an increase in land use consents.

98. This includes resource consents issued for residential and commercial purposes, earthworks applied for in advance of development, additions to existing buildings and changes of use. Some developments will also involve the need to get both subdivision and land use consents, meaning there may be some double counting. Therefore, data must be used with caution.

4.4.2 New land parcels

Through subdivision, new land parcels[99] are created and released to the market. PCC data on new land parcels is shown below:

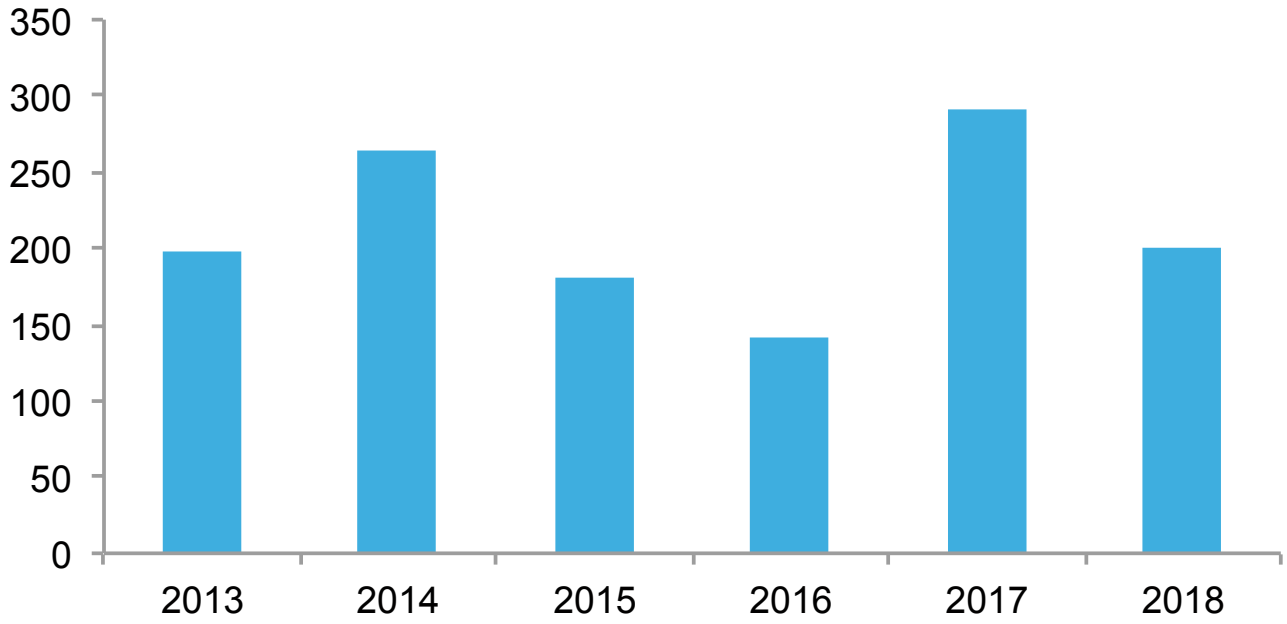

Figure 4.10: New land parcels in Porirua

There has been no land re-zoned for residential purposes in Porirua City for 15 years[100]. As a result, the existing residential land supply is diminishing and we can expect to see a fall in the number of new land parcels created until rezoning provides further land for subdivision and development.

99. New land parcels are created from subdivision works and provide an official number by LINZ.

100. Operative Plan Change 7 in 2004

4.4.3 Residential building consents

Building consents provide an indication of the number of dwellings that will be built. Figure 4.11 shows that since 2012, PCC has issued an increasing number of new building consents for houses and apartments, townhouses, units and other dwellings. 2017 was a record year with 297 new residential building consents issued, including 101 new building consents for apartments, townhouses, units and other dwellings. In Porirua the average construction time for a residential building is typically between 6 to 12 months.

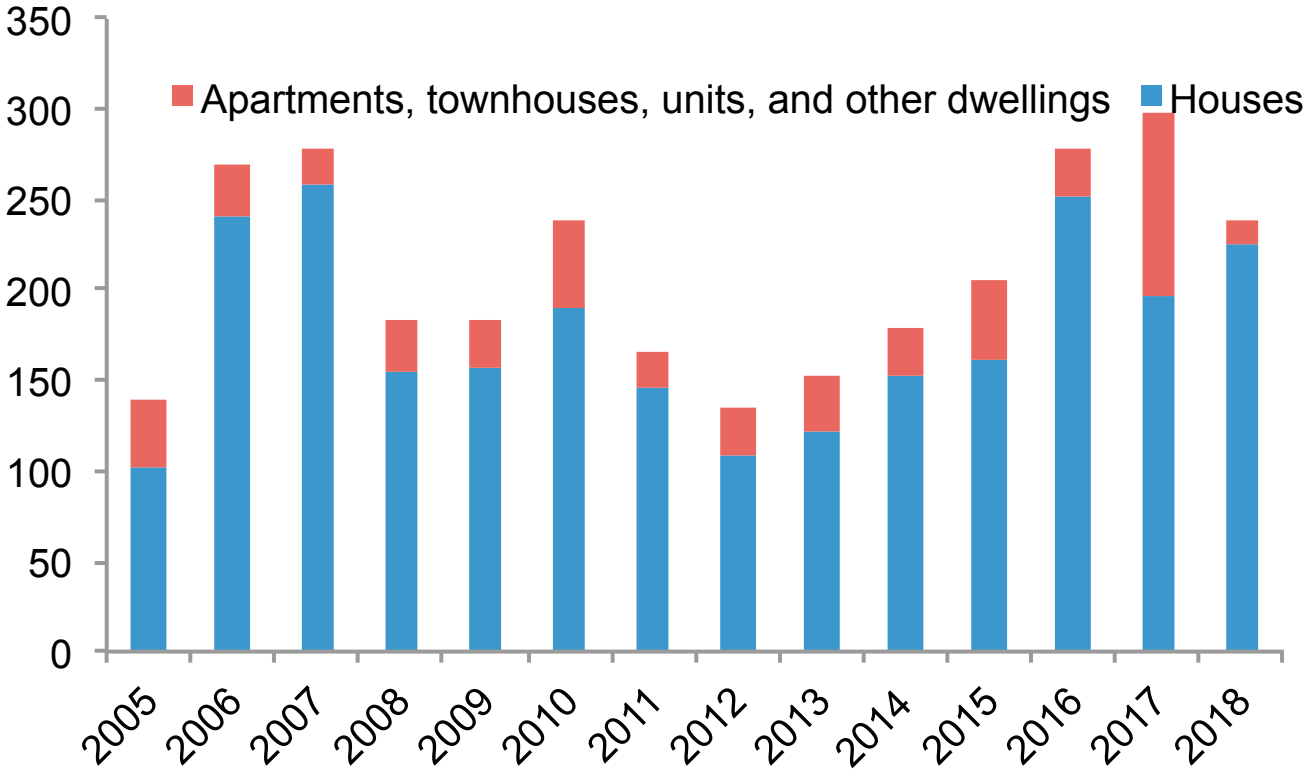

Figure 4.11: New building consents breakdown

In 2018, PCC issued a record low number of new building consents for apartments, townhouses, units and other dwellings, contributing to an overall decline in the total number of new building consents after five years of consecutive growth. This may be indicative of the lack of suitable land available for this type of building, rather than representing a trend within the City.

Historically the trend in new building consents for standalone houses has been steadier compared to apartments, townhouses, units and other dwellings, which have tended to be more volatile. Overall, the building consents data indicates that Porirua's housing supply is dominated by standalone houses rather than apartments, townhouses, units and other types of dwellings.

Figure numbering 4.12?

4.4.4 House price to cost ratio

The house price to cost ratio[101] shows the extent to which house prices are driven by construction costs versus the cost of land[102]. Figure 4.13 shows the different components of the price to cost ratio.

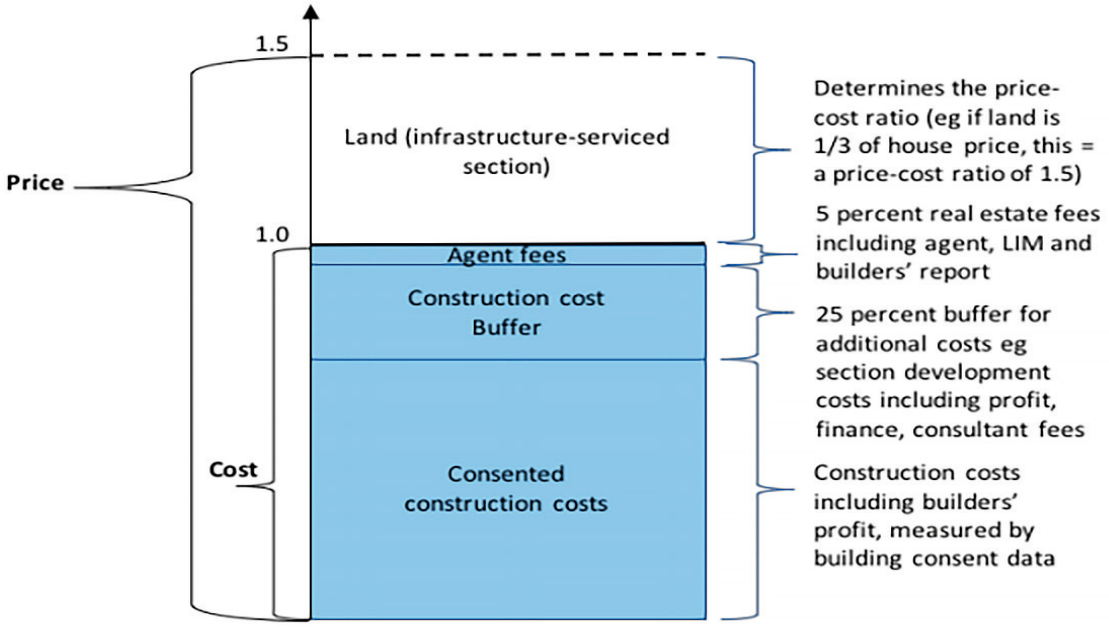

Figure 4.13: Components of the price-cost ratio

In general, if the land cost is a smaller proportion of the cost of the house then it suggests that house prices mostly reflect the construction cost. However, if the land cost is a larger proportion of the house cost then it suggests that house price reflects more land costs than construction costs. This also suggests constrained land supply and high demand for land[103].

The benchmark ratio is 1.5.[104] Ratios between 1.0 and 1.5 suggest that the cost of an infrastructure serviced section comprises up to one third of the price of a home. Any ratio above 1.5 implies that there are severe constraints on the supply of infrastructure-serviced sections relative to housing demand.

Since 2000, Porirua's price to cost ratio has been above 1.0. It rose sharply from 2002 and peaked at 1.7 in 2005. During this period, Porirua's house prices seem to have been dominated by higher land costs rather than construction costs. From 2008 to 2014, the ratio fell below 1.3 but since then has rebounded, showing land prices are on an upward trend.

101. This ratio is developed by comparing the price of each house sold with the relevant building consent values, plus a 25 per cent 'construction cost buffer', and an additional 5 per cent for real estate fees and other costs of buying a home.

102. Defined as infrastructure-serviced sections

103. Construction and land prices might both increase commensurately with growth in demand

104. This is because most areas in New Zealand historically had a price cost ratio of below 1.5 except during periods of rapid growth.

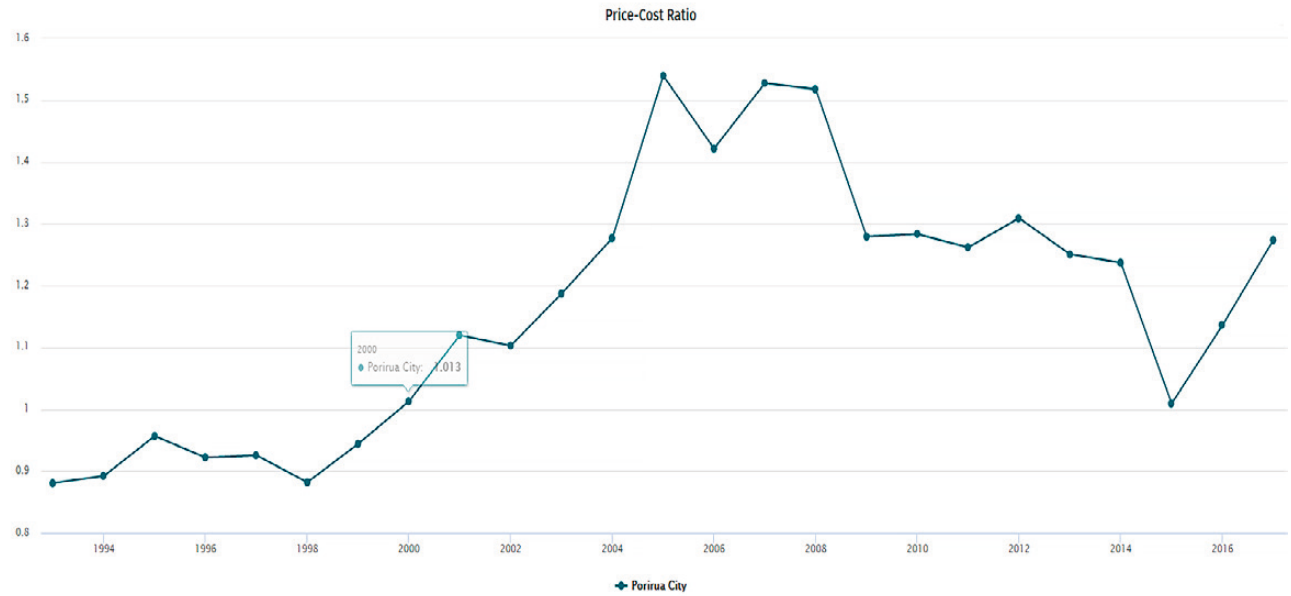

Figure 4.14: Price to cost ratio for Porirua

4.4.5 Land concentration ratio

The land concentration ratio informs how concentrated the ownership of underdeveloped residential zoned land is. In Porirua there is an estimated total of 1,768 ha of residential land, and of this 240 hectares or 14% is undeveloped[105].

Ten entities collectively hold 76% of the total undeveloped residentially zoned land in Porirua and are identified in Table 4. A large proportion of undeveloped residential zoned land is owned by Carrus Limited within the Aotea development, followed by Housing New Zealand and PCC. Most of the undeveloped residential zoned land in Porirua is clustered in Elsdon, Takapuwahia and Porirua East with some land in Whitby (Table 2).

Entities controlling undeveloped residentially zoned land

Urban area	Rank	Area (ha)	Title count	Controlling Entity	Market share	Entity Type
Porirua Zone	1	63.3	72	CARRUS LIMITED	26.3%	Individual Entity
Porirua Zone	2	42.4	32	("HOUSING NEW ZEALAND LIMITED", "HER MAJESTY THE QUEEN")	17.6%	Related Entities
Porirua Zone	3	26	39	("PORIRUA CITY COUNCIL", "THE PORIRUA CITY COUNCIL")	10.8%	Related Entities
Porirua Zone	4	15.5	2	DAVID PROSSER, HERANI WIPOU KING, HUNIA TE URUKAIATA MACKAY, MELISSA LOVE, MERE HAUTONGA KOHE LOVE	6.5%	Consortium
Porirua Zone	5	13.4	2	BROOKSIDE ESTATE LP	5.6%	Individual Entity
Porirua Zone	6	11.4	1	NAVIGATION HEIGHTS LP	4.7%	Individual Entity
Porirua Zone	7	3.9	1	ADVENTURE DRIVE LP	1.6%	Individual Entity
Porirua Zone	8	2.1	2	WELEM DEVELOPMENTS LIMITED	0.9%	Individual Entity
Porirua Zone	9	1.7	1	SUNLINK DEVELOPMENTS LIMITED	0.7%	Individual Entity
Porirua Zone	10	1.7	21	TODD PROPERTY WHITBY DEVELOPMENT LIMITED	0.7%	Individual Entity

Table 4.2: Undeveloped vacant residential zoned land in Porirua

105. Based on land with an underlying residential zoning in the Operative District Plan

4.4.6 Dwelling supply versus demand

A comparison of the number of dwellings that were supplied to the market over 2014 to 2018 with population growth indicates a shortfall in housing supply during this period. This is determined by dividing the increase in population from 2014 to 2018 with the average household size to obtain the number of dwellings that should be supplied. When compared to the actual number of dwellings built in Porirua over this period there is a shortfall of 366 dwellings. This indicates demand outstripped supply between 2014 and 2018.

	Population growth	Average household size	Dwellings required	Actual no. of dwellings built	Shortfall in Dwellings
2014	820	3.0	269	210	-59
2015	820	3.0	270	181	-89
2016	820	3.0	271	160	-111
2017	821	3.0	273	292	19
2018	819	3.0	273	148	-125
Total	4,100		1,357	991	-366

Table 4.3: Dwelling supply versus demand 2014 – 2018

5.0 Housing assessment results

5.1 Overview

This section summarises housing demand and capacity assessment results for Porirua for the next three-years (short-term), 10-years (medium-term) and 30-years (long-term)[106] to determine if there will be a shortfall or surplus in housing capacity.

When assessing housing demand, four different aspects are considered as required by the NPS-UDC. Housing demand is assessed by considering the total number of dwellings required, the demand for different types of dwellings, dwelling demand in different locations, and dwelling demand at different price points.

When assessing housing capacity, greenfield and infill development capacity by typology and wards was considered. After estimating housing demand and capacity, an estimate of housing sufficiency is then determined i.e. if there will be a surplus or a shortage of housing in the next three, 10 and 30-years. Housing sufficiency results are provided for both greenfield and infill/redevelopment by typology and wards.

5.2 Population Projections

Population growth is a fundamental consideration for urban planning. The rate at which population grows has implications for a city's dwelling requirements, infrastructure, amenities, and service provision.

PCC has considered seven different population projections, with each showing a different rate of population growth for Porirua dependent on the methodology applied and the weighting given to different variables. These are summarised in Figure 4.15:

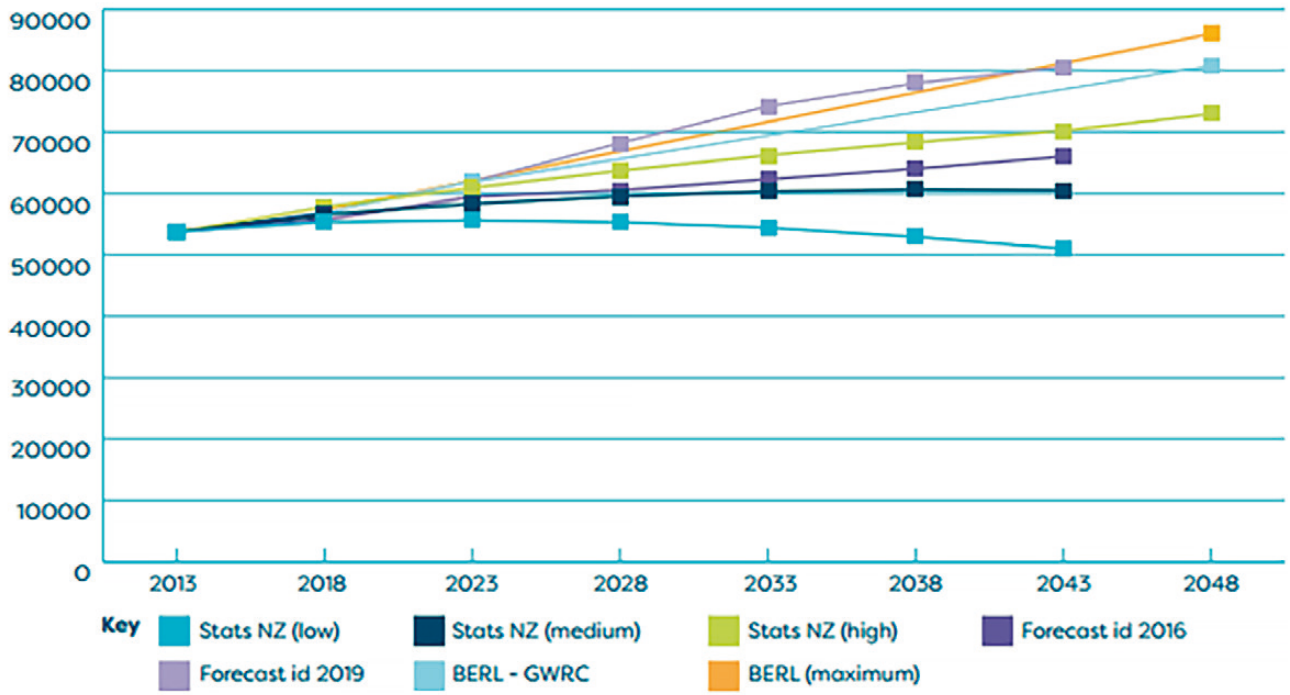

Figure 4.15: Porirua population projection scenarios

106. . PCC has used 3, 10 and 30 years interchangeably with the short term, medium term and long term.

For the purposes of this report, four of the above population projections have been used as they are considered to adequately cover a range of scenarios. These are set out below.

BERL scenarios (GWRC and Maximum) (High Growth)

PCC acknowledges that while the Forecast id 2016 and Statistics high growth scenarios meet the Wellington regional reporting standards as agreed with other Councils within the region, they do not indicate the full potential for population growth due to the number of major housing developments earmarked for Porirua. PCC therefore commissioned BERL to provide an independent set of projections to inform the Growth Strategy that were higher than the Statistics NZ and Forecast.id scenarios.

Forecast.id January 2019 scenario (High Growth)

PCC requested Forecast.id to review Porirua's projections in January this year. The review confirms that with potential major housing developments, Porirua's population is likely to grow at a higher rate than anticipated in its earlier projections, and similar to BERL projections.

Forecast.id April 2016 scenario (Medium Growth)

This is a base case scenario. It was reviewed in 2016 and does not factor in major proposed developments including the Porirua Development[107] and various greenfield developments identified in the Growth Strategy and likely to be enabled through the District Plan review.

Statistics NZ high growth scenario[108] (Medium Growth)

This projection was also provided in 2016 by Statistics NZ. Similar to Forecast id's 2016 projections, this does not take into account the Porirua Development and various greenfield developments identified in the Growth Strategy and likely to be enabled through the District Plan review.

5.2.1 PCC Adopted Scenarios

PCC has resolved that planning based on only one set of projections could result in insufficient provision of housing capacity, especially given the major housing developments proposed in the City. To manage this risk, PCC has decided to plan according to high and medium growth scenarios. This decision has been informed by monitoring of quarterly market indicators and work undertaken with the developer community as part of the Growth Strategy implementation and District Plan Review.

However, for the purposes of consistency and in order to complete the regional HBA reporting as required by the NPS-UDC, PCC uses the Forecast.id and Statistics NZ high scenarios so there is consistency with projections used by other councils in the Wellington region. Using the same projections allows meaningful comparisons across councils in the Wellington region, although PCC is not using these figures for the purposes of its own planning.

107. https://poriruadevelopment.co.nz

108. Although this scenario includes 'high growth' in the title, it is actually a medium growth projection compared to the Berl and Forecast.id January 2019 projections

5.2.2 High growth population projections[109]

BERL projections

BERL provided high level projections of the total number of dwellings that will be required to meet housing demand in the next 30 years. BERL's GWRC scenario assumes that Porirua will require an additional 8,800 houses for a total population of 80,800 people in the next 30 years. However, BERL's housing development scenario assumes that Porirua will require as many as 10,500 additional houses to accommodate up to 86,000 people in Porirua in the next 30 years.

Scenario	2018 population	2048 population	Change in population	Additional homes needed
GWRC projection	56,100	80,800	24,700	8,800
BERL projection - 9,000 to 10,500 new homes are built and occupied in Porirua	56,600	81,800-86,000	25,200-29,400	9,000-10,500

Table 4.4: BERL's population projections

Forecast.id January 2019 projections

Forecast id's January 2019 projections align with BERL's GWRC projections, although noting that BERL projects for the next 30 years but Forecast.id only projects for the next 25 years.

	2018	3 years	10 years	25years	2043	Percent change (2018-2043)
Population	56,865	3,060	11,800	25,900	82,800	46%

Table 4.5: Forecast id's January 2019 population projections

According to Forecast id's January 2019 projections, Porirua's population will grow by 46% in the next 25 years to 82,800. Property Economics have then used Forecast id's January 2019 household (to 2043) projections and have extrapolated it to 2048 to establish Porirua's total dwelling requirements by typology[110] for the next three, 10 and 30-years.

109. These are BERL's projections based on 9,000-10,000 dwellings and Forecast id's March 2019 review.

110. Note typology is based on the current household structure and housing preferences projected for temporal changes to these preferences and expected future demographics

5.2.3 Total dwellings required based on high growth projections

In 2018 Porirua had 18,300 dwellings. Based on the high growth projections, Property Economics assess that in the next 30 years Porirua will require 10,400 additional dwellings. This will increase the total number of dwellings by 57% to 28,700 by 2048.

No. of dwellings	Short-term (2018-2021)	Medium-term (2021-2028)	Long-term (2028-2048)	Total (2018-2048)	2048	Percent change (%) (2018-2048)
18,300	1,070	3,030	6,300	10,400	28,700	57%

Table 4.6: Total number of dwellings required

Of the 18,300 dwellings in Porirua in 2018, 80.5% were standalone houses, 13% were apartments and 6.5% were terraced housing (Table 7). According to Property Economics, in the next 30-years these proportions are likely to remain similar with a slight proportional increase in medium to high density product. Their assessment notes that demand for all types of dwellings is projected to increase over the next 30 years.

	2018	Short-term (2018-2021)	Medium-term (2021-2028)	Long-term (2028-2048)	Total (2018-2048)	2048	Percent change (2018-2048)
Standalone	14,720	870	2,430	5,030	8,330	23,050	57%
Terraced	2,410	150	410	900	1,460	3,870	61%
Apartments	1,170	50	190	380	620	1,790	53%
Total	**18,300**	**1,070**	**3,030**	**6,310**	**10,410**	**28,710**	**57%**

Table 4.7: Housing demand by typology

5.2.4 Medium growth population projections

Forecast.id 2016 projections

According to Forecast id's 2016 growth scenario, Porirua's population was 55,687 in 2018. By 2048, this scenario projects an increase of 21% (11,719 additional people).

Statistics NZ high growth projections

Statistics NZ's high growth scenario estimates a population of 57,800 in 2018 for Porirua. By 2048, this scenario projects an increase of 25% (14,302 additional people).

Population projections	2018	Short-term (2018-2021)	Medium-term (2021-2028)	Long-term (2028-2048)	Total (2018-2048)	2048	Percent change (2018-2048)
Forecast id 2016	55,687	2,311	2,505	6,903	11,719	67,406	21%
Stats NZ-high	57,800	1,860	4,040	8,402	14,302	72,102	25%

Table 4.8: Population projections for Porirua

Porirua households have typically consisted of three people per household[111]. Assuming an average household size of 3 for the next 30-years, Porirua will require 5,445 to 6,431 additional dwellings by 2048 based on the medium growth projections.

Total number of dwellings required	2018 (total number of dwellings)	Short-term (2018-2021)	Medium-term (2021-2028)	Long-term (2028-2048)	Total (2018-2048)	2048 (total number of dwellings	Percent change (2018-2048)
Forecast id (April 2016 projections)	19,153	973	1,281	3,191	5,445	24,598	45%
Stats NZ (high growth scenario)	19,880	823	1,835	3,773	6,431	26,311	50%

Table 4.9: Dwelling requirements for Porirua

Similar to the adopted high growth scenarios, Porirua's housing demand assessment based on the medium growth scenarios indicates that in the next 30-years, more standalone houses will be demanded compared to apartments in Porirua. Although the Growth Strategy indicated existing residential areas of the City could accommodate medium density housing (a key consideration in the District Plan review), the modelling indicates that this will not significantly shift demand away from standalone houses in Porirua.

111. Rounded up from 2.8. Figures from Statistics NZ census data

5.2.5 Total dwellings required based on medium growth projections

Under the Forecast.id scenario, Porirua will require 4,697 additional standalone houses and 569 flats/units/townhouses/ apartments by 2048.

Under the Stats NZ high growth scenario, Porirua will require 5,508 additional standalone houses and 702 flats/units/townhouses/ apartments by 2048.

Forecast id	2018	Short-term (2018-2021)	Medium-term (2021-2028)	Long-term (2028-2048)	Total (2018-2048)	2048	Percent change (2018-2048)
Standalone	15,385	814	1,073	2,810	4,697	20,079	31%
Flats/units/townhouses/ apartments	2,841	109	141	268	518	3,359	18%
Other private dwelling types	85	15	15	21	51	136	60%
Total	**18,311**	**938**	**1,229**	**3,099**	**5,266**	**23,574**	**29%**

Table 4.10: Housing demand by typology

Stats NZ (high growth scenario)	2018	Short-term (2018-2021)	Medium-term (2021-2028)	Long-term (2028-2048)	Total (2018-2048)	2048	Percent change (2018-2048)
Standalone	15,969	694	1,521	3,293	5,508	21,477	34%
Flats/units/townhouses/ apartments	2,948	86	220	339	645	3,593	22%
Other private dwelling types	88	15	18	24	57	145	66%
Total	**19,006**	**795**	**1,759**	**3,656**	**6,210**	**25,215**	**33%**

Table 4.11: Housing demand by typology – Stats NZ high growth scenario

5.2.6 Demand for dwelling by locations

Forecast.id 2016 projections

Under this scenario, demand for houses will be greater in the Northern Ward compared to the Western and Eastern wards in the next three, 10 and 30-years. Housing demand is projected to be lowest in the Eastern Ward, although the analysis preceded the announcement of the Eastern Porirua Regeneration Project (Porirua Development) meaning that it doesn't provide an accurate representation of current and future state. It is also not representative of recent market analysis that indicates that house prices in the east have experienced the highest increase in the city (45% in three years)[112].

	Short-term (2018-2021)	Medium-term (2021-2028	Long-term (2028-2048)	Total
Eastern ward				
Standalone housing	22	60	190	272
Two or More Flats/Units/Townhouses/Apartments/ Houses Joined Together	5	13	42	60
Other Private Dwelling Types	-	0	0	0
Total	**27**	**73**	**233**	**333**
Western ward				
Standalone housing	351	318	278	946
Two or More Flats/Units/Townhouses/Apartments/ Houses Joined Together	54	51	49	154
Other Private Dwelling Types	13	10	3	26
Total	**418**	**379**	**330**	**1,127**
Northern ward				
Standalone housing	441	695	2,342	3,478
Two or More Flats/Units/Townhouses/Apartments/ Houses Joined Together	50	78	177	304
Other Private Dwelling Types	2	5	18	25
Total	**493**	**777**	**2,536**	**3,806**
Total - Porirua city	**938**	**1,229**	**3,099**	**5,266**

Table 4.12: Housing demand by wards and typology

112. https://www.oneroof.co.nz/news/36316?ref=nzhhome

Stats NZ high growth projections

Similar to the Forecast.id scenario, demand for houses will be greater in the Northern Ward compared to the Western and Eastern wards in the next three, 10 and 30-years. Housing demand is projected to be the lowest in the Eastern Ward, although the analysis again does not take into account the Porirua Development and is therefore considered unrealistic.

	Short-term (2018-2021)	Medium-term (2021-2028)	Long-term (2028-2048)
Eastern ward			
Standalone housing	-14	160	271
Two or More Flats/Units/Townhouses/Apartments/Houses Joined Together	-7	45	68
Other Private Dwelling Types	0	0	0
Total	**-21**	**205**	**339**
Western ward			
Standalone housing	331	420	362
Two or More Flats/Units/Townhouses/Apartments/Houses Joined Together	51	68	64
Other Private Dwelling Types	13	12	4
Total	**395**	**500**	**430**
Northern ward			
Standalone housing	377	942	2663
Two or More Flats/Units/Townhouses/Apartments/Houses Joined Together	42	106	207
Other Private Dwelling Types	2	6	20
Total	**421**	**1054**	**2890.0**
Total - Porirua city	**795**	**1759**	**3659**

Table 4.13: Housing demand by wards and typology – Stats NZ projections

While new data indicates that the projections above are not representative of the current state, what we can draw from them is that growth will be distributed throughout the city. This means that no single response will address future housing demand.

5.2.7 Demand for dwellings by price point

Policy PB1 of the NPS also requires that the HBA considers demand by price point. Beyond the general assessment of affordability, this report has not attempted to undertake any additional assessment due to the complexity associated with undertaking a meaningful assessment. Instead the HBA has chosen to consider the demand for different types of housing by location. The type of housing, coupled with location, can provide us with an indication of price point.

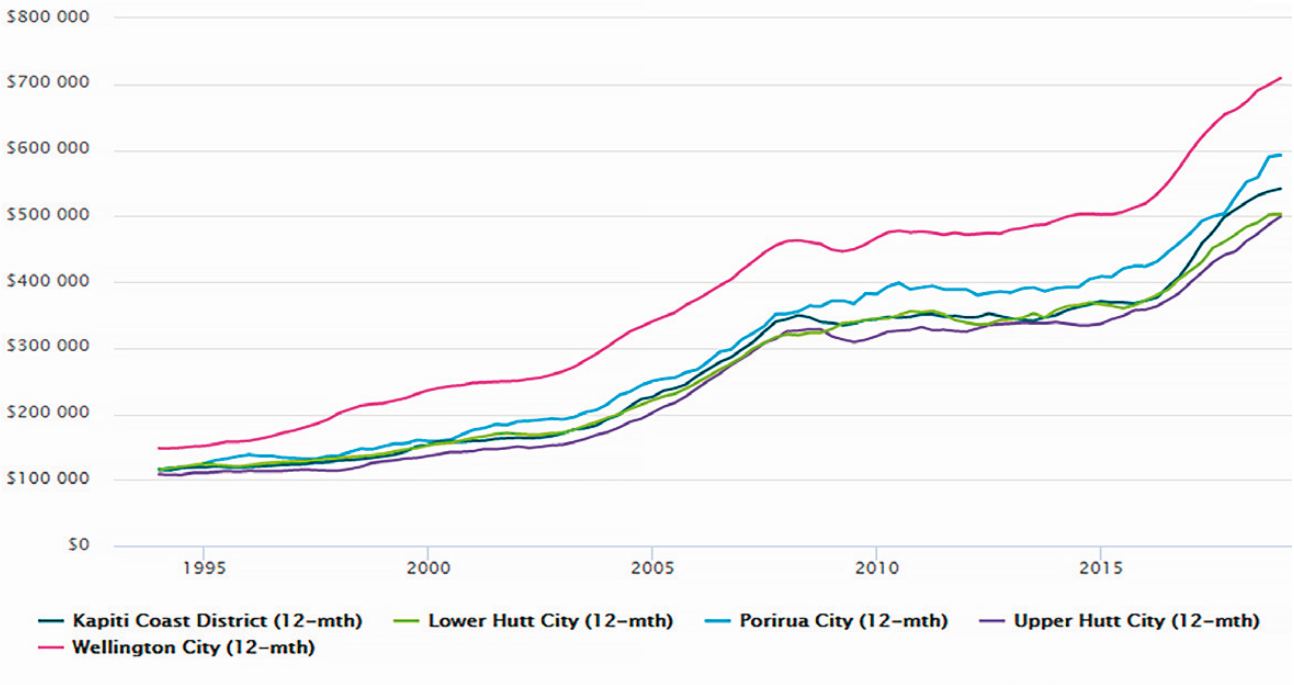

Figure 4.16: Median dwellings sales price in the Wellington region

5.3 Housing affordability

Council uses MBIE's and Infometric's housing affordability indices to track Porirua's housing affordability (see section 5 for more details). Both indicators suggest that housing affordability is declining in Porirua. House prices are increasing due to increased demand, and this is not being met by a commensurate increase in new supply. This is exacerbated by a declining number of existing houses for sale. Incomes are also not increasing as much as house prices and this is in turn is further reducing housing affordability.

Median dwelling sales prices	2008	2013	2018	Percent change (2013-2018)
Northern ward	$426,500	$459,375	$669,333	46%
Western ward	$293 250	$309,125	$476,667	54%
Eastern ward	$323,750	$288,750	$484,055	68%
Porirua city	$371,000	$390,500	$592,000	52%
Median household incomes – Porirua city	$74,500	$83,100	$108,400	30%

Table 4.14: Median dwelling sales price in Porirua

Since 2013, Porirua's median dwelling sales prices [113] have increased considerably (52%) while incomes have only risen by 30%.

113. These are not adjusted for size and quality of dwellings.

5.3.1 Councils' approach to affordable housing

PCC has an opportunity to enable a range of housing typologies through the District Plan review, in particular through the introduction of provisions that provide for medium density housing. The rezoning of land for residential development will increase land supply, and help counter current supply constraints that are contributing to housing affordability issues.

The 2013 census data shows that Porirua only had 2,505 one to two bedroom houses, 7,731 houses 3 bedroom houses and 5,736 four bedroom houses. The need to provide smaller houses aligns with the changes expected in household structure in Porirua over the next 30-years. Statistics NZ projections indicate that dependent and lone households are expected to grow by 44% over the next 30-years. Porirua will also have strong growth (21%) in one-parent families. These indicators point towards Porirua needing to have a larger supply of one to two bedroom houses.

5.3.2 Demand for visitor accommodation

Porirua has comparatively small visitor demand compared to Wellington, and is mostly seen as a day destination. From 2010 to 2018, guest nights in Porirua have increased by an average 3.6 percent per year. In 2018 guest nights peaked at 74,860.

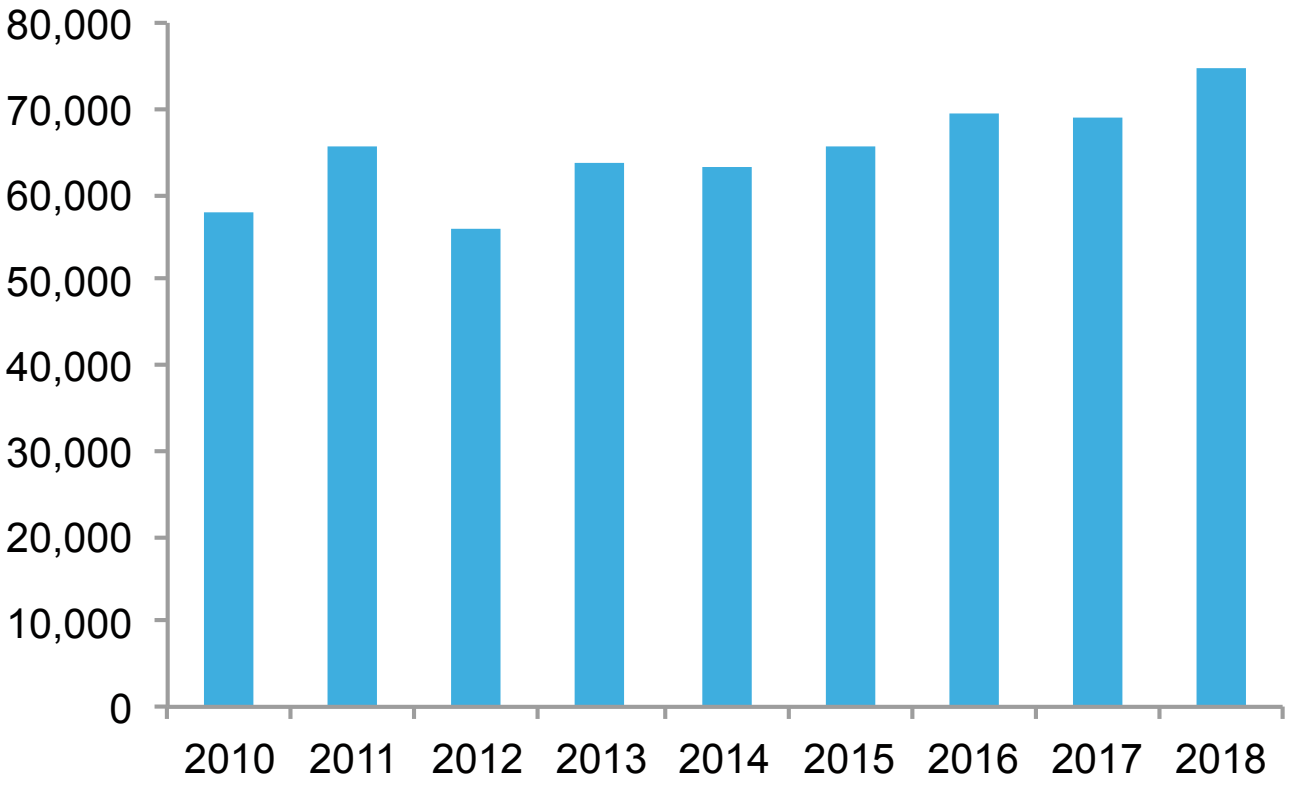

Figure 4.17: Guest nights in Porirua

PCC expects visitor demand to increase in the next few years once the proposed Adventure Park is operating[114]. According to an economic assessment accompanying the application for resource consent, the Porirua Adventure Park will bring over 200,000 visitors each year once it is fully operational (estimated to be in 2022).

Most of the visitor demand is currently met by commercial accommodation providers. There are eight commercial accommodation providers in Porirua, comprising two hotels, five motels and one backpacker hostel. There is currently no apartment-style visitor accommodation in Porirua. The average occupancy rate for the commercial accommodation sector was 54% over 2016 to 2018. This suggests that there is spare capacity in the commercial accommodation sector to accommodate a moderate increase in visitor demand.

There has also been a rapid increase in Airbnb numbers over the past three years. From no Airbnb place listings in 2015, place listings have grown by an average of 115% per year. This suggests that Airbnb has also been meeting an increasingly high proportion of visitor demand.

	2015	2016	2017	2018
Number of Airbnb properties in Porirua	247	420	1,524	1,703
Percent change (%)	-	70%	263%	12%

Table 4.15: Airbnb entire place listings

114. The proposed Adventure Park was granted resource consent by the Council in 2019. Select Contracts is now awaiting the resource consent from the Greater Wellington Regional Council and a concession from the Department of Conservation. If constructed, it would feature a gondola ride, a top station restaurant, new and existing mountain bike trails for all levels of riding ability, new walking and hiking sightseeing trails and a 1,410m dual zipline

6.0 Housing Development Capacity

6.1 Overview

The modelling of residential development capacity for this HBA has been split into two parts:

- Modelling of the available capacity in the city's greenfield areas. A minimum site size of 5 hectares has been used to define greenfield sites.
- Modelling has also been undertaken of what infill and redevelopment capacity exists within urban areas.
- All modelling uses operative District Plan settings as a starting point. From this plan enabled capacity, the modelling then assesses the feasibility of that capacity. The modelling methodology, assumptions and limitations have been discussed in the regional chapter of this HBA.

There are several constraining factors with respect to the realisation of plan enabled housing capacity, with infrastructure servicing and commercial feasibility two of the key factors. These are considered in further detail below, and summarized conceptually in Figure 4.18.

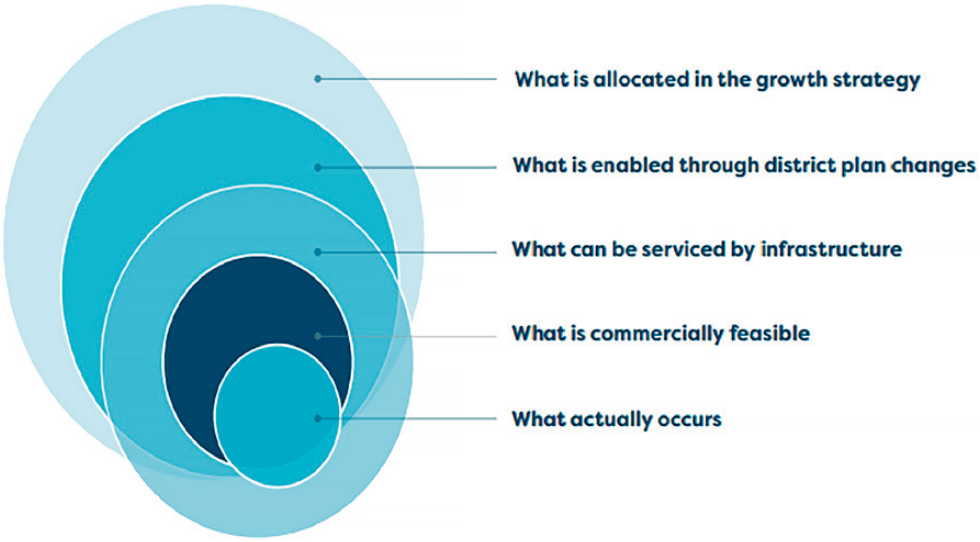

Figure 4.18: Different levels of development capacity

6.2 Greenfield development Capacity

The Council's greenfield assessment was undertaken by MRCagney and Colliers. They extended MBIE's greenfield development feasibility model to estimate greenfield development feasibility for Porirua.

The model estimates the commercial feasibility of developing new residential subdivisions. It took into account all greenfield sites available for development that are more than 5ha, the cost of acquiring greenfield sites and developing them (such as undertaking site works and providing infrastructure), and the expected prices sections would sell for. It's important to note that the MRCagney and Colliers reports consider greenfield sites to include those currently zoned residential along with land zoned rural under the Operative District Plan, but identified as a future growth area in the Porirua Growth Strategy. This means the capacity estimates provided in the report will only be realised following rezoning through the District Plan review or as plan changes to the Operative District Plan.

Commercial feasibility is estimated from the perspective of a profit seeking developer. It does not take into account the broader economic, social or environmental consideration that may affect the development of a greenfield site, or projects with alternative funding sources such as the Porirua Development. The Porirua greenfield development feasibility modelling report is provided in Appendix 4.2.

The results assumed that Porirua has 406ha of greenfield land available of which 92% or 375ha in developable, culminating in 4,838 sections (Table 13)[115].

		Site attributes & plan enabled capacity			Feasibility of council capacity estimates		
	Number of sites	Total land area (hectares)	Total developable area (hectares)	Number of additional plan enabled sections	Number of feasible sites	Feasible area to develop (hectares)	Number of added sections
Eastern ward[116]	2	6	5	60	2	5	60
Western ward[117]	3	62	62	791	3	62	791
Northern ward[118]	7	338	308	3,987	7	308	3,987
Total	**12**	**406**	**375**	**4,838**	**12**	**375**	**4,838**

Table 4.16: Greenfield modelled results

115. Note: the figures in Table 4.13 are theoretical only. They do not take into consideration the constraints and opportunities affecting the development of greenfield land promulgated through the District Plan review, and application of rules within the Greater Wellington Proposed Natural Resources Plan.

116. Includes sites at Ranui Heights

117. Includes Titahi Bay Radio NZ site, Porirua central and Kenepuru.

118. Includes Plimmerton Farms, Grays Farm, Judgeford Hills, rural Judgeford Hills Zone, Pukerua Bay and Mana Camborne and Whitby – Adventure.

6.3 Infill and redevelopment

Porirua's infill and redevelopment capacity assessment by Property Economics takes into account sites that are 5ha and less. Porirua has a plan enabled capacity of 36,084 infill houses. However, of this only 4,315 are considered feasible, comprising 1,060 feasible standalone houses and 3,255 feasible terraced houses[119]. By wards, infill and redevelopment sites are the most feasible in the Western Ward (20%) compared to the Eastern Ward (9%) and Northern Ward (10%). The overall feasibility rate is 12%[120].

Wards	Theoretical Capacity	Feasible Standalone	Feasible Terraced	Feasible Apartment	Feasible Capacity	Feasibility Rate
Eastern ward	14,928	275	1,074	0	1,349	9.0%
Western ward	9019	287	1,482	0	1,769	19.6%
Northern ward	12,137	498	699	0	1,197	9.9%
Total	**36,084**	**1,060**	**3,255**	**0**	**4,315**	**12.0%**

Table 4.18: Infill and redevelopment by wards[121]

6.4 Total housing capacity in Porirua

Combining feasible residential greenfield capacity with feasible infill and redevelopment capacity, an overall feasible development capacity of 10,276 dwellings for Porirua for the next 30-years has been estimated.

	Standalone	Apartments and terraced	Total
Eastern ward	335	1,074	1,409
Western ward	1,124	1,482	2,606
Northern ward	5,562	699	6,261
Total feasible capacity	**7,021**	**3,255**	**10,276**

Table 4.19: Total residential feasible development capacity

The results indicate that Porirua has a greater capacity to provide standalone houses (68%) compared to apartments and terraced housing (32%). It is important to note that while the terraced housing is 'the most' feasible it does not discount the fact that standalone product could also be feasible for these sites. In fact although there are only 1,060 (highest profit) feasible standalone, the total number of feasibly developed standalone dwellings in Porirua is 2,275.

119. Note that this represents the feasibilities with the highest profit levels and does not represent the total level of feasible product by typology.

120. Note: the figures in Table 4.18 are theoretical only. They do not take into consideration the constraints and opportunities affecting the development of existing urban land promulgated through the District Plan review.

121. This assessment excludes Porirua Development infill numbers.

6.5 Realisation rate

6.5.1 Greenfield Realisation Rate

A greenfield realisable development rate of 76% of feasible capacity has been assumed, based on an assumption that all greenfield development identified will be developed over the next 30-years[122].

6.5.2 Infill/Redevelopment Realisation Rate

A realisable infill/redevelopment rate of 50% of feasible capacity or 6% of plan enabled capacity has been calculated.

	Standalone	Apartments and terraced	Total
Eastern ward	45	527	572
Western ward	110	809	919
Northern ward	206	453	584
Total feasible capacity	361	1,789	2,150

Table 4.20: Total realisable infill and redevelopment capacity

6.5.3 Total realisable capacity

Porirua has an assumed total feasible realisable housing capacity of 6, 664 dwellings over the next 30 years. Of this 4,514 are greenfield and 2,150 are infill. The total realisable housing capacity is therefore 35% lower than the total feasible housing capacity.

	Standalone	Apartments and terraced	Total
Eastern ward	105	527	632
Western ward	947	809	1,756
Northern ward	3,823	453	4,276
Total realisable capacity	4,875	1,789	6,664

Table 4.21: Total realisable housing capacity

By typology, Porirua has a realisable standalone housing capacity of 4,875 dwellings compared to a realisable apartment and terraced housing capacity of 1,789. Standalone realisable capacity is 30% lower than the total feasible capacity, while for apartments/terraced realisable capacity is 45% lower than feasible realisable capacity.

122. Again, this does not take into consideration the constraints and opportunities affecting the development of greenfield land promulgated through the District Plan review, and application of rules within the Greater Wellington Proposed Natural Resources Plan

6.6 Housing sufficiency

Having established overall demand and supply based on agreed assumptions and projections, housing sufficiency can now be determined i.e. whether there is sufficient housing capacity in Porirua.

Housing sufficiency has been assessed using Forecast id's March 2016 growth scenario. In addition to having sufficient housing capacity, the NPS-UDC directs PCC to provide 20% additional capacity in the short and medium term and 15% additional capacity in the long term. This is to ensure that that there is capacity to provide housing if demand is higher than anticipated.

6.6.1 Forecast.id April 2016 projection

Under the medium growth scenario, Porirua has sufficient housing capacity to meet the expected housing demand in the next three, 10 and 30-years. It has been assessed that there is 20% additional capacity in the short and the medium term and 15% additional capacity in the long term as required by the NPS-UDC, although this does not account for the constraints and opportunities realised through the District Plan review.

	Short-term (2018-2021)	Medium-term (2021-2028	Long-term (2028-2048)
Forecast id April 2016 projections			
Standalone	814	1,073	2,810
Apartments/terraced	124	157	289
Total	938	1,230	3,099
Total realisable capacity		6,664	
Standalone		4,875[123]	
Remaining standalone capacity	4,061	2,988[124]	178[125]
% of capacity remaining	83%	61%	4%
Apartments/terraced		1,789	
Remaining apartments/terraced capacity	1,665	1,508	1,219
% of capacity remaining	93%	84%	68%
Total remaining capacity	5,726	4,496	1,397
% of remaining capacity	86%	68%	21%

Table 4.22: Housing sufficiency - forecast id April 2016 scenario

By typology Porirua has sufficient housing capacity for both standalone and infill/redevelopment over the next three, 10 and 30 years under this scenario. But for standalone houses, we do not meet the NPS-UDC requirement of provision of 15% additional capacity in the long term. .

123. This capacity will be utilised as we progress from the short term to the medium term to the long term.

124. The medium term standalone demand is subtracted from the remaining capacity in the short term which is 3,898.

125. The long term standalone demand is subtracted from the remaining capacity in the medium term which is 2,610.

6.6.2 Stats NZ projections

Under this scenario, Porirua has sufficient capacity to meet housing demand in the next three, 10 and 30 years. The 20% NPS-UDC additional capacity requirement for the short and medium term is met but we do not meet the 15% additional capacity in the long term.

	Short-term (2018-2021)	Medium-term (2021-2028	Long-term (2028-2048)
Forecast id April 2016 projections			
Standalone	694	1,522	3,296
Apartments/terraced	101	237	363
Total	795	1,759	3,659
Total realisable capacity		6,664	
Standalone		4,875	
Remaining standalone capacity	4,181	2,659	-637
% of capacity remaining	86%	55%	-13%
Apartments/terraced		1,789	
Remaining apartments/terraced capacity	1,688	1,451	1,088
% of capacity remaining	94%	81%	61%
Total remaining capacity	5,869	4,110	451
% of capacity remaining	88%	62%	7%

Table 4.23: Housing sufficiency- Stats NZ scenario

By typology, Porirua has sufficient capacity to meet demand for standalone houses in the next 3 and 10 years but not in the next 30-years. This also means that we cannot provide 15% additional capacity in the long term for standalone houses as required by the NPS-UDC. In terms of infill/redevelopment capacity, Porirua has sufficient capacity to meet demand in the next 3, 10 and 30 years.

6.6.3 Forecast id's January 2019 projections

Under this high growth scenario, Porirua has overall sufficient housing capacity in the next three and 10 years but not in the next 30 years. Council will be able to meet the NPS-UDC requirement of 20% additional capacity in the next three and 10 years only but not the 15% additional capacity requirement in the next 30 years.

	Short-term (2018-2021)	Medium-term (2021-2028	Long-term (2028-2048)
Forecast id January 2019 projections			
Standalone	870	2,430	5,030
Apartments/terraced	200	600	289
Total	1,070	3,030	5,319
Total realisable capacity		6,664	
Standalone		4,875	
Remaining standalone capacity	4,005	1,575	-3,455
% of capacity remaining	82%	32%	-71%
Apartments/terraced		1,789	
Remaining apartments/terraced capacity	1,589	989	700
% of capacity remaining	89%	55%	39%
Total remaining capacity	5,594	2,564	-2,755
% of capacity remaining	84%	38%	-41%

Table 4.24: Housing sufficiency – Forecast id January 2019 scenario

6.7 Housing sufficiency issues for Porirua

Based on the housing sufficiency results, two key issues emerge for Porirua. The first is that the City does not meet the NPS-UDC requirements under all growth scenarios. The second is that there is a shortage of standalone houses in the long term - Porirua does not meet the long term NPS-UDC requirements under high growth scenarios. Based on the Stats NZ and Forecast id January 2019 growth scenarios, we have a significant shortfall due to the higher demand for housing that will be realised in the medium term.

Identifying and enabling an adequate supply of greenfield land in the medium and long term will address this issue. Currently, of the total feasible greenfield sections, we assume 4,514 sections will be realised although this does not take into account constraints and opportunities realised through the District Plan review, nor the application of rules in the Proposed Natural Resources Plan affecting greenfield development. A further risk for PCC will be if identified greenfield areas take longer to be developed than anticipated, leading to a significant shortfall of standalone houses in the medium term.

To help address the shortage of standalone houses in Porirua, the Plimmerton Farm Plan Change is proposed to be promulgated through a streamline planning process (SPP). Plimmerton Farms is part of the Northern Growth Area and is included in the greenfield analysis, with an expected yield of up to 1,500 feasible sections, all of which are realisable. Given the significant lag time associated with conventional RMA plan change processes (up to five-years from pre-notification to houses able to be occupied), the SPP will truncate this timeframe significantly and help ensure an adequate medium and long term greenfield housing supply for Porirua[126].

126. This is subject to the Minister for the Environment agreeing to a streamlined planning process for Plimmerton Farms.

7.0 Business trends

7.1 Overview

This section is divided into three parts:

- Part 1 provides an overview of Porirua's economy;
- Part 2 analyses and discusses business trends; and
- Part 3 discusses business demand and capacity assessment results.

7.2 Porirua economy

Gross Domestic Product (GDP) is a key indicator of economic growth. Over the last 18 years, Porirua's economy as measured by GDP has performed well overall (Figure 4.19). Economic growth data from Infometrics shows that Porirua's GDP grew in all years except 2009 due to the Global Financial Crisis (GFC). Prior to the GFC, Porirua's GDP grew strongly from 3.8% in 2006 to a record 7.4% in 2007.

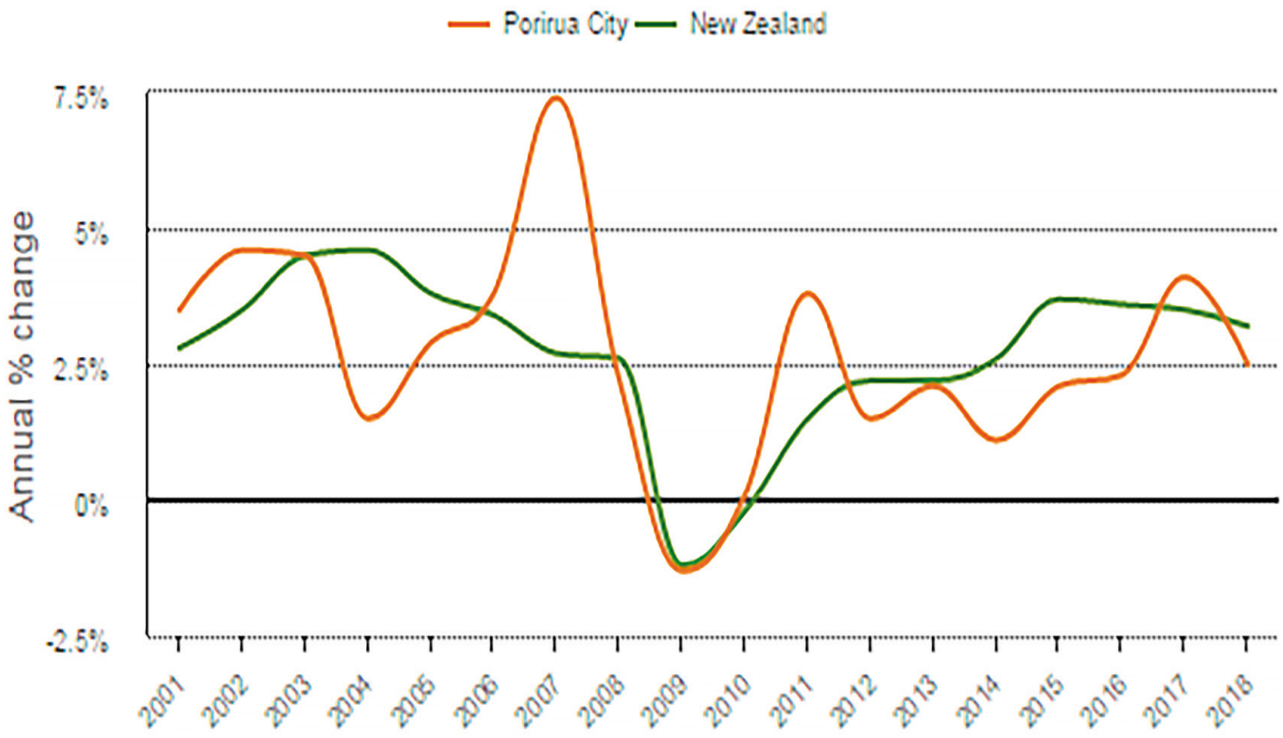

Figure 4.19: Porirua's GDP Growth (%)

Since 2010 Porirua's economy has been on a steady growth trajectory. From 2010 to 2018 Porirua's GDP grew by an average of 2.2% per year, and in the last three years GDP grew by 3.0% per year.

7.3 Porirua's industries

Porirua's largest industries are:

- construction;
- health care and social assistance;
- professional, scientific and technical services;
- manufacturing and training;
- rental, hiring and real estate services;
- owner-occupied property operation; and
- retail trade.

Together these made up 66% of GDP in 2018.

The construction sector has been the biggest contributor to GDP since 2013. The growth in the construction sector is being led by the construction of the TGM, and an increase in the numbers of houses and dwellings constructed. Once TGM is completed in 2020 there is likely to be a temporary slowdown in construction activity, although this may be partially offset by the construction of new dwellings.

TGM is also expected to be the catalyst for new industrial and commercial businesses establishing in Porirua. According to Property Economics this will in part depend on Porirua's ability to compete for regional employment and relocation of existing businesses as a result of the improved accessibility that TGM brings. The proposed Adventure Park is also expected to attract a large amount of visitors and make a positive contribution to the accommodation, food services and retail trade industries in Porirua.

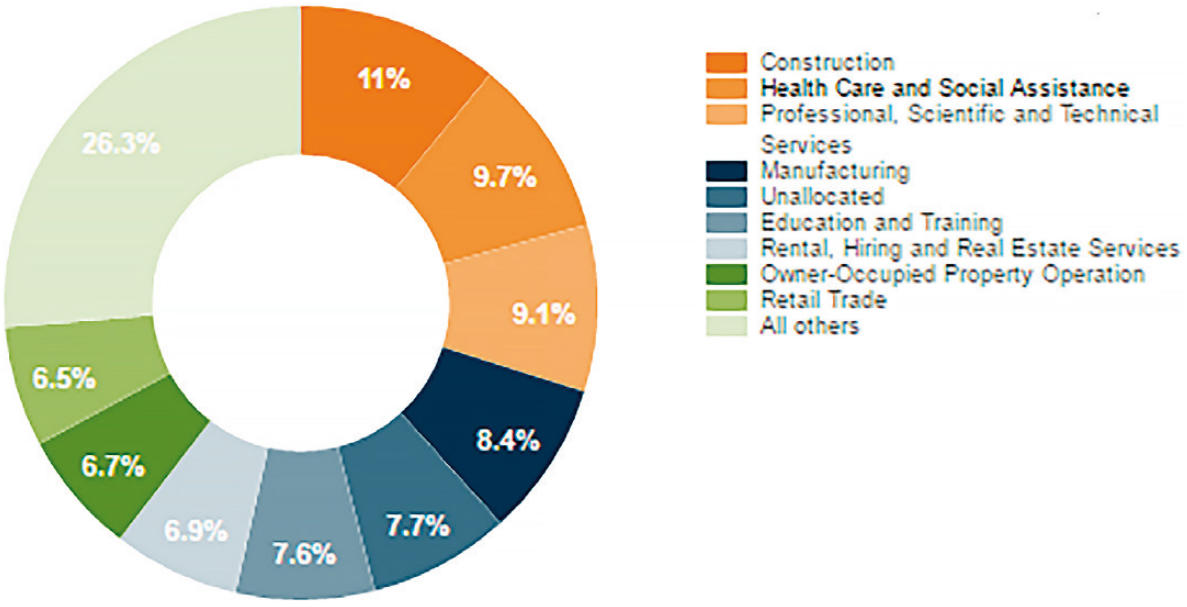

Figure 4.20: Industries: proportion of GDP

7.4 Business trends

7.4.1 Number of businesses

As the economy grows it creates opportunities for existing businesses to expand and attracts new businesses to the city that may require additional floorspace. Since 2010, 429 new businesses have established in Porirua, of which 156 started between 2015 and 2018. New business numbers are volatile however, and they are not an accurate predictor of demand for floor space. For example, 65% of businesses based in Porirua are also sole traders which typically require very small or no additional floor space.

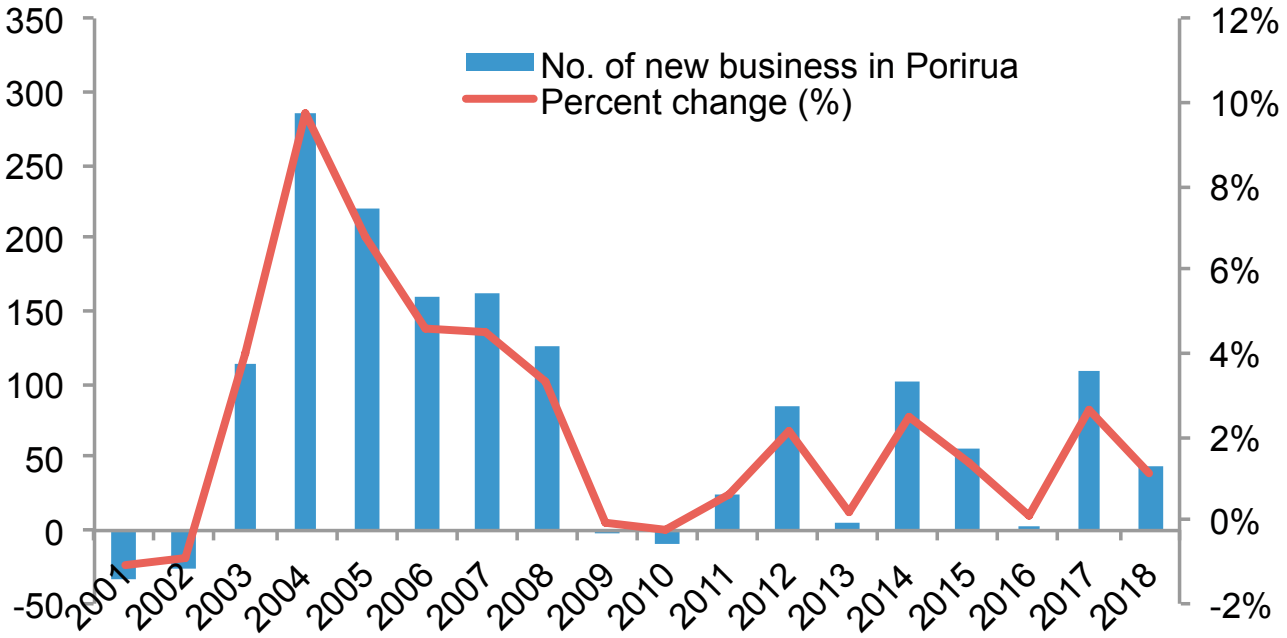

Figure 4.21: Number of new businesses in Porirua

7.4.2 Employment growth

From 2010 to 2018 a total of 2,199 new filled jobs were created. Of these, 1,445 jobs were created between 2015 and 2018. Since 2016 there has been a steady growth in the number of jobs available in Porirua reflecting business growth and a commensurate demand for workers.

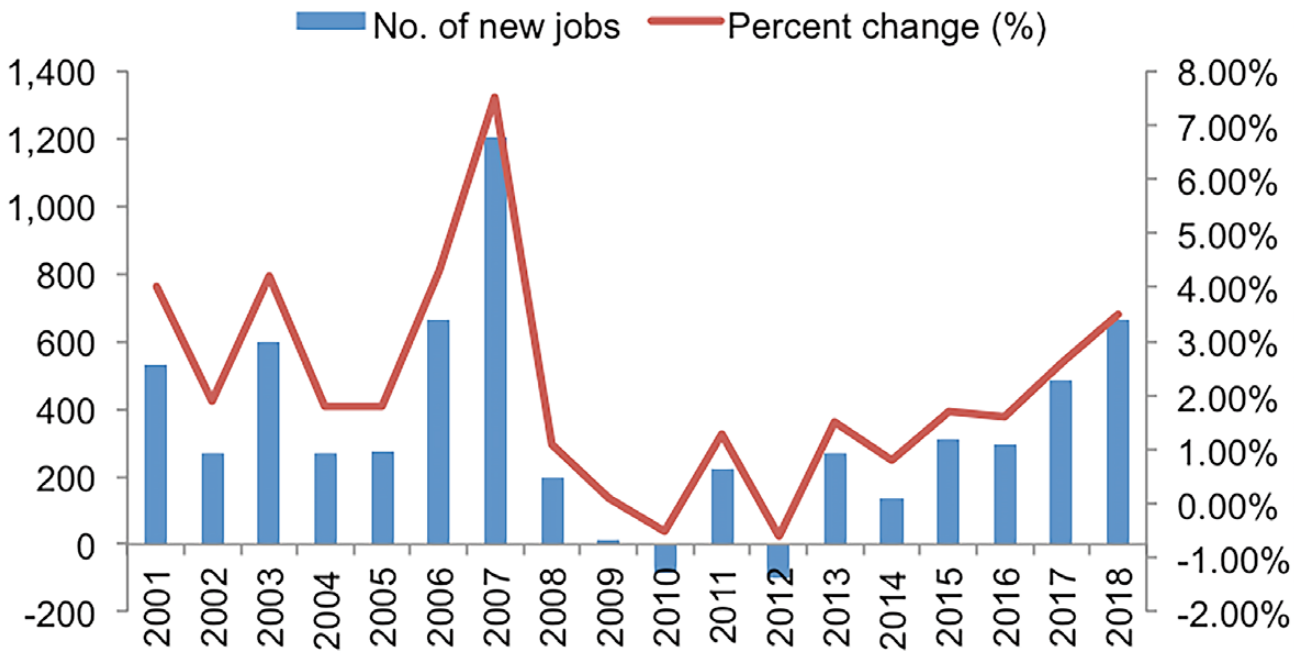

Figure 4.22: Number of new filled jobs

7.4.3 Supply of business floorspace and land use trends

Non-residential building consents data is an indicator of the type of business locating in the City. There is no clear trend in the number, value and gross floor area of new non-residential building consents that Council has consented, however it is clear that the significant proportion (and gross floor area) of new non-residential consents are for factories, industrial and storage buildings.

	Total			Commercial buildings			Factories, industrial and storage buildings			Education buildings			Other buildings		
	Number	Value	Floor area	Number	Value	Floor area	Number	Value	Floor area	Number	Value	Floor area	Number	Value	Floor area
2004	35	31,030,820	19,489	11	6,348,000	7,040	5	1,215,000	2,963	6	5,713,000	3,171	13	17,754,820	6,315
2005	32	6,752,753	10,072	9	1,616,000	2,029	11	3,055,250	5,268	3	619,000	769	9	1,462,503	2,006
2006	43	14,871,784	15,197	9	449,999	526	12	7,596,390	9,072	5	639,145	580	17	6,186,250	5,019
2007	35	21,576,050	19,868	2	220,000	221	11	4,304,000	7,413	4	4,360,000	1,475	18	12,692,050	10,759
2008	39	17,382,770	21,962	4	1,970,000	1,234	16	10,330,820	15,697	6	2,051,000	1,521	13	3,030,950	3,510
2009	29	19,782,665	14,592	4	483,000	420	7	4,634,952	9,448	10	12,678,000	3,899	8	1,986,713	825
2010	37	28,500,300	20,491	2	135,000	128	15	16,526,185	10,949	9	8,365,433	7,637	11	3,473,682	1,777
2011	23	12,461,912	10,860	5	6,425,000	4,240	6	3,304,527	4,672	2	120,000	79	10	2,612,385	1,869
2012	23	18746310	10,023	9	3,496,000	2,931	6	1,555,675	1,996	4	13,530,035	4,919	4	164,600	177
2013	25	15,756,041	16,164	4	6,430,000	8,638	5	664,921	733	2	1,218,000	833	14	7,443,120	5,960
2014	10	5,616,946	4,594	1	190,000	154	2	662,000	1,087	2	3,185,000	1,695	5	1,579,946	1,658
2015	24	5,307,500	4,084	5	1,200,000	843	12	2,708,000	2,424	1	40,000	22	6	1,359,500	795
2016	19	4,793,950	4,002	3	1,426,950	698	7	1,830,000	1,904	4	1,280,000	508	5	257,000	892
2017	13	30,087,546	15,822	1	1,750,000	693	2	2,700,000	4,745	4	25,340,906	9,360	6	296,640	1,024
2018	15	8,092,500	5,111	2	280,000	120	10	7,672,000	4,800	1	90,000	39	2	50,500	152

Table 4.25: New non-residential building consents

7.4.4 Industrial zone differentials

Industrial zone differentials inform how valuable industrial land is relative to residential, commercial and rural land. For instance, if the value of commercial-zoned land is considerably higher than the value of adjacent industrial-zoned land, then it indicates that location is more beneficial for commercial activities than industrial activities. It can also indicate the relative sufficiency of development capacity for different land uses throughout the city. For example, high differentials between industrial and rural land values may indicate development capacity for industrial land is in scarce supply. Industrial land generally has lower value than residential and commercial land in Porirua, but has higher value than rural land.

Figure 4.23 shows the location of industrial zoned land in Porirua. The largest proportion of industrial zoned land is located in Elsdon, Broken Hill and Kenepuru (3).

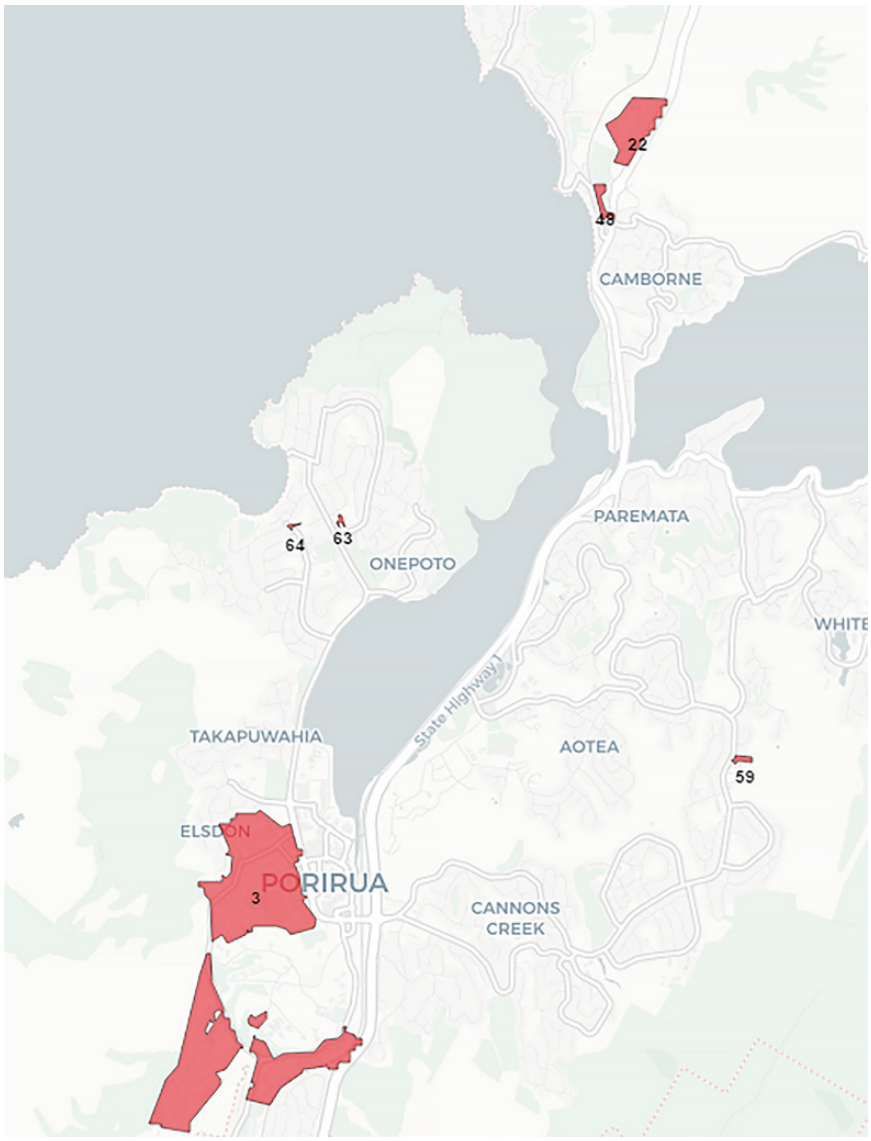

Figure 4.23: Spatial distribution of industrial zoned land

7.5 Business demand and capacity assessment results

7.5.1 Business demand

Property Economics have assessed future demand for different types of businesses in Porirua and identified the subsequent land requirement to meet that demand. They specifically assessed business demand for retail and commercial service, commercial office and industrial space[127].

7.5.2 Retail

Property Economics used a Retail Expenditure Model and sustainable footprint approach to assess retail demand. The sustainable floor space (or net retail floor space area) refers only to the area displaying goods and services and the area which the general public has access to[128]. The sustainable footprint approach does not include back office floor space[129] because it does not generate retail spending, and typically occupies 25-30% of a retail store's GFA. For Porirua, a 30% ratio has been applied.

In 2018 Porirua had a sustainable retail demand of 84,850 sqm of floor space. This is expected to increase to 90,200 sqm in the next three-years, 101,500 sqm in the next 10 years and 142,600 sqm in the next 30 years. Taking into account the NPS-UDC buffer of 20% for the short and the medium term and 15% for the long term, sustainable retail demand is expected to be higher (Table 18). The total demand for retail floor space is what can be sustained by total retail expenditure/spending in Porirua (including retail spending by residents, businesses (non-trade) and non-residents)[130].

Total sustainable retail demand (GFA in sqm)	3 years	10 years	30 years
Sustainable retail demand	90,200	101,500	142,600
Sustainable retail (including NPS buffer)	91,330	104,400	151,300

Table 4.27: Sustainable retail demand in Porirua

The above sustainable retail floor space demand will culminate in the following land requirements:

Land requirements (ha) – net additional	3 years	10 years	30 years
Retail	-	-	1.1
Commercial service (50% AT-Grade)	-	-	0.3
Retail and commercial service total	-	-	1.4

Table 4.28: Total land required to meet additional retail demand

In summary, in the short and the medium term no additional land will be required to meet the retail demand for floor space. In the long term the Council will potentially need to provide an additional 1.4 ha of business land for retail activity.

127. For full report, see Attachment 1, Porirua City Business Land Demand and Supply Assessment.

128. It does not include back office floor space in a retail store which is used for storage, warehousing, staff facilities, admin functions or toilets and other "back office' uses. This is because these do not generate any retail spend. For the purpose of this analysis, a 30% ratio has been applied. Back office floor space typically occupy 25-30% of a retail store's GFA.

129. This space is used for storage, warehousing, staff facilities, admin functions or toilets and other "back office' uses.

130. This is because residents can travel in and out of Porirua to shop. Residents will typically choose the centres with their preferred range of stores, proximity and accessibility.

7.5.3 Commercial office

Commercial office[131] demand is assessed under two scenarios; a trending growth and a TGM scenario.

The total demand for commercial office floor space, including the NPS-UDC buffer, is higher under the TGM scenario compared to the trended scenario (Table 20). This is due to the assumption that the opening of the TGM in 2021 will attract a number of businesses including commercial offices to locate in Porirua. The TGM scenario also assumes a higher average building (2.1 storey within commercial zones) and the potential for 40% of all commercial office floor space to be accommodated within buildings with a retail or commercial service activity on the ground floor.

Total commercial office demand (GFA in sqm)	3 years	10 years	30 years	3 years	10 years	30 years
			Trended			**Transmission Gully**
Without NPS-UDC buffer	1,500	7,500	28,000	1,600	9,000	34,000
With NPS-UDC buffer	1,800	9,000	32,200	1,920	10,800	39,100

Table 4.29: Commercial office demand in Porirua

The above commercial office floor space will culminate into the following land requirements:

Total commercial office land requirements (ha)	3 years	10 years	30 years	3 years	10 years	30 years
			Trended			**Transmission Gully**
Land req (ha)	0	2	6	0	2	8
Infrastructure req (ha)	0	2	7	0	2	9
NPS req (ha)	1	2	8	1	3	10

Table 4.30: Total land required to meet additional commercial office demand

Including infrastructure and NPS-UDC buffer requirements, land requirements for commercial office activity will be higher under both scenarios with up to 10 hectares required. Total land requirements are similar in the short term for both scenarios but differ marginally in the medium and long term.

131. This development occurs vertically, above ground floor and above retail or commercial services.

7.5.3 Industrial

Similar to commercial office demand, Property Economics assesses Porirua's industrial demand under two different scenarios; a trended growth and a TGM scenario.

The demand for industrial floor space is the same under the two scenarios in the short term but considerably higher under the TGM scenario in the next 10 and 30-years. This is due to the assumption that being strategically placed near TGM, many industrial businesses requiring large footprint sites will relocate to Porirua[132].

Total industrial demand (GFA in sqm)	3 years	10 years	30 years	3 years	10 years	30 years
		Trended growth scenario			Transmission Gully scenario	
Without NPS buffer	5,500	16,000	60,000	5,500	42,500	146,700
With NPS buffer	6,600	19,200	69,000	6,600	51,000	168,705

Table 4.31: Total industrial demand in Porirua

The above floor space will culminate into the following land requirements:

Total industrial demand (GFA in sqm)	3 years	10 years	30 years	3 years	10 years	30 years
		Trended growth scenario			Transmission Gully scenario	
Land req (ha)	1	5	18	2	12	42
Infrastructure req	1	6	23	2	16	54
NPS buffer	1	7	26	2	19	63

Table 4.32: Land required for additional industrial demand

132. According to Property Economics some of the industrial businesses that Porirua will be able to attract based on its ability to compete for regional employment, business growth and relocation as a result of the changing accessibility throughout the region are:
- Other transport;
- Warehousing and storage services;
- Motor vehicle and motor vehicle parts wholesaling;
- Polymer product and rubber product manufacturing; and
- Heavy and civil engineering construction.

Ability for businesses to cluster is another important factor that determines the ability of businesses to move. Some of the businesses that are likely to co-locate in Porirua include:
- Warehousing and storage services;
- Grocery, liquor and tobacco product wholesaling;
- Heavy and civil engineering construction;
- Construction services;
- Basic material wholesaling;
- Motor vehicle and motor vehicle parts wholesaling;
- Other goods wholesaling; and
- Commission-based wholesaling;

According to Property Economics, Porirua will be able to benefit from TGM if an additional 63ha of land is rezoned for industrial use within proximity to a TGM interchange. A report by Martin Jenkins also suggested that PCC should consider establishing a new industrial park as it will be economically beneficial for Porirua[133]. Based on these studies, the Growth Strategy has identified potential locations for employment growth which are being considered in detail as part of the District Plan review[134].

Property Economics provided further analysis on what the 63ha of land could accommodate. Potentially the 63 ha could accommodate a total of 156 sites. Of this, 34 sites could be provided for businesses requiring less than 1,000 GFA sqm, 75 for businesses requiring 1,000 to 4,000 GFA sqm and 47 larger sites for businesses requiring >4,000 GFA sqm[135].

Activity	<1,000sqm	1,000-4,000sqm	4,000sqm plus
Agriculture, forestry and fishing	3	0	0
Mining	0	0	0
Manufacturing	3	10	14
Electricity, gas, water and waste services	0	2	0
Construction	18	36	19
Wholesale trade	8	16	8
Transport, postal and warehousing	2	11	6
Total	34	75	47
Sites	22%	48%	30%
Land area	4%	37%	60%

Table 4.33: Site sizes of the total industrial land demand

133. *Porirua Land Use Analysis*.

134. See page 15 of *Porirua Growth Strategy 2048*: https://poriruacity.govt.nz/your-council/city-planning-and-reporting/growth-strategy/

135. For full report, see Porirua City Industrial Land Demand Assessment Part 2.

7.6 Business demand summary

Under the trended growth scenario, the largest demand for business space in Porirua will be for retail and commercial services in the short, medium and long term. Under the TGM scenario, the largest demand for business space in the short and medium term will be from retail and commercial activities. In the long term, the largest demand for business space will be for industrial activity. Under both scenarios, industrial activity will require approximately 26-63ha by 2048. Commercial Office (ex. Retail and commercial service) activity will require 8-10 ha of land by 2048.

Total Business Demand (GFA in SQM)	3 years	10 years	30 years	3 years	10 years	30 years
		Trended growth scenario			Transmission Gully scenario	
Industrial	6,600	19,200	69,000	6,600	51,000	168,705
Commercial office	1,800	9,000	32,200	1,920	10,800	39,100
Retail & commercial service	95,200	104,400	151,300	95,200	104,400	151,300
Total	100,500	124,650	230,600	100,600	152,650	323,300

Table 4.34: Floor space demand for different business use in Porirua

The total business floor space demanded will culminate into the following land requirements:

Total land requirements (ha)	Trended scenario			TG scenario		
Industrial	1	7	26	2	19	63
Commercial office	1	2	8	1	3	10
Retail & commercial service	0	0	1.4	0	0	1.4
Total land requirement (ha)	2.0	9.0	35.4	3.0	22.0	74.4

Table 4.35: Land requirements for the floor space for different business uses

7.7 Business capacity

7.7.1 Retail capacity

Porirua has a large retail area. Most of Porirua's retail GFA is in the city centre (83%), with the remaining GFA in Mana, Aotea and other smaller shopping centres such as Cannons Creek and Titahi Bay. In total, the local and neighbourhood shopping centres make up 17% of the total retail space.

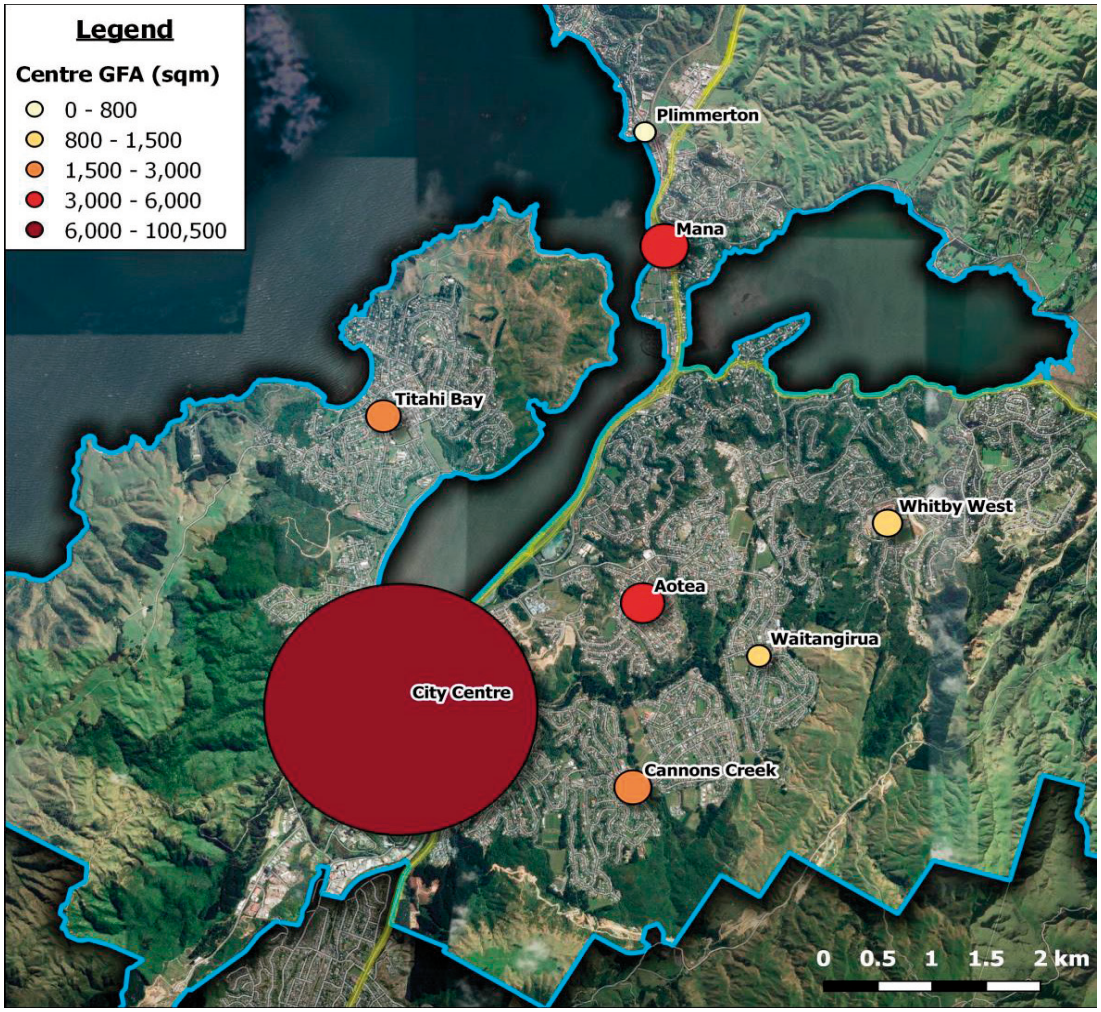

Figure 4.24: Spatial distribution of retail space in Porirua

The city centre provides a total retail GFA of 121,500 sqm.[136] Outside the city centre, Porirua is estimated to have retail GFA of 24,275 sqm.[137] In total Porirua has a retail supply of 145,775 sqm GFA.

136. Porirua has 309 retail stores in total, of which 180 are in the city centre providing the 121,500sqm of retail floor space. Nearly two thirds (64%) of the retail stores in the city centre are Large Format Retail (LFR) stores.

137. This is estimated based on the retail employment distribution within Porirua. For Porirua, a 25 sqm per employee has been adopted to approximate the scale of out of centre retailing activity.

7.7.2 Commercial and industrial zoned land supply

Porirua has 200 ha of commercial and industrial zoned land in total. Figure 25 shows the spatial distribution of commercial and industrial zoned land in Porirua.

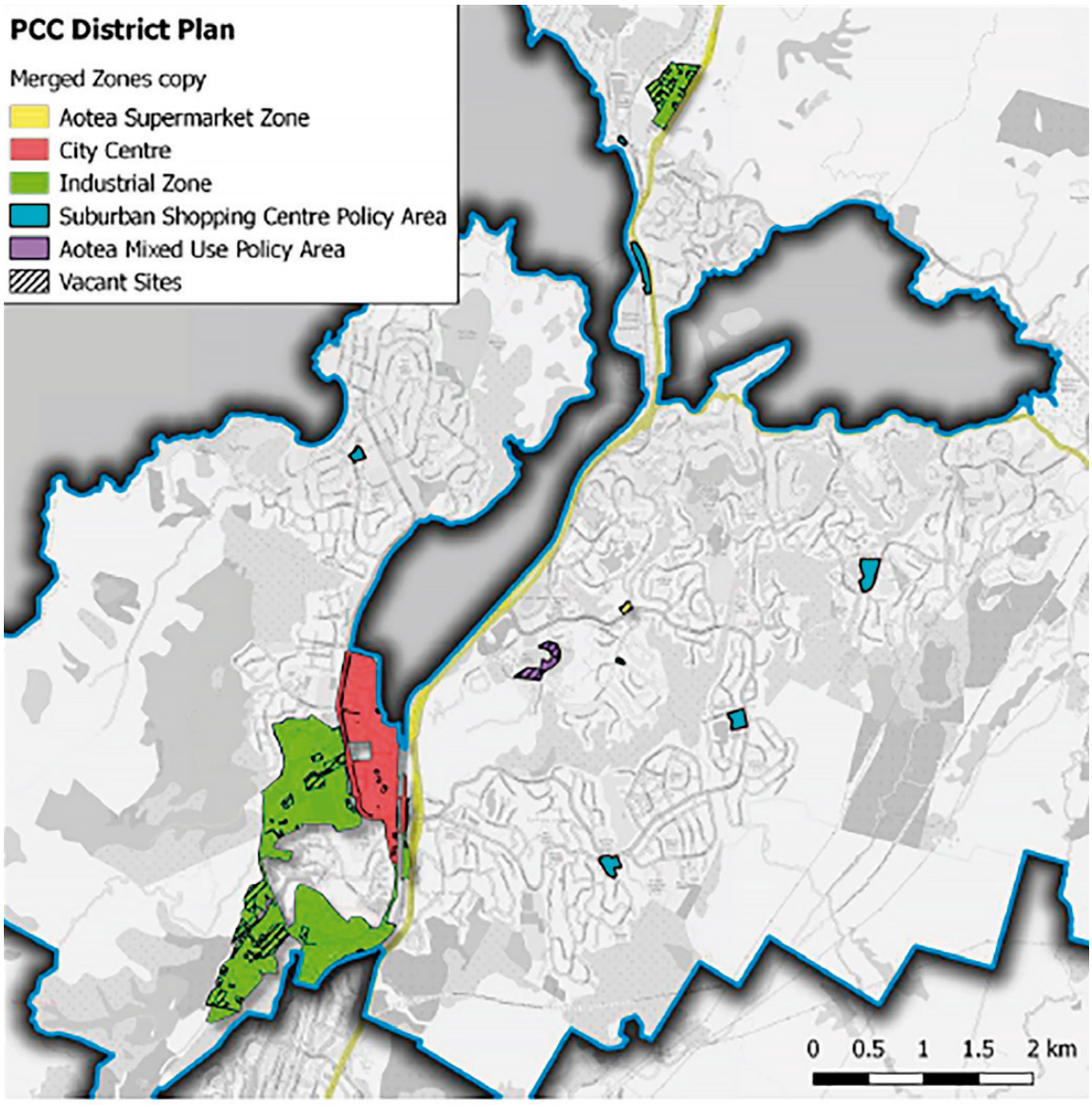

Figure 4.25: Spatial distribution of commercial and industrial zoned land in Porirua

Of the 200ha, 172 ha are developed and approximately 30 ha are vacant. Most of the vacant land is zoned industrial (Table 27).

Commercial zones (ha)	Developed	Vacant	Total
Aotea supermarket zone	0.7	0	0.7
City centre	38.5	1.4	39.8
Total commercial zone	39.2	1.4	40.6
Commercial policy areas (ha)			
Suburban shopping centre	8.4	0.9	9.3
Aotea mixed use policy area	0	0.5	0.5
Total - commercial policy area	8.4	1.4	9.8
Total - commercial	47.6	2.8	50.4
Total - industrial	124	26	150
Total commercial and industrial land	**171.6**	**28.8**	**200.4**

Table 4.36: Commercial and industrial land supply in Porirua[138]

7.7.3 Commercial and industrial capacity (Gross Floor area in sqm)

PCC has estimated business capacity by GFA (in sqm) in each of the business zone in Porirua[139]. The results show that Porirua has current existing building floor space of 597,090 sqm. In addition to this, Porirua has an infill business capacity of 384,881 sqm.

DP Zone	Existing Building Floorspace (m^2)	Redevelopment SCR floorspace (m^2)	Infill floorspace (m^2)
Aotea Supermarket Zone	6,000	3,349	349
City Centre	192,216	929,458	216,726
Industrial Zone	358,532	411,670	141,704
Suburban Zone - Shopping Centre Policy Area	40,342	65,045	26,102
Total	**597,090**	**1,409,522**	**384,881**

Table 4.37: Business capacity (GFA in sqm)

138. Commercial activity, which includes retail activity, within Porirua is distributed across both commercial zoning areas with additional supported policy area overlays that overlap non-commercial zoned areas.

139. Business capacity (in sqm) has been estimated based on business zone rather than business activity because the zoning generally is flexible enough to allow for multiple uses. It is challenging to project business capacity for activity type.

7.7.4 Business feasibility

A multi criteria analysis (MCA) workshop was hosted by PCC in early December 2018 to test and determine the feasibility of business land in Porirua. The workshop included people from different backgrounds, including real estate agents, retail experts and property developers. They were required to collectively score a location from 1-5 (with 1 being least favourable and 5 being the most favourable) based on a number of factors (Table 29).

The panelists collectively assessed Kenepuru as being the most feasible. Other areas that scored favourably were Porirua East/ Ranui Shopping Centre, City Centre, City Centre South and Cannons Creek, Elsdon and Broken Hill. In contrast, Whitby Village Centre was considered the least feasible given there is lack of room for expansion a due to the number of covenants restricting certain types of business activity. Titahi Bay/ Whitehall Road and Ulric Industrial Areas were assessed to be the two least favourable areas. Most areas in Porirua East turned out to be highly feasible, likely due to the impact of TGM and associated link roads.

In determining the feasibility of business land, the panelists identified access to the required labour force, markets/ consumers, resilience, parking availability and accessibility, public transport accessibility, separation from more sensitive activities and community impact as the major factors underpinning their decision making. Access to the airport, strategic roads and state highways, and resilience to hazards were assessed to be less important factors for business activity.

The results reflect market perspectives and what locations businesses would prefer and what factors matter to them most. It is important that these are taken into account when rezoning or providing new business land. If there is a disconnect between what the markets want and what is provided through the District Plan then it is likely that such locations may not be attractive to the business sector and the uptake will be slow.

7.8 Business sufficiency

7.8.1 Overview

This section assesses business sufficiency by subtracting the demand for business floorspace from supply of business floorspace, along with calculating business sufficiency by land requirements. To do this total demand for business land (in ha) is subtracted from total supply of business zoned land.

7.8.2 Business sufficiency – retail

For retail activity, there is sufficient developed capacity in the short and medium term. In the long term Porirua will have a shortfall of 5,525 sqm of floor space.

Total retail demand (GFA in sqm)	3 years	10 years	30 years
Total retail supply	145,775	145,775	145,775
Sustainable retail demand (including NPS buffer)	95,200	104,400	151,300
Shortfall (-)/Excess(+)	+50,575	+41,375	-5,525

Table 4.39: Retail floor space

7.8.3 Land requirements

The shortfall of floorspace will require 1.4ha of additional land. Currently Council has no provisions to provide this additional 1.4ha of land for retail activity. The Council will need to assess how this land can be provided in the long term through suitably zoned land.

7.8.4 Business sufficiency - commercial and industrial

Under both scenarios there is a sufficient supply of commercial and industrial land to enable commercial and industrial business activities in the next three, 10 and 30-years. This also means Porirua will meet the NPS-UDC requirements of 20% additional capacity in the short and the medium term and 15% additional capacity in the long term. The commercial and industrial zoned land includes 26ha of vacant industrial land and 3ha of commercial zoned vacant land. However the location and accessibility of the existing capacity may not meet market requirements, and therefore may not be taken up in the short, medium or long term.

	Trended scenario			TG scenario		
Floorspace	3 years	10 years	30 years	3 years	10 years	30 years
Total GFA capacity in commercial and industrial zoned land			981,971[140]			981,971[141]
Total demand (commercial and industrial)	8,400	28,200	101,200	8,520	61,800	207,805
Shortfall (-)/excess(+)	973,571	945,371	844,171	973,451	911,651	703,846
Remaining capacity (%)	99%	96%	86%	99%	93%	72%

Table 4.40: Commercial and industrial floorspace

7.8.5 Land requirements

Property Economics recommends that PCC should not utilise the 26ha of vacant industrial land to meet part of the demand for 63ha of industrial land in the long term. Instead, they suggest that the 63ha of land should be provided as a single piece of land within proximity to a TGM interchange[142]. PCC has considered this recommendation and in the Growth Strategy has identified potential business land (employment areas) near TGM, which is being assessed in detail as part of the District Plan review. PCC also has the opportunity to better utilise the existing commercial and industrial land through rezoning or encouraging more mixed-use zoned areas, and this is also being assessed as part of the District Plan review.

140. This consists of 597,070 sqm of existing floorspace capacity and 384,881 sqm of infill floorspace.

141 This consists of 597,070 sqm of existing floorspace capacity and 384,881 sqm of infill floorspace

142. Property Economics outlines the following factors that the District Plan should take into account when re-zoning and providing that 63 ha land for business growth:
    1. Undisrupted water and electricity supply
    2. Digital capability
    3. Close proximity/good access to transportation hubs such as ports and airports
    4. Proximity to an appropriate labour supply
    5. Location of customers/target markets
    6. Access to major road corridors
    7. Location of suppliers
    8. A company's existing network and infrastructure
    9. Room for potential expansion and growth on the site
    10. Land and property costs
    11. Ability to secure resource consent
    12. Congestion at peak times
    13. Owner's home address
    14. Exposure profile
    15. Quality of business location

8.0 Infrastructure

8.0 Overview

The NPS-UDC requires Councils to consider infrastructure needs when providing development capacity. The main infrastructure components are three waters (water supply, wastewater and stormwater), roading and transport infrastructure, and other infrastructure such as open space, social and community infrastructure.

8.1 Three Waters

Wellington Water have assessed if future the areas identified and being considered for Porirua can be serviced with existing or planned three waters infrastructure[143]. The results indicate that water supply and wastewater networks in Porirua are not fit to meet the projected growth, which will place constraints on growth over the next 30-years. Wellington Water's assessment also indicated constraints with the stormwater network, but suggests these can be mitigated through a range of alternative measures including policies and rules in the District Plan requiring hydraulic neutrality[144] and water sensitive design.

Most identified greenfield sites are also not serviced by three waters infrastructure, and funding for essential infrastructure is not identified within the current LTP (2018 – 2028). To help overcome the lack of committed funding, PCC has commenced discussions with developers to provide the necessary infrastructure and to secure this through developer agreements. Once in place, infrastructure will be vested with Council and PCC will be responsible for the operational and maintenance costs.

8.1.1 Water supply network

Wellington Water assessed Porirua's water supply capacity to accommodate future growth based on storage capacity (S), network pressure (N) and overall capacity in the short, medium and long term for 15 Water Storage Areas (WSA's). This assessment has determined that catchment scale upgrades will be needed to the water supply network to support proposed urban developments where:

- Pressure in the existing network drops below 25m as a result of projected infill development;
- The existing reservoir storage would be insufficient to support projected urban growth; and
- The bulk water supply network will not be able to adequaltely replenish the local reservoirs.

Wellington Water concludes that the overall capacity of Porirua's water supply network is insufficient in the short, medium and long term.[145]

8.1.2Waste water network

The Porirua wastewater network and treatment plant (WWTP) receives wastewater from the northern parts of Wellington City, including parts of Johnsonville and all of Churton Park and Tawa.

Catchment-scale upgrades will be needed to the wastewater network to provide for urban development and reduce the adverse environmental effects and public health issues associated with wastewater overflows during wet weather. Wellington Water have identified the most feasible upgrades, and these will be used to inform decisions on land re-zoning and development, along with funding requirements in the LTP and Infrastructure Strategy. A wastewater network improvement plan (NIP) will also be developed, which will take the solutions identified in the Three Waters Catchment Plan and develop them further. The output from the NIP is due at the end of 2019.

143. Wellington Water, Preliminary Three Waters Catchment Plan to support the Porirua Urban growth Strategy 2048 (2019)

144. Ensuring that stormwater runoff post-development is the same as pre-development

145. For full results, refer Page 57, Table 4.20 , Table 4.3 in the Preliminary three Waters Catchment Plan

Most proposed upgrades to the wastewater network will benefit multiple growth areas, and will include:

- New gravity sewers to provide additional capacity
- Upgrades to existing pump stations to provide additional capacity
- New pressure mains from pump stations to provide additional capacity
- Offline wastewater storage tanks
- Upgrades to the Porirua Wastewater Treatment Plant (WWTP).

Wellington Water also promote policies and rules in the District Plan that require new development and subdivision to be assessed for the provision of adequate wastewater services.

8.1.3 Stormwater

The stormwater infrastructure capacity is based on regular rainfall events and on six modelled catchments[146]. During heavy rainfall events, stormwater flows overland increasing potential for localised flooding. Flood risk can be mitigated through protection of overland flow paths via District Plan rules, and ensuring new development is hydraulically neutral.

8.2 Road network

8.2.1 Local road network

In 2017 PCC commissioned Stantec to undertake a Strategic Road Network Study. It evaluated Porirua's primary road network capacity post TGM[147] and identified key pressure points and residual capacities on the transport network in three future years (2021, 2031 and 2041). The report estimates residual capacities by predicting if the predicted growth areas within Porirua can be accommodated by the transport network. The limitation to this is that the areas modelled only consider residential development identified in past planning documents like the Porirua Development Framework, the Pauatahanui Judgeford Structure Plan and Porirua Northern Growth Area Structure Plan. It does not reflect the adopted Porirua Growth Strategy 2048 and the detailed assessment work being undertaken as part of the District Plan review. It also did not take into account the impact commercial and industrial activity will have on the transport network. Despite its limitations, it does provide some indication of future pressure points in the transport network.

146. Cannons Creek, Porirua CBD, Titahi Bay, Taupo Swamp, Pauatahanui and Plimmerton.

147. TG represents the most significant roading project in Porirua's history. When TG opens in 2020 it will have a significant effect on the way traffic moves both through and within Porirua giving rise to a restriction of traffic flows on Porirua's road network.

8.2.2 Link capacity analysis and issues

Link capacity analysis of the road network revealed existing pressures on some of Porirua's arterial roads and on parts of the two state highways (SH1 and SH 58). The table below summarises the roads that are operating at high capacity.

70-85% capacity	Approaching or exceeding capacity (>85%)
Grays Road	SH1 alignment (through the length of the District);
Omapere Street	SH58 / Paremata Road;
Titahi Bay road	Paekakariki Hill Road (through Pauatahanui);
Kenepuru Drive	Mungavin Avenue between Titahi Bay Road and Warspite Avenue;
	Mungavin Bridge;
	Titahi Bay Road (west of Mungavin Bridge); and
	Parumoana Street / CBD links.

Table 4.41: Link road capacity results

The study highlighted that SH1 and parts of SH58 including Paremata Road at the western end (adjacent to SH1) are above the capacity threshold. Other parts of the network which were assessed to be close to or above capacity include the urban section of road through Pauatahanui. The study concluded that it experiences high demands with traffic routing between SH58 and SH1 to the north. The study also found Mungavin Avenue and the interchange with SH1 to be operating at capacity. This was due to the convergence of trips from the eastern suburbs routing into the CBD or onto SH1.

Aside from capacity issues some of the major constraints highlighted by the report include:

- Accidents closing the northbound or southbound lanes on SH1 cause significant impact on travel times
- Problems with SH1 incident response. It's challenging to divert traffic e.g. to route via Tawa in the south, or Paekakariki Hill Road in the north; and
- Lack of resilience of the existing SH1 route, especially if there are long term closures following significant natural events.

8.2.3 Residential development and its impact on the transport network

The study used three scenarios to assess the impact of residential development on the transport network. The three different scenarios assume different levels of greenfield, infill and rural development rates and in different locations[148]. Greenfield development rates range from 60-80%, infill development rates range from 12-30% and rural residential development ranges from 8-17%.

The results from the three different scenarios indicate that post-TGM opening there is the capacity to accommodate continued growth in residential traffic volumes on the primary road network. This supports the various greenfield areas identified in the Growth Strategy and being further considered in the District Plan review.

8.3 Other infrastructure

8.3.1 Parks and Amenities

Other infrastructure includes parks and amenities. The NPS-UDC requires councils to be satisfied that other infrastructure is likely to be available. It requires councils to be informed about the likely availability of such infrastructure when they make decisions about where to provide development capacity.

PCC provides and maintains parks and amenities either by itself or in collaboration with other agencies. The Council is responsible for maintaining 184 parks covering 998ha in Porirua city[149]. This includes:

- 48 ha sports fields
- 35 courts
- 41 playgrounds
- 1 dog park

PCC also maintains 75km of walkways & cycle ways and its cemeteries[150].

148. Scenario 1 assumes 66% greenfield development; 17% rural residential development and 17% infill development. In total this will yield approximately 1,200 dwellings. It assumes concentrated residential development in Paekakariki; Pauatahanui; Pukerua Bay; Plimmerton and Whitby East.

    Scenario 2 assumes a higher proportion of greenfield development (80%), (especially in Pukerua Bay and Plimmerton) 12% of infill and 8% of rural residential (in Paekakariki and Pauatahanui). Scenario 3 assumes 60% of greenfield development 30% of infill in areas such as Titahi Bay and Cannons Creek and a smaller proportion of growth in the Northern Growth Areas as compared to scenarios 1 and 2 more concentrated infill development within the existing urban areas, towards southwest. It assumes 10% rural development.

149. Approximately half of this protected and managed for its natural values.

150. We have one cemetery that is in operation and two others are closed.

8.3.2 Current capacity and sufficiency

Sports fields and courts

At present, sports fields have moderate to limited capacity, being mostly at or near capacity during peak times in winter. The city's netball courts are operating at full capacity.

Parks

Some neighbourhood parks are small, especially in recent subdivisions. The smaller parks place constraints on children's playing opportunities.

Cemeteries

The Whenua Tapu cemetery will reach capacity in the medium term (approximately 2027).

Future needs

Councils in the Wellington Region are working collaboratively with Sport Wellington and Sport NZ to develop a Spaces and Places Plan for the Wellington Region. This will determine the location where sport and recreation space and places are considered sustainable, and will be able to meet the needs of the community.

The Council will also need to assess the parks and amenity requirements that the Porirua Development will bring. At present, PCC assess that Porirua will need the following new parks and amenities in the medium term:

- A new artificial sports turf in the next 10-15 years; and
- A new Community Park in Whitby in the next five years to provide adequate active recreation space for the new hill-side greenfield subdivisions, as well as an appropriate level of service at the centre of the suburb.

9.0 Conclusion

Overall Housing Pressures

An assessment of housing trends indicate that there are currently housing pressures within the City, and these are projected to increase. There is an emerging trend of median dwelling sales prices and average rents rising more rapidly in the Eastern and Western wards compared to the Northern ward. There was also an undersupply of housing over 2014 to 2018 in Porirua, exacerbating pressure on the existing housing stock resulting in higher rents and house sale prices.

Housing Affordability

Indicators of housing affordability developed by MBIE and Infometrics suggest that housing affordability is declining in Porirua. House prices are increasing due to increased demand, and this is not being met by a commensurate increase in new supply. This is exacerbated by a declining number of existing houses for sale. Incomes are also not increasing as fast as house prices and this is in turn is further reducing housing affordability.

Housing Sufficiency

Based on the housing sufficiency results, two key issues emerge for Porirua. The first is that the City does not meet the NPS-UDC requirements under all growth scenarios. The second is that there is a shortage of standalone houses in the long term, and Porirua does not meet the long term NPS-UDC requirements under high growth scenarios. Porirua will have a significant shortfall due to the higher demand for housing that will be realised in the medium and long term.

Identifying and enabling an adequate supply of greenfield land in the medium and long term will address this issue. The capacity assessment does not take into account constraints and opportunities realised through the District Plan review, nor the application of rules in the Proposed Natural Resources Plan affecting greenfield development. A further risk for PCC will be if identified greenfield areas take longer to be developed than anticipated, leading to a significant shortfall of standalone houses in the medium and long term.

Business trends

Business trends generally depict volatility. The number of new businesses in Porirua has fluctuated and does not provide an accurate picture of floorspace requirements. The number of filled jobs has also fluctuated historically, although has shown steady growth since 2016. The high majority of consents for new non-residential activities are for factories, industrial and storage buildings.

Business capacity and demand

Porirua has sufficient business floorspace capacity for commercial and industrial activities over the short, medium and long term under both the trended and the TGM scenarios. However, the location and accessibility of the existing capacity may not meet market requirements, and therefore may not be taken up in the short, medium or long term. It is recommended therefore that an additional 63ha of land is rezoned for industrial use within proximity to a TGM interchange. This has been considered in the Growth Strategy and in detail as part of the District Plan review.

Retail capacity and demand

Porirua has a sufficient supply of retail capacity in the short and medium term, but insufficient floorspace capacity in the long term. PCC will need to provide for this shortfall in the longer term.

Three Waters Infrastructure

Porirua has constraints within its three waters networks, which will need to be addressed to enable residential and business capacity. In particular, Porirua's wastewater network and water supply network will not be able to meet required levels of service for the increasing population. The stormwater network also has some constraints although this can be partly mitigated through a range of alternative measures. Significant investment will be required over time to address three waters infrastructure constraints to enable long term residential and business growth.

Roading Network

There are existing pressures on some of Porirua's arterial roads and on parts of the two state highways (SH1 and SH 58). Post TGM opening, the northern part of Porirua has capacity to accommodate growth in residential traffic volumes on the primary road network.

Other Infrastructure

PCC has a number of capacity issues such as a deficit of parks, and netball courts operating at full capacity. The Whenua Tapu cemetery will also reach capacity in the medium term (2027).

Next Steps

PCC has already developed and adopted the Porirua Growth Strategy and is now reviewing its District Plan and implementing the Growth Strategy. This HBA is timely to help inform those processes. The housing and business assessments in this report will be reviewed again in 2021.