



**Greater Christchurch
Partnership**

Te Tira Tū Tahī
One Group, Standing Together

Housing and Business Development Capacity Assessment

Te Arotake i te Whakawhanaketanga ā-Whare, ā-Umanga hoki

March 2018

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1. Executive Summary

Te Whakarāpopototanga

Overview

The Greater Christchurch Partnership has prepared this *Housing and Business Development Capacity Assessment* ('capacity assessment') as part of a review of the settlement pattern for Greater Christchurch. This was first outlined in the Greater Christchurch Urban Development Strategy (UDS) and has subsequently been advanced through other planning documents.

The Partnership has worked collaboratively since 2003 to manage growth in the Greater Christchurch area. Over the last seven years, earthquake recovery and regeneration plans have helped respond to changes in where many people live, work, study, shop and socialise. These circumstances present unique challenges when identifying areas for future urban development and providing planning certainty, while being resilient and responsive to change.

The capacity assessment provides information about current housing and business trends to inform future planning responses across Greater Christchurch. Such an assessment is also a requirement of the National Policy Statement on Urban Development Capacity (NPS-UDC) 2016.

The overall conclusion from the assessment is that at a Greater Christchurch level there is enough zoned land in the short and possibly the medium term to meet projected demand, but there may be some emerging shortages in the Selwyn and Waimakariri districts. These potential shortages will need to be considered through this review process, the District Plan reviews underway in Selwyn and Waimakariri Districts and potentially changes to other planning documents, such as the Canterbury Regional Policy Statement.

Key trends and issues in the capacity assessment

The population is growing and that means more houses are needed

- the population of the Greater Christchurch area could grow to about 640,000 people by 2048 (150,000 more than today) meaning we will need about 75,000 new dwellings.

There's plenty of land ready to develop for housing

- collectively the district plans of Christchurch, Selwyn and Waimakariri already allow for a significant number of additional dwellings to be built in and around its urban areas. This is in identified greenfield locations (new subdivisions) or redevelopment in existing zoned areas (over 65,000 dwellings if historical rates are applied or potentially up to 235,000 if the full theoretical extent of zoning rules are applied). However, more than 75% of this capacity is within the City and the projected demand for housing in Selwyn and Waimakariri districts could outstrip current supply in those areas over the next decade.

Changes in demographics and housing affordability will alter housing demand

- our changing and aging population will require more one person and couple only households with a significant increase in demand for small and multi-unit dwellings. Continuing housing affordability issues will create more demand for private rental accommodation and social housing.

The commercial feasibility of some land for housing is uncertain, particularly sites for redevelopment

- the commercial feasibility for developers to build housing (standalone houses, townhouses and apartments) in all the locations identified in district plans is uncertain, especially in some areas of the City considered suitable for redevelopment to provide medium and higher density housing.

Industrial land needs are likely to be met

- collectively the district plans make generous provision for future industrial needs, although monitoring and review of uptake in some locations will be needed to confirm actual market demand.

There's sufficient commercial space for now

- commercial floorspace (primarily office and retail) is well provided for across Greater Christchurch, at least over the short to medium term. Over the long term some demand for commercial floorspace may be accommodated through redevelopment from other existing business land uses. Again ongoing monitoring and review of uptake in some locations will be needed to confirm actual market demand.

Business land is commercially feasible to develop

- the land identified to accommodate future business growth is generally considered to be commercially feasible.

Infrastructure to support growth is in place or well-planned for

- the collaborative planning over the last decade means the majority of areas currently identified for growth are either already serviced with the necessary infrastructure for development to proceed, or will be following completion of infrastructure projects identified in the respective Council's Long Term Plans. Feedback from other infrastructure providers (electricity and telecommunications) support this finding.

We're travelling far and wide, and in cars we're on our own

- post-earthquake disruption and land use change means trips are originating from and terminating at a wider range of locations in Greater Christchurch. This has increased travel by car and reduced public transport patronage. Over 40% of the Selwyn and Waimakariri workforce commute to Christchurch City for work (totalling some 22,000 people) and these are primarily single occupant vehicle trips. Data indicates average trip lengths have grown by between 5-10% over the last decade, as people travel further.

Travel times will improve but are then likely to get longer

- construction of motorways and local road improvements will improve journey times and reliability. However without changes in our travel behaviour and mode choice (such as cycling, bus, and carpooling), the projected population growth will place significant pressure on the transport network. Trips from Selwyn, Waimakariri and western Christchurch into the central city would be worst hit. Integrating land use and transport planning, coupled with additional investment to support public transport, cycling and walking, will be critical to address these pressures.

There are constraints to urban expansion

- although there's a large amount of rural zoned land within the Greater Christchurch area, some of this land is constrained by environmental, planning and physical factors, especially around the City's edge.

Urban growth comes at a cost

- there are significant costs associated with urban growth and while these are largely factored into Council plans for the short to medium term, the long-term provision of infrastructure to support quality urban environments is likely to be a major challenge in Greater Christchurch.

It is important to recognise that the findings in this assessment are based on available information and have used various models to project future demands. Figures presented within this assessment should be treated with some caution, and not considered in isolation because:

- some data sources are yet to show clear or reliable post-earthquake trends
- land supply and demand findings at a Greater Christchurch or territorial authority level will not show possible local level imbalances that require resolution; and
- factors that influence housing and business needs (such as population growth, government policy, economic conditions, or the ability to achieve commercially attractive returns on development) can all change significantly over the next thirty years.

Further work, including quarterly monitoring of urban development indicators, will add to this evidence base over time.

What happens next?

The next step in the review process is to consider what action is required to address capacity shortfalls and issues raised by these trends so we can achieve the vision set out in the UDS. The Partnership will consider this assessment and release a draft 2018-2048 settlement pattern document for community consultation in August 2018. There will be an opportunity for formal submissions as part of a hearings process. Further details and additional information will be placed on our website www.greaterchristchurch.org.nz/ourspace.

From the available data, and using the models outlined in this capacity assessment to project future housing and business demand, a summary of the sufficiency of existing supply is derived.

Housing

Details of the housing capacity assessment are in sections 3 to 5 of this report and related appendices, the summary findings from which suggest the following¹:

Area	Long term demand for additional dwellings (2018 - 2048) (includes additional margins added to projected demand)	Sufficiency of feasible development capacity		
		Short Term (2018 - 21)	Medium Term (2018 - 28)	Long Term (2018 - 48)
Christchurch City	46,400	+47,173	+ 38,873	+ 13,539
Selwyn	24,200	+ 6,617	+ 1,117	- 14,483
Waimakariri	16,000	+ 2,488	- 2,112	- 11,812
Greater Christchurch	86,600	+ 56,278	+37,878	-12,756

Business

Details of the business capacity assessment are in sections 7 to 9 of this report and related appendices, the summary findings from which suggest the following:

Area	Sufficiency of Industrial Supply			Sufficiency of Commercial Supply		
	Short Term (2018 - 21)	Medium Term (2018 - 28)	Long Term (2018 - 48)	Short Term (2018 - 21)	Medium Term (2018 - 28)	Long Term (2018 - 48)
Christchurch City	518	676	226	82	47	-118
Selwyn	204 to 231	216 to 243	192 to 219	22 to 32	-3 to +7	-31 to -21
Waimakariri	19 to 71	38 to 90	7 to 59	-5 to +13	-9 to +9	-17 to +1
Greater Christchurch	741 to 820	930 to 1,009	425 to 504	99 to 127	35 to 63	-166 to -138

¹ noting that at this stage feasible development is an assumed level of development capacity and reflects total dwellings, not sufficiency at specific price points or typologies

2. Introduction

Kupu Whakataki

This Housing and Business Development Capacity Assessment ('capacity assessment') has been prepared by the Greater Christchurch Partnership as part of a Settlement Pattern Review of the [Greater Christchurch Urban Development Strategy](#) (the 'UDS').

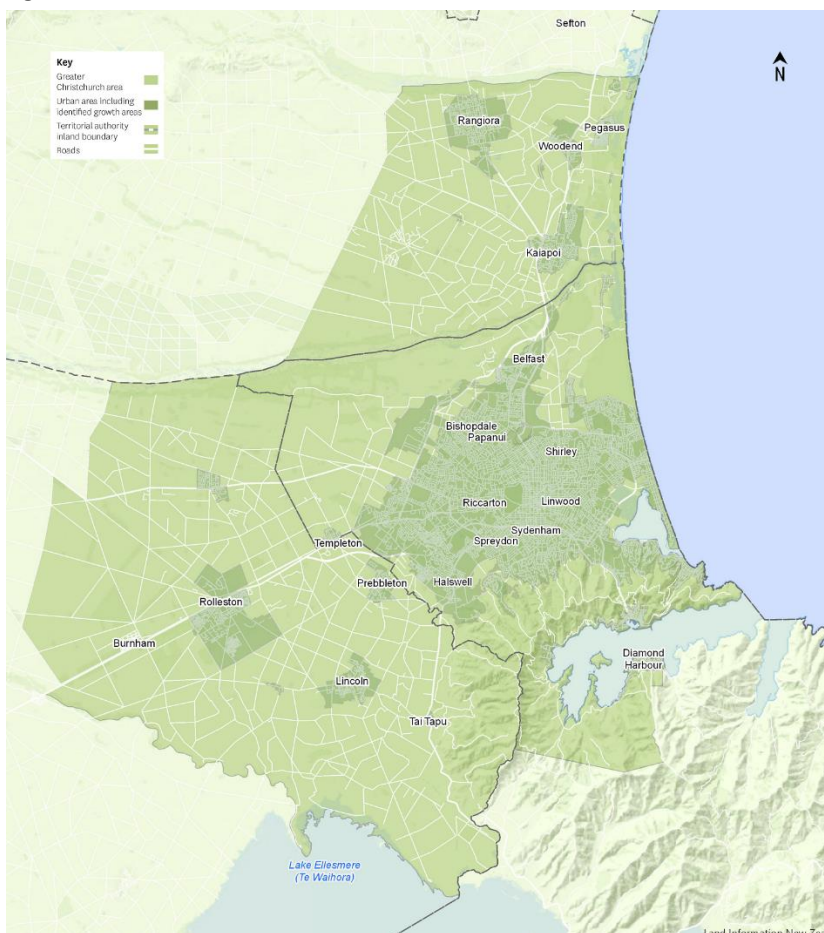
The Greater Christchurch Partnership comprises:

- Christchurch City Council
- Selwyn District Council
- Waimakariri District Council
- Environment Canterbury
- Te Ngāi Tūāhuriri and Ngāti Wheke, supported by Te Rūnanga o Ngāi Tahu
- Canterbury District Health Board
- New Zealand Transport Agency
- Regenerate Christchurch
- Greater Christchurch Group (Department of the Prime Minister and Cabinet).

The document has been compiled collaboratively by the Partnership and gives effect to part of the [National Policy Statement for Urban Development Capacity](#) (NPS-UDC) released by Government in December 2016.

The overall objective of the capacity assessment is to provide an evidence base to inform spatial planning decisions across Greater Christchurch. In short, the assessment estimates the demand for dwellings and business land and the supply of development capacity to meet that demand in order to determine whether there is sufficient capacity to meet need over the next thirty years. The assessment is broken down into three time periods – short term (1-3 years); medium term (3-10 years) and long term (10-30 years) through to 2048.

Figure 1: Greater Christchurch²



² Greater Christchurch encompasses the Christchurch City urban area (including Lyttelton Harbour/Whakaraupō) and the eastern parts of Waimakariri and Selwyn Districts (including the towns of Rangiora and Kaiapoi to the north, West Melton to the west, and Rolleston and Lincoln to the south). This is a larger area than that specifically identified in the NPS-UDC as a high growth area.

The NPS-UDC provides national direction to local government on making provision for urban development. It identifies 'Christchurch' as a high-growth urban area, using a geographic classification from Statistics New Zealand that includes areas in Selwyn and Waimakariri districts. The NPS-UDC places a strong emphasis on cross-boundary coordination and encourages the use of existing coordination arrangements when implementing its requirements.

The Partnership considers the Greater Christchurch sub-region, as shown in *Figure 1*, is the appropriate geographic area to assess urban growth and development and therefore has adopted this for the capacity assessment. Reference to each Council area in the remainder of this report therefore refers to the portion of each district within this study area.

In completing this assessment a range of measures were used to seek input from targeted stakeholders as directed by the NPS-UDC. This input, and existing information from previous engagement exercises, has helped guide the various aspects of the assessment and is outlined further in the respective sections and supporting technical reports.

The limitations of available information and the robustness of modelling tools mean the figures presented in this assessment should be treated with some caution. Further work outlined in this assessment will add to this evidence base over time. The assessment will therefore be updated at least every three years and integrates monitoring of urban development indicators published by the Partnership on a quarterly basis.

2.1 Greater Christchurch context

Greater Christchurch is the largest urbanised area in the South Island. Christchurch is New Zealand's second largest City and the sub-region is home to 80% of the Canterbury regional population (40% of the South Island population). Christchurch Airport and Lyttelton Port of Christchurch are respectively the principal hubs for international visitors and freight, emphasising the sub-region's importance as a strategic regional centre and economic gateway. This has been boosted in recent years through the creation of inland ports at the I-Zone southern business hub in Rolleston.

The Greater Christchurch Urban Development Strategy (UDS) was adopted in 2007. The Strategy sets out a vision for 2041 and a 35 year growth management and implementation plan for continued prosperity across the sub-region. Coordinated planning for this urban area, including the provision of housing, transport, social, health and recreational facilities provides long-term benefits for the people and communities living and working here. The strategy is underpinned by strategic principles and goals to support overall economic, social, cultural and environmental wellbeing. The Partnership's commitment to the vision and strategic goals was reinforced as part of a [UDS Update](#) published in 2016.

Following the Canterbury earthquakes the UDS was a key source document in the development of both the [Land Use Recovery Plan](#) (LURP) and the Christchurch Central Recovery Plan. The time invested in shaping the UDS future settlement pattern enabled land use recovery to be advanced quickly, with confidence and in an integrated manner.

While greenfield development around the edge of the city and in the larger townships in Selwyn and Waimakariri has occurred faster than anticipated at the time the UDS was conceived, it is still consistent with the envisaged longer term growth and development of Greater Christchurch and has brought greater levels of self-sufficiency to those areas. A scenario of significant population flight from the sub-region due to a lack of timely relocation options has been averted.

2.2 Policy and planning context

Work to undertake this assessment and complete a settlement pattern review is inextricably linked to a number of other processes underway and emerging changes in national direction, including:

- changes in Government policy, funding approaches and implementation tools available for urban development
- District Plan Reviews and a future review of the Canterbury Regional Policy Statement
- Council Long Term Plans (LTPs) and infrastructure strategies
- revisions to the Regional Land Transport Plan (RLTP) and Regional Public Transport Plan (RPTP)
- coastal hazards planning and engagement across and within Greater Christchurch
- Central City and Ōtākaro Avon River Corridor Regeneration
- Implementing the Resilient Greater Christchurch Plan



Figure 2: Strategy Principles



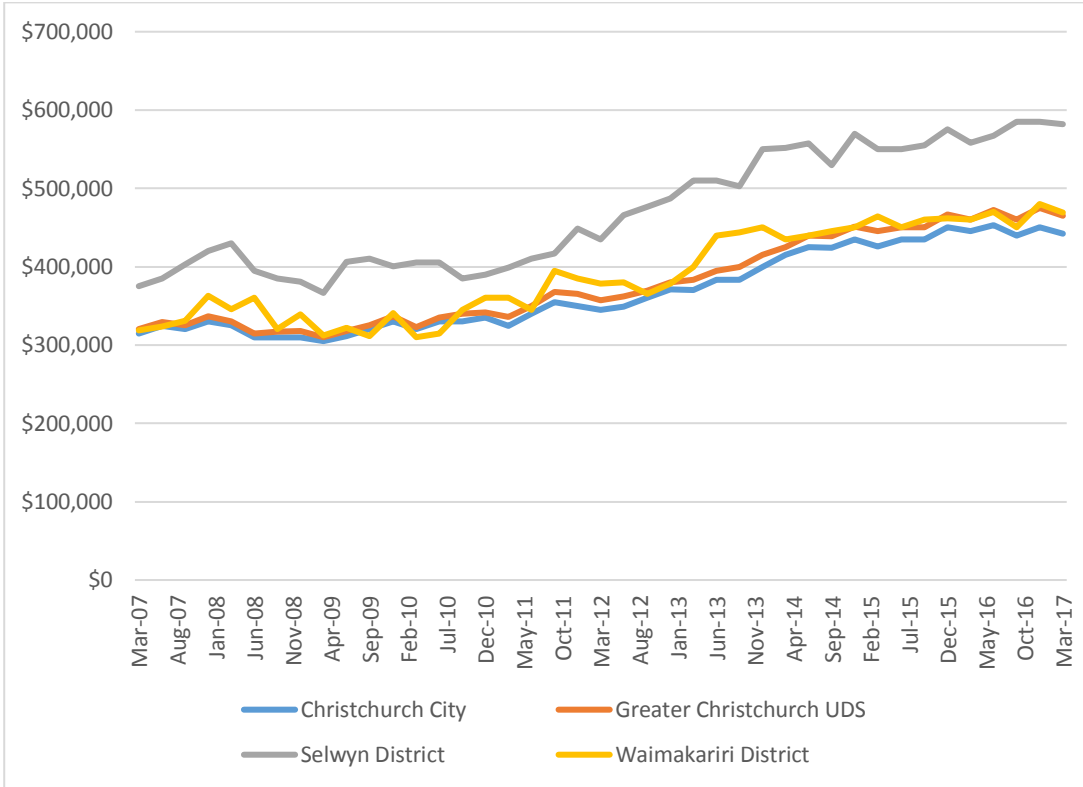
PART A: Housing

3. Housing Demand

Te Tono-ā-Whare

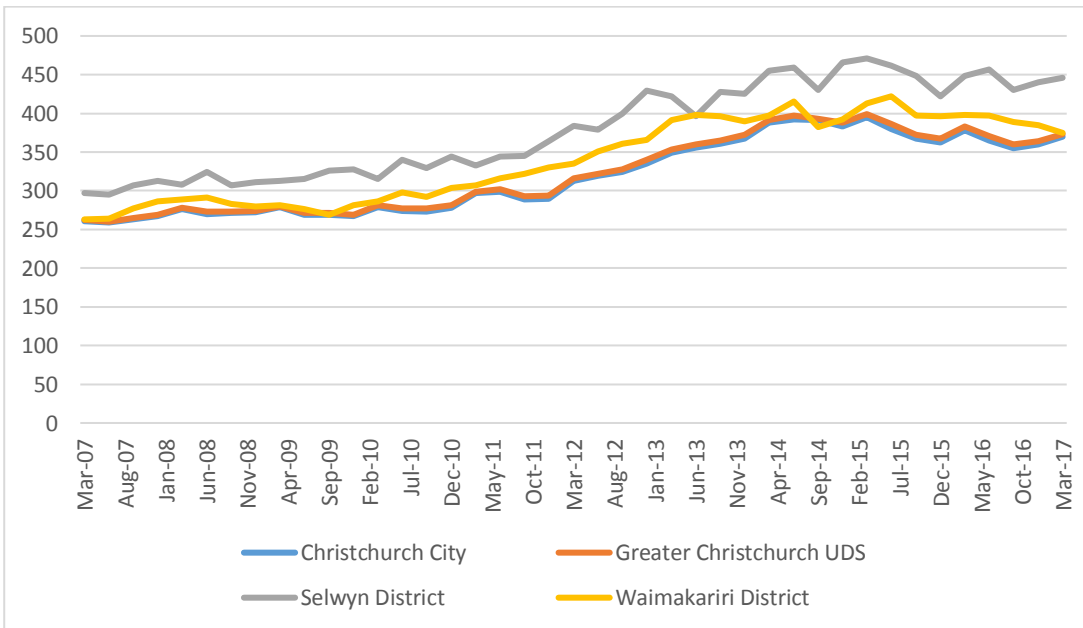
Greater Christchurch effectively operates as a single housing market with strong interrelationships between the populations of Christchurch City, Selwyn District and Waimakariri District. Indicator 1 (dwelling sales price) and Indicator 7 (dwelling rents) from the published Urban Development Indicators report highlight this close historical correlation across Greater Christchurch.

Figure 3: Quarterly Monitoring - Housing Indicator 1: Price for Housing – Dwelling Sales Price (Actual)³



Source: Corelogic – MBIE Urban Development Capacity Dashboard

Figure 4: Quarterly Monitoring - Housing Indicator 7: Dwelling Rents⁴



Source: MBIE Urban Development Capacity Dashboard

³ This indicator shows the median prices of residential dwellings sold in each quarter. This median price series is not adjusted for size and quality of dwellings. Prices are presented in nominal terms; they have not been adjusted for general price inflation.

⁴ This indicator reflects nominal mean rents as reported in lodged new rental bonds with MBIE. The mean used is a geometric mean. Prices are in nominal terms and are not adjusted for general price inflation. The data is for private bonds only and so excludes social housing.

3.1 Population and household projections

Robust population and household projections are key to addressing the level of demand and subsequent supply required in both housing and business markets in the Greater Christchurch area.

The capacity assessment has taken the most recent projections information provided by Statistics New Zealand and determined the most appropriate growth rates to use for each council area. Statistics New Zealand addresses the inherent uncertainty of future projections, especially over the long term, by providing three projection scenarios – low, medium and high growth. Following the earthquakes of 2010 and 2011 the variance between these scenarios for Greater Christchurch has grown, reflecting exacerbated uncertainties during a period of earthquake recovery.

The Partnership has assessed projection scenarios against historical trends and local circumstances to reach consensus on a chosen projection. This balances a desire that planning for growth is ‘ahead of the curve’, thereby not constraining housing supply, with a prudent approach to ensure the timely provision and financing of infrastructure. The Greater Christchurch area could see its population grow to around 640,000 people by 2048 (150,000 more than today) translating to demand for around 75,000 new dwellings (from the current stock of around 180,000).

The future household demand used throughout the capacity assessment is shown in *Table 1*. This table also outlines the additional margins of development capacity, in other words the additional dwellings to be provided for over and above projected demand, required by NPS-UDC Policy PC1 and discussed later in this report.

Table 1: Projected household demand (including required additional dwellings) 2018-2048

Area	short term 2018-2021	medium term 2021-2028	long term 2028-2048	30 Year 2018-2048	including additional 20% margin 2018-2021	including additional 20% margin 2021-2028	including additional 15% margin 2028-2048	Total 30 Year 2018-2048
Christchurch (medium)	5,100	9,400	25,200	39,700	6,200	11,200	29,000	46,400
Selwyn (medium-high ⁵)	2,600	4,600	13,500	20,800	3,100	5,500	15,600	24,200
Waimakariri (medium-high)	1,300	3,900	8,400	13,700	1,700	4,600	9,700	16,000
Greater Christchurch	9,000	17,900	47,100	74,200	11,000	21,300	54,300	86,600

International and domestic migration makes up a significant proportion of anticipated future growth in Greater Christchurch and can be volatile, particularly should national migration policy settings change. Periodic monitoring and review of population change is required as this may have a large impact on the future demand for housing.

3.2 Household composition by location, dwelling type and tenure

A comprehensive report on the demand profile for housing in Greater Christchurch was commissioned as part of the capacity assessment⁶. The report disaggregates the Greater Christchurch and territorial authority data into thirteen sub-market areas as shown in *Figure 5*. These sub-areas are constructed from Statistics New Zealand area units⁷.

The report projects demand for;

- housing in different groups within the population (age, household composition, income)
- different household groups translates into demand for different housing typologies (stand-alone homes; multi-unit dwellings; and apartments);
- private owner occupier dwellings, private rented dwellings, and social housing (rented); and
- housing typologies as distributed across broad locations and price points.

In undertaking this analysis the following assumptions were made⁸:

- population and household growth follows the projected increases outline in Table 1.;

⁵ Medium-high relates to a future growth being the mid-point between the Statistics NZ medium and high projections

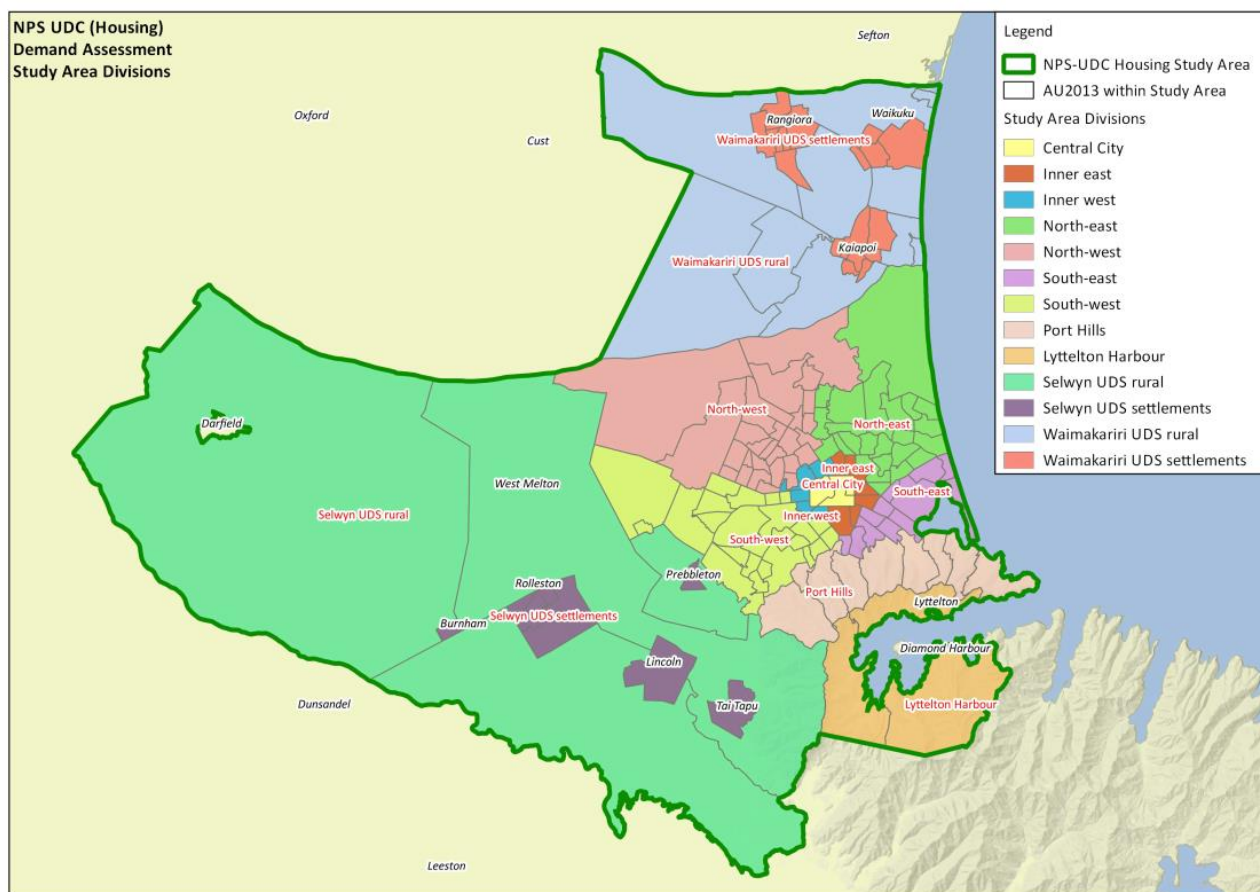
⁶ *Housing Demand in Greater Christchurch* (November 2017) prepared by Livingston Associates

⁷ Parts of the Selwyn and Waimakariri rural sub-areas include land outside the Greater Christchurch boundary but this anomaly is not considered statistically significant for the purposes of the capacity assessment demand analysis.

⁸ refer to Livingston and Associates Limited *Housing Demand in Greater Christchurch*, Appendix 2 Overview of modelling methodology

- underlying change in age structure and family composition changes associated with Statistic New Zealand’s population projections hold true;
- there are no significant unexpected changes to the Greater Christchurch and National economies over the projection period;
- there are no significant changes to the institutional and structural settings in the local housing markets (i.e. planning constraints and/or governmental policy and/or financial institutional changes).

Figure 5: Housing sub-areas across Greater Christchurch



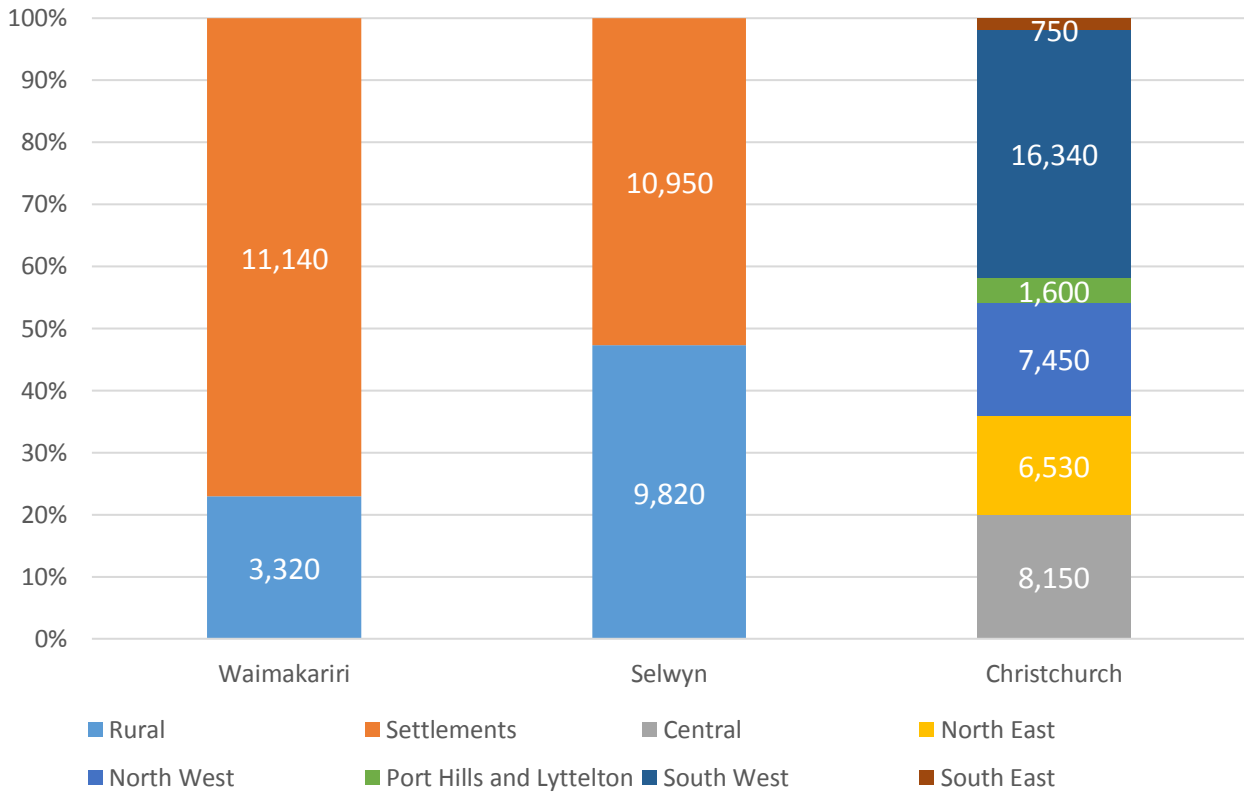
This fine grained analysis reveals significant common trends in the demographics and dwelling types likely over the next thirty years. Sub-area information outlines the extent to which these trends vary by location.

Proportionally, Christchurch City is projected to accommodate 54% of the total growth to 2048, with 27% occurring in Selwyn district sub-areas and 19% in the Waimakariri district sub-areas. The sub-areas which are projected to experience the highest percentage growth rates are those in include Selwyn and Waimakariri districts, and the south-west sub area in Christchurch.

The level of owner occupation like the rest of the country has declined in recent decades and this trend is expected to continue, particularly in younger age groups. The rate of owner occupation may reduce from 68% as at 2013 (i.e. the percentage of households that owned their own home) to 61% by 2048, a 7% fall. Conversely the number of renter households is expected to rise over the period to 2048:

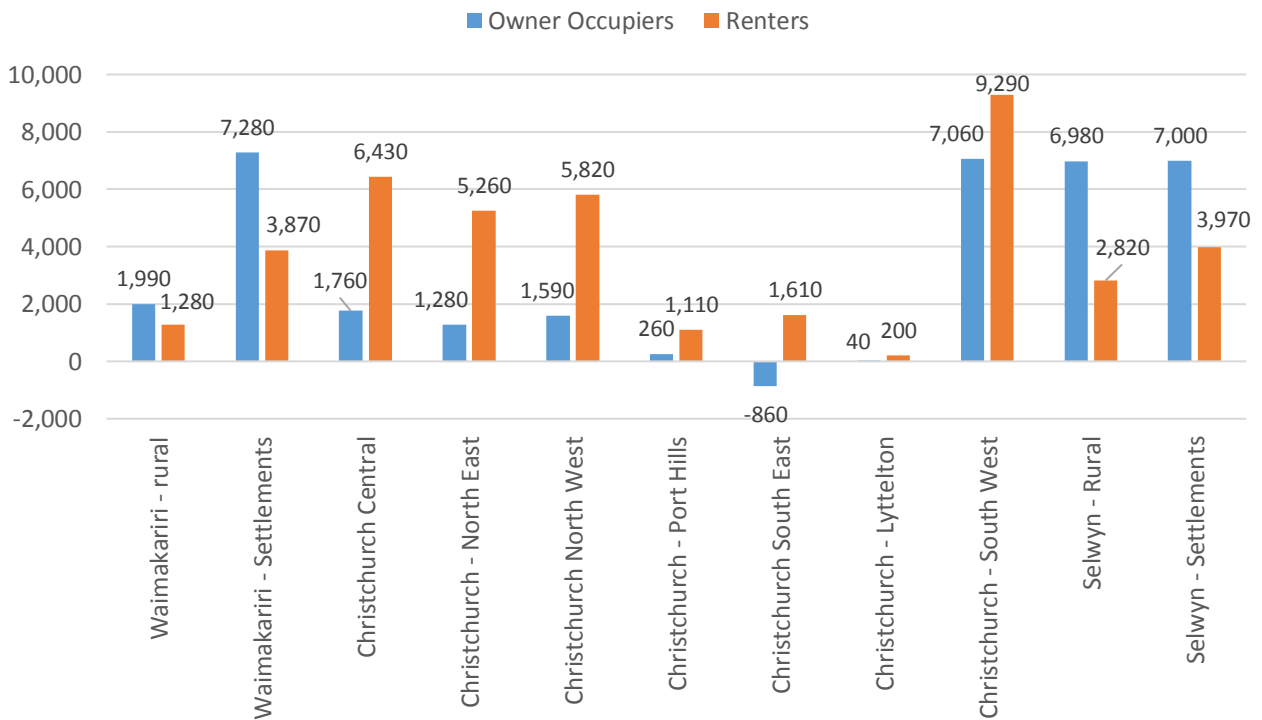
- by over 130% in the Waimakariri sub-areas (+5,150 renter households)
- by over 215% in the Selwyn sub-areas(+6,800 renter households); and
- a strong increase in demand for rental housing across the Christchurch sub-areas of Christchurch Central, North-East, North-West and South-West (+26,800 from a total growth of 29,700 renter households).

Figure 6: Projected growth in households by sub-areas to 2048



Source: Housing Demand in Greater Christchurch (Livingston and Associates Ltd), Page 25, data from Table 3.6

Figure 7: Projected change in demand (growth and/or decline) in the number of households by tenure and sub-area

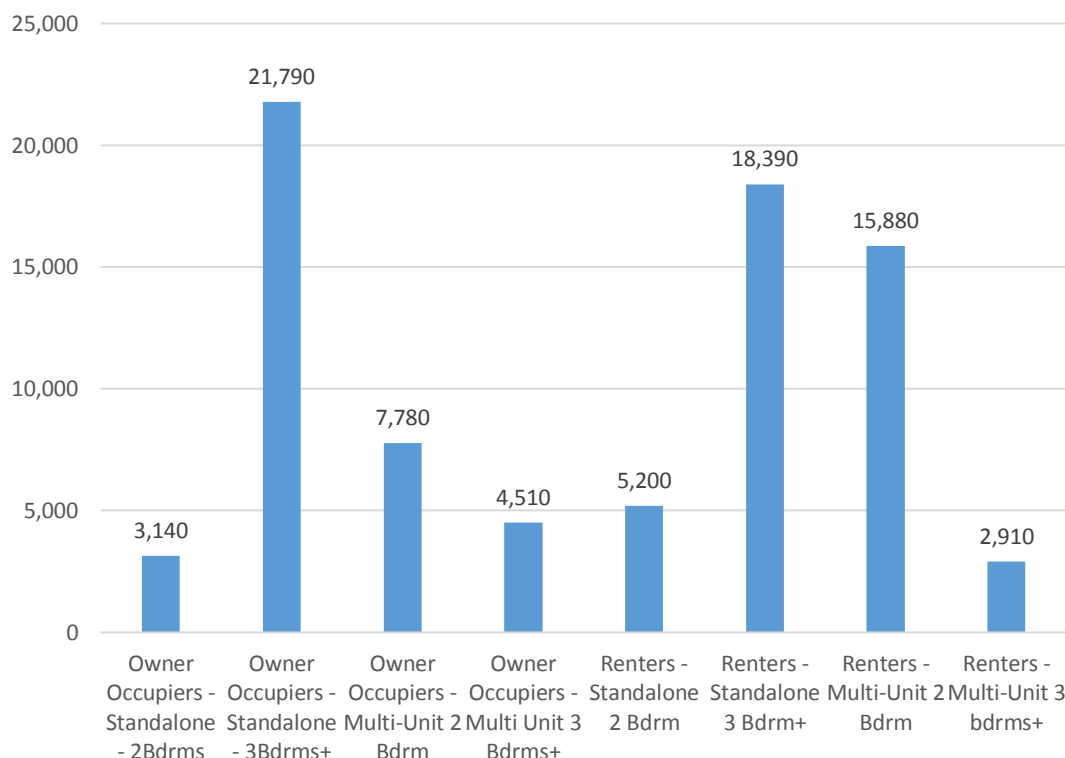


Source: Housing Demand in Greater Christchurch (Livingston and Associates Ltd), Page 26, data from Table 3.7

In terms of the types of dwellings that will be demanded, the report concludes that:

- Greater Christchurch’s aging population will be reflected in significant growth in the number of one person and couple only households, resulting in a significant increase in the demand for smaller and multi-unit dwellings. Multi-unit demand is typically for units with fewer bedrooms. Renters have and will continue to have a higher propensity to rent multi-unit dwellings relative to standalone dwellings.
- Demand for 200 to 230 additional social housing dwellings per annum may be required if the current ratio of social renter dwellings to total housing need is maintained.
- Of the total projected demand from owner occupiers it is estimated 66% of this will be for standalone dwellings (predominantly with three or more bedrooms). Similarly, of the total renter household demand it is estimated that 56% will be for standalone dwellings.

Figure 8: Implications of the household projections on demand by dwelling typology and tenure in Greater Christchurch to 2048



Source: Housing Demand in Greater Christchurch (Livingston and Associates Ltd), Page 32, data from Table 3.11

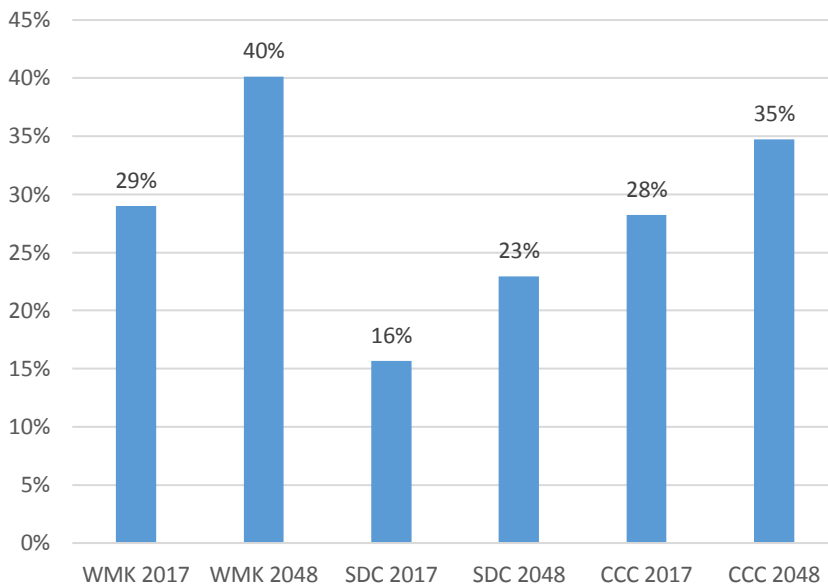
Total ‘*renter housing need*’⁹ has been assessed by encapsulating those financially stressed private renter households, together with those who are homeless or living in crowded dwellings, with those whose housing requirements are met by social, third sector and emergency housing providers. The relative level of housing need is expected to increase across Greater Christchurch, but this demand will be significantly greater in Christchurch City (refer to *Figure 7*). This is a reflection of the low income renters and social renters living in the city and projected to continue to live in the city, comparative to the outer districts. Over the next thirty years to 2048 total housing need (i.e. by those aforementioned groups) is projected to increase by 20,970 households or 63% in the Christchurch sub-areas, 3,030 households or 256% in the Selwyn sub-areas and 2,910 households (or 141%) in the Waimakariri sub-areas. This analysis highlights the significant challenges that are ahead for both public agencies and the private development market to meet this particular type of housing demand. *Figures 9 and 10* further illustrate the changing trend in regard to housing affordability and renter housing need.

The recent release by Government of an independently authored report¹⁰, ‘*A Stocktake of New Zealand’s Housing*’ provides further analysis and support for these matters at a national level. Further work will be required to identify the needs and opportunities specific to Greater Christchurch.

⁹ Housing need is a measure of the total number of renter households within a community which require some assistance to meet their housing requirements

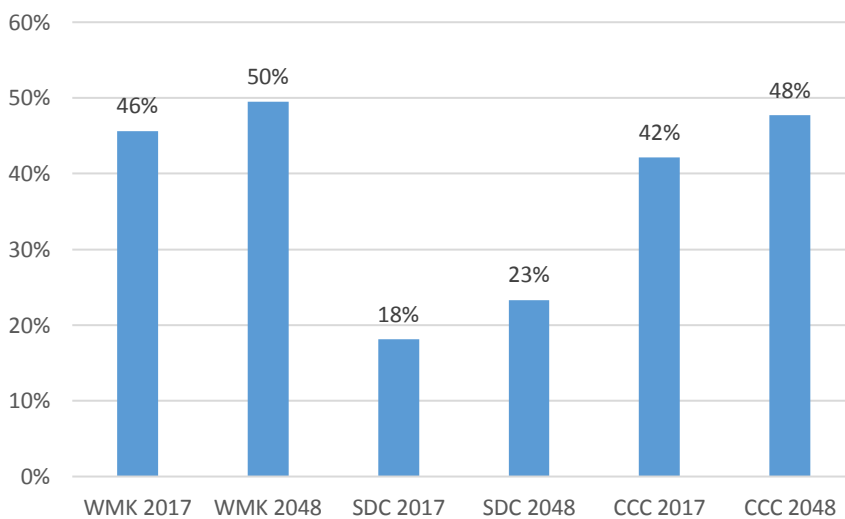
¹⁰ A Stocktake of New Zealand’s Housing (Johnson, Howden-Chapman and Eaqub, 2018) ISBN 978-1-98-853554-8 (online)

Figure 9: Projected proportion of households unable to buy a house over \$250,000 - 2017 and 2048 (using 2017\$)



Source: Housing Demand in Greater Christchurch, Page 43, data from Table 4.5 Livingston and Associates Ltd

Figure 10: Projected proportion of renter households unable to affordably pay more than \$300/wk for rent – 2017 and 2048 (using 2017\$)



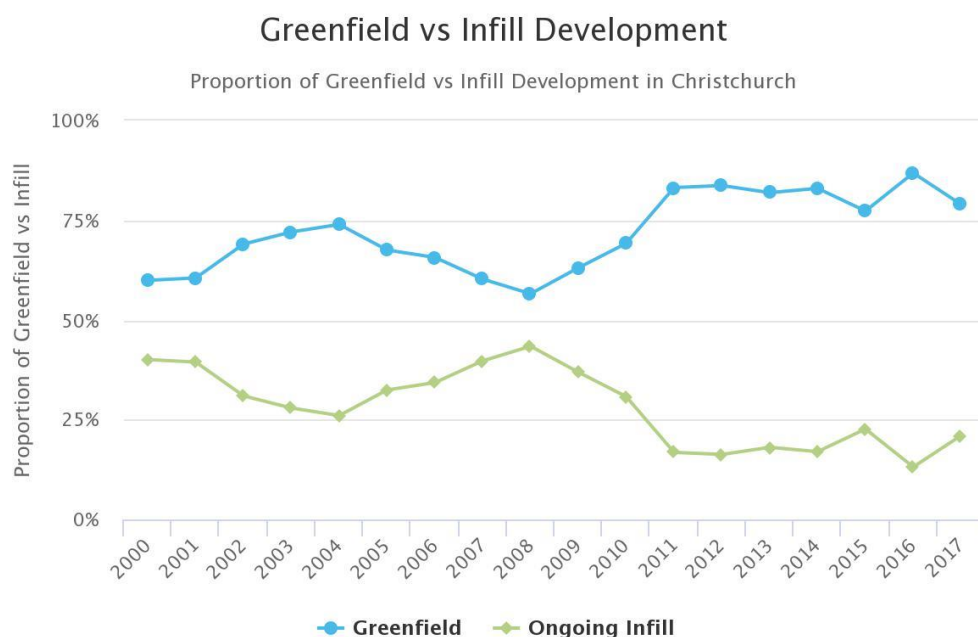
Source: Housing Demand in Greater Christchurch, Page 44, data from Table 4.6 Livingston and Associates Ltd

Ngā Papatipu Rūnanga of Canterbury Ngāi Tahu currently have aspirations to have more members living in suitable housing on current and former Māori Reserve lands owned, or formerly owned by the members. The extent of these land packages is defined by the original extent of the reserves as determined within the crown purchase deeds (including Kemp Purchase 1848, and Port Cooper Purchase 1849). These lands were never developed as multiple acts of parliament restricted this, going against the provisions made an agreed to within the purchase deeds. Only in recent years has planning legislation sought to remedy this situation, allowing for regional and district planning rules that lift restrictions on these reserves, via Papakainga/Kāinga-Nohoanga zoning and associated provisions.

It is envisaged that Papakainga/Kāinga-Nohoanga provisions will generate some demand for usage on currently owned lands, and generate demand for acquisition of land-packages within the former reserves extents. An estimated 1260 hectares of lands within former reserves extents may be made available for Papakainga/Kāinga-Nohoanga style-living, i.e. whānau groups, cluster housings, community centres, hostels, businesses and other developments. Such provisions might also extend to lands and properties purchased by the iwi then devolved to Papatipu Rūnanga.

Other research and information on housing demand has been summarised in an appendix to this assessment¹¹. It further outlines the demand for housing in particular locations, identifies annual capital and operational costs to council and impact on rates, and explores the drivers of housing demand such as lifestyle choices, financial circumstances, and accessibility and ease of travel to places of education, work and recreation and leisure activities. The demand for new neighbourhoods (i.e. greenfield development) has always been consistently strong in Christchurch City, and in more recent years within the Selwyn and Waimakariri districts (see *Figure 11*). Conversely, the growth (and therefore assumed demand) for new housing with the existing urban area (i.e. through infill and intensification), has been lower and faced a notable drop after the 2010 and 2011 earthquakes. Recent research provides some insight as to why the demand for greenfield development has been consistently strong. For example, a study carried out by Kusumastuti and Nicholson (2017) on mixed-use development in Christchurch found that those residents surveyed wanted to live near supermarkets and parks, but less so near offices. Further, this and other studies indicate that people seek a balance between housing features (i.e. housing design, number of bedrooms and level of garden and open space) and location (see section 10 below).

Figure 11: Proportion of growth attributed to greenfield and infill development in Christchurch City between 2000 and 2017



Source: CCC Building Consent Records

There is evidence that housing demand for Central City living is increasing. Whilst after the earthquakes the number of people living within the central city decreased significantly from 7650 to 4900, since 2014 there has been an increased interest in residents wanting to live in the central city, and in 2016 the central city population had increased to 5,600.

Demographic, tenure, employment and welfare trends (i.e. an ageing population, falling home ownership, less secure employment, and restricted access to welfare) are drivers for the current and projected increase in demand for social housing. The Salvation Army released a report in August 2017 analysing the future need for social housing in New Zealand¹². The report states that current capacity of Social Housing in New Zealand is ‘just over 82,000’ units, with the majority owned by Housing New Zealand (62,500 units). Of the NZ total, Greater Christchurch has 9,500 social housing units, mostly provided for by central government through Housing New Zealand (64%), local government (25%) and other NGO providers (11%)¹³. The vast majority (95%) of these units are located within Christchurch, mostly provided for by central government through Housing New Zealand (67%), local government (29%) and other NGO providers (4%).

The report identifies two groups of growing need, people with health or disabilities, and older people who don’t own a home and rely on superannuation. Currently, within Canterbury, there are 17,200 people receiving benefits, 5,600 on

¹¹ Refer to report “Greater Christchurch Housing Capacity Assessment – An Overview of Housing Demand in Greater Christchurch”. There is no additional housing demand from visitor accommodation, as data suggests it is not a significant issue facing Greater Christchurch. Commercial visitor accommodation is addressed as part of the business capacity assessment.

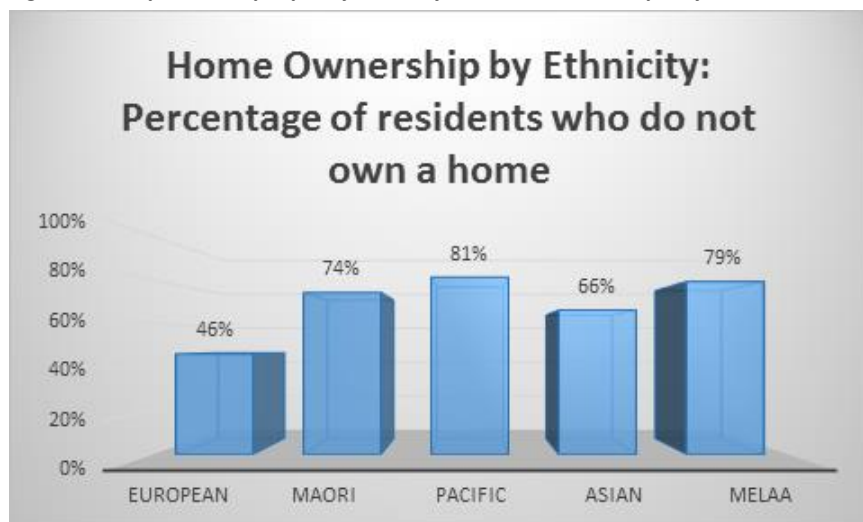
¹² Johnson, Alan (2017); *Taking Stock, the demand for Social Housing in New Zealand*; www.salvationarmy.org.nz/TakingStock

¹³ Housing New Zealand has capacity of 6,048, with 140 within Waimakariri, 9 in Selwyn and 5,899 in Christchurch (<https://www.hnzc.co.nz/assets/Publications/Research/Housing-Statistics-Managed-stock/Managed-Stock-Territorial-Local-Authority-June-2017.pdf>). Christchurch City Council, through the Ōtautahi Community Housing Trust, has 2,300 units (<https://ocht.org.nz/about/>), while Waimakariri has 112 units (<https://www.waimakariri.govt.nz/community/council-housing>). NGO’s and others provide for approximately 350 units (through providers such as Comcare (60 units), Christchurch Methodist Mission (59 units), Salvation Army (100 units))

health condition benefit and 11,600 on supported living benefit. There are currently 4,200 older people who don't own a home and rely on superannuation and this number is expected to grow by 155% (6,500) by the year 2030. Whilst these numbers do not represent social housing demand, they do indicate broad demand from people who are more likely to require long-term social housing support. As Greater Christchurch has only 9,500 social housing units, there is already a deficit in the supply of social housing units. Several sources¹⁴ have converged on a figure of approximately 170 units per annum of additional social housing being required to meet expected demand over the next 20-30yrs (based on current levels of provision in relation to housing need).

Information gathered further indicates that demand for social housing, and certainly lower cost housing, may be proportionally higher for some ethnicities. *Figure 12* shows the proportion of people aged 15 years and over who do not own or partly own their usual residence in Greater Christchurch. As seen below, the graph shows that 74% of Maori population does not own a dwelling. Other ethnic groups such as Pacific and Middle Eastern/Latin American/African (MELAA) are also disproportionately represented.

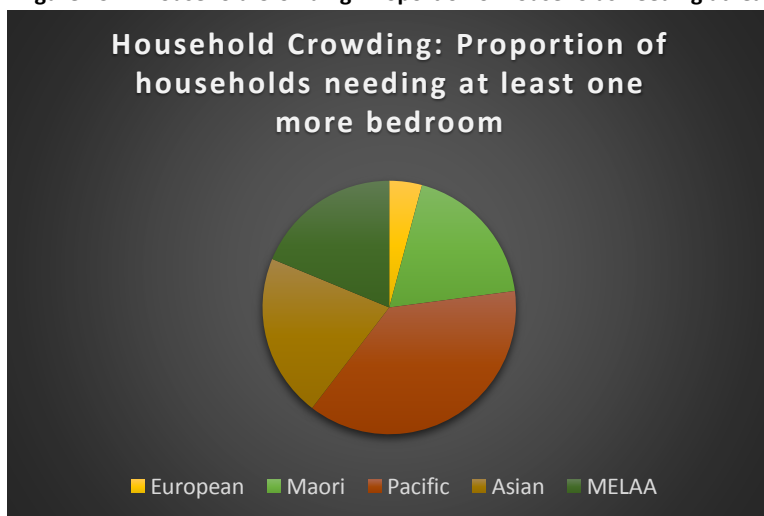
Figure 12: Proportion of people by ethnicity who do not own or partly own their home



Source: 2013 census data

Figure 13 shows that Maori, Pacific, Asian and MELAA groups are also disproportionately represented in terms of household crowding. Further research and analysis needs to be carried out in order to determine the size and types of dwellings that need to be supplied to reduce crowding for all ethnic groups. This trend suggests that the market needs to supply a range of housing, which will give all households a range of opportunities to buy or rent dwellings within their budget and preferred location.

Figure 13: Household Crowding: Proportion of households needing at least one more bedroom



Household Crowding: Proportion of households needing at least one more bedroom	
European	2%
Maori	9%
Pacific	18%
Asian	10%
MELAA	9%

Source: 2013 census data

¹⁴ Salvation Army forecasts, MBIE's 2013 housing market assessment, and the Livingston and Associates Ltd Housing Demand Assessment 2017

4. Housing Development Capacity

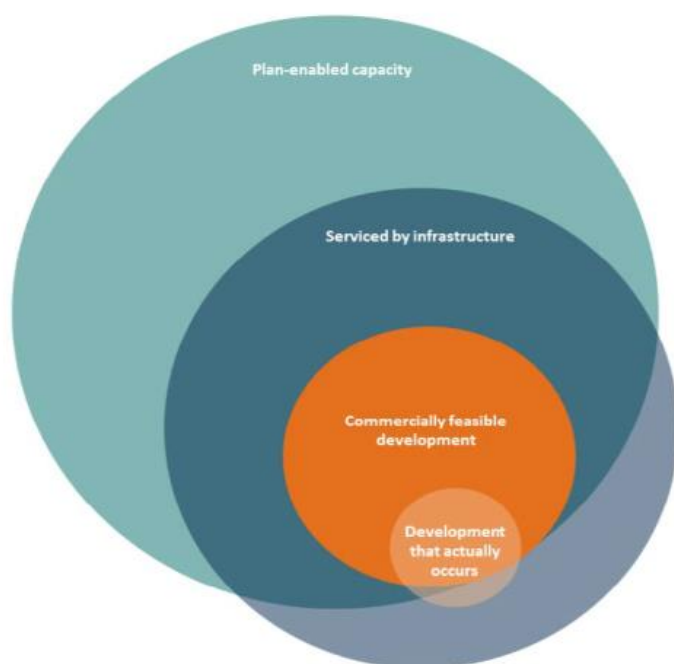
Te Kaha Whanake Whare

In order for the supply of new housing to effectively meet future housing demand, three important elements need to be in place or planned for across the short (1-3 years); medium (3-10 years) and long term (10-30 years) through to 2048:

- land is appropriately zoned in relevant district plans for housing (plan-enabled capacity)
- key network infrastructure is available to the development site (serviced capacity)
- the development is sufficiently commercially attractive (commercially feasible)

This section provides a summary of the assessment of plan-enabled and serviced capacity across Greater Christchurch. The following Section 5 addresses the feasibility aspects this capacity and reports on the how this assessment has attempted to address this aspect of the NPS-UDC.

Figure 14: Diagram of the dimensions of development capacity



Source: NPS-UDC: Guide on Evidence and Monitoring, Figure 5, page 35

4.1 Plan-enabled capacity

Plan-enabled capacity is determined from an assessment of both vacant residential zoned land and zoned land with existing housing but with potential for redevelopment and intensification to provide additional housing. For this assessment the 'theoretical' plan-enabled capacity is reported first. This is the maximum capacity allowed for by a respective zone based on the densities provided for through rules in the district plans. *Table 2* tabulates the theoretical plan-enabled capacity for each council and across the assessment sub-areas. A further table, *Table 3*, has been produced which reduces the theoretical to a 'modified' total. This is based on historical density yields that have occurred over the last 10-20 years. The 'modified' scenario incorporates an element of commercial feasibility, as it is reflective of past developments that have been built and on-sold.

The total theoretical net capacity within Greater Christchurch is 256,908 households and modified capacity is 65,011 households, being a difference of some 191,897 households. As well as reflecting past development trends, the large difference in the theoretical and modified counts can be attributed to the changes in density provisions resulting from the recent District Plan Review now completed for Christchurch. New zoning rules enable significantly more dwellings than that which resulted through historical redevelopment under the previous district plan. Dwelling densities resulting from future redevelopment, particularly in the central and inner suburbs of Christchurch will therefore likely be much greater and not comparable with previous redevelopment densities.

Table 2: Summary of theoretical plan-enabled net capacity for housing across Greater Christchurch¹⁵

Area	sub-area	net capacity	Total net household capacity
Greater Christchurch	N/A	N/A	256,908
Christchurch			236,968
	North West	32,500	
	North East	29,349	
	South East	12,059	
	South West	36,877	
	City & Inner Suburbs	37,881	
	Port Hills	12,888	
	Lyttelton Harbour	4,853	
Selwyn			12,120
	Rolleston	6,862	
	Lincoln	3,891	
	Prebbleton	914	
	West Melton	391	
	Tai Tapu	62	
Waimakariri			7,820
	Kaiapoi	1,590	
	Rangiora	1,403	
	Woodend/Ravenswood	3,467	
	Pegasus	1,043	
	Other existing zoned land and small settlements	317	

Table 3: Summary of modified plan-enabled net capacity for housing across Greater Christchurch

Area	sub-area	net capacity	Total net household capacity
Greater Christchurch	N/A	N/A	65,011
Christchurch			51,106
	Central City and inner suburbs	6,270	
	North-west	12,172	
	North-east	12,045	
	South-east	2,288	
	South-west	14,566	
	Port Hills	2,594	
	Lyttelton Harbour	1,171	
Selwyn			9717
	Rolleston	5,728	
	Lincoln	3,020	
	Prebbleton, West Melton, Tai Tapu	969	
Waimakariri			4,188
	Rangiora	1,251	
	Kaiapoi	488	
	Woodend/Pegasus	2,132	
	Other existing zoned land and small settlements	317	

¹⁵ as at March 2017

4.2 Availability of infrastructure

Development infrastructure, as defined in the NPS-UDC, principally relates to the network infrastructure for water supply, wastewater, stormwater, and transport. Zoned greenfield areas have been identified for such growth for over a decade now through the collaborative spatial planning of the Partnership. This means the majority is now serviced with the necessary development infrastructure for it to be considered 'shovel ready'.

Development of plan-enabled capacity in Selwyn and Waimakariri has no development infrastructure constraints. In Christchurch, short-term wastewater constraints exists in some south-west greenfield areas and for a few redevelopment in areas in eastern Christchurch (Shirley and Aranui) impacted by the earthquakes and which now rely on a vacuum sewer system. All wastewater capacity constraints will be resolved by 2028 following the completion of planned upgrades under the current LTP. The following table outlines the implications of these constraints on plan-enabled capacity in relation to the short, medium and long term for each territorial area.

Table 4: Infrastructure constraints for modified plan-enabled net capacity for housing across Greater Christchurch

Area	Short term 2018-2021	Medium term 2021-2028	Long term 2028-2048
Greater Christchurch	58,892	61,792	65,458
Christchurch			
plan-enabled capacity	51,106	51,106	51,106
constraints	6,566	3,666	0
net serviced capacity	44,540	47,440	51,106
Selwyn			
plan-enabled capacity	9,717	9,717	9,717
constraints	0	0	0
net serviced capacity	9,717	9,717	9,717
Waimakariri			
plan-enabled capacity	4,188	4,188	4,188
constraints	0	0	0
net serviced capacity	4,188	4,188	4,188

Information on the supply of other infrastructure (including land transport, telecommunications, energy and other infrastructure not controlled by councils) was sourced directly by such providers or indirectly through [ChristchurchNZ](https://www.christchurchnz.org.nz)¹⁶. Feedback suggests that access to 'other infrastructure' is either available or likely to be available to service all housing needs over the next 30 years.

Provision of wider social infrastructure (such as schools, healthcare, community halls) has been well-integrated with recovery planning over the last seven years and is considered not to represent a constraint on developed.

¹⁶ ChristchurchNZ was established in July 2017, following the merger of Christchurch & Canterbury Tourism (CCT), Canterbury Development Corporation (CDC), International Education, the Convention Bureau and the Christchurch City Council's Major Events team: <https://www.christchurchnz.org.nz>

5. Housing Feasibility and Sufficiency

Te Whaihuanga me te Āhua ā-Whare

Information contained in this section outlines the current status of a significant area of new work for the councils in Greater Christchurch. Ongoing refinement and testing of the work that informs an assessment of commercial feasibility will be required before detailed findings are sufficiently robust to be reported.

5.1 Feasibility

Feasibility is defined in the NPS-UDC as being ‘development that is commercially viable, taking into account the current likely costs, revenue and yield of developing’. It essentially involves a calculation of likely profit and whether that profit outweighs the developer’s risk. ‘Commercially viable’ is not defined however supplementary guidance suggests a 20% profit margin should be applied when assessing the feasibility of sites for both redevelopment and greenfield areas. This figure is as yet untested with the local development community but anecdotally profit margins appear to fluctuate widely and a single figure for greenfield and redevelopment feasibility may be too simplistic given the implications the NPS-UDC places on a test of what is commercially viable.

Significant work has been undertaken by the Councils in Greater Christchurch to develop and run feasibility models tailored to the local housing market conditions. Councils, in conjunction with consultants, have adopted and developed a spreadsheet provided by MBIE¹⁷ that calculates total costs and expected revenue from section or redevelopment sales. Total costs relevant to Greater Christchurch were provided, in broad terms, by local valuation consultants and expected revenue was based on recent sales and current listings.

However, in running the respective models based on a number of generalisations and assumptions, the findings in some areas appear unrealistic when compared to actual development occurring. Sites and dwellings were being deemed not feasible by the models in some greenfield and redevelopment areas, when in reality dwellings of a similar typology and location have already been built and on-sold.

Further model refinement work and ground-truthing with market realities would be necessary before any results can be considered reliable and conclusions reached on the sufficiency of the supply of commercial feasible dwellings.

¹⁷ Ministry for Business, Innovation and Employment

5.2 Sufficiency

As noted in the section above, given the need to further refine the feasibility modelling, an assessment of sufficiency can only be performed at this stage against an assumed position on development capacity that is considered to be commercially feasible.

This sufficiency assessment has taken the approach that the modified development capacity identified in *Table 3* is considered commercially feasible until shown to be otherwise. As outlined in Section 4.1, the modified development capacity count does not reflect some of the new density provisions of the Christchurch District Plan. Figures for Christchurch City have been adjusted to provide additional dwellings to account for higher anticipated yields from the new Residential Density Transition Zone and Residential Central City Zone¹⁸.

The effect of this is to conservatively increase the assumed feasible development capacity for Christchurch City from 51,106 (the modified figure in *Table 3*) to 59,939. Monitoring of development uptake in these areas over time will provide a clearer assessment of achieved development densities. The sufficiency of assumed feasible development capacity across Greater Christchurch is reported in *Tables 5* and *6* below.

Table 5: Sufficiency of feasible development capacity for the periods 2018-2021 and 2018-2028 (short and medium term)

Area	short term 2018-2021	medium term 2021-2028	10 Year 2018-2028	including additional margin 20% 2018-2021	including additional margin 20% 2021-2028	Total 10 Year 2018-2028	Feasible development capacity ¹⁹ 2018-2021	Feasible development capacity ²⁰ 2018-2028	Sufficiency within the 2018 to 2021	Sufficiency within the 2018 to 2028
Christchurch (medium)	5,100	9,400	14,500	6,200	11,200	17,400	53,373	56,273	+47,173	+38,873
Selwyn (medium-high)	2,600	4,600	7,200	3,100	5,500	8,600	9,717	9,717	+6,617	+1,117
Waimakariri (medium-high)	1,300	3,900	5,200	1,700	4,600	6,300	4,188	4,188	+2,488	-2,112
Greater Christchurch	9,000	17,900	26,900	11,000	21,300	32,300	67,278	70,178	+56,278	+37,878

Table 6: Sufficiency of feasible development capacity for the 2018 to 2048 (long term) period

Area	short term 2018-2021	medium term 2021-2028	long term 2028-2048	30 Year 2018-2048	including additional margin 20% 2018-2021	including additional margin 20% 2021-2028	including additional margin 15% 2028-2048	Total 30 Year 2018-2048	Feasible development capacity ²¹	Sufficiency within the 2018 to 2028 period
Christchurch (medium)	5,100	9,400	25,200	39,700	6,200	11,200	29,000	46,400	59,939	+13,539
Selwyn (medium-high)	2,600	4,600	13,500	20,800	3,100	5,500	15,600	24,200	9,717	-14,483
Waimakariri (medium-high)	1,300	3,900	8,400	13,700	1,700	4,600	9,700	16,000	4,188	-11,812
Greater Christchurch	9,000	17,900	47,100	74,200	11,000	21,300	54,300	86,600	73,844	-12,756

¹⁸ the basis for these additional dwelling numbers are the dwelling yields from comparative residential zones with similar district plan controls.

¹⁹ at this stage feasible development is an assumed level of development capacity, this figure is reduced according to short-term constraints identified in Table 4

²⁰ at this stage feasible development is an assumed level of development capacity, this figure is reduced according to medium-term constraints identified in Table 4

²¹ at this stage feasible development is an assumed level of development capacity, no long-term constraints are identified in Table 4



PART B: Business

6. Business Context

Te Horopaki Umanga

The Canterbury region’s business activity has traditionally been driven by agriculture due to the extent of arable land on the Canterbury Plains. The agricultural hinterland of Christchurch provided the foundation for the City’s economy and export base, creating the City’s business services and manufacturing sectors and enabling the distribution of goods through the seaport at Lyttelton and the airport on the western edge of the City.

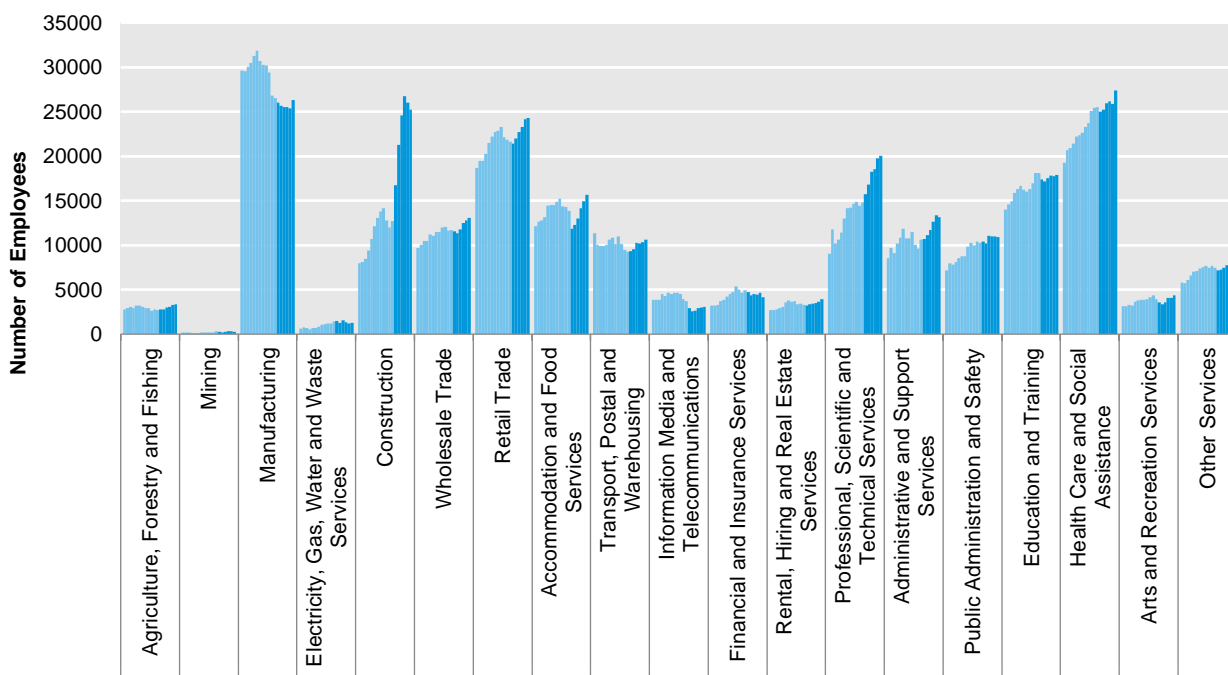
More recently, information and communications technology and high-value added manufacturing have developed and business and financial services have advanced as growing sectors. The city and region also operates as an important gateway and destination for the South Island visitor economy.

The recovery and regeneration of Greater Christchurch following the Canterbury earthquakes has had a significant impact on the local economy as a whole, and the size of the construction sector of the economy which has then flowed through to other business sectors.

6.1 Composition and growth of the Greater Christchurch economy: 2000-2016

Demand for floorspace and land in an urban economy commonly focusses on the relationship between workers and their space requirement. Growth in employment commonly manifests as increased demand for floorspace and/or land. However, there are instances where growth can be accommodated in existing space (productivity improvement) and/or locate in non-business zones (e.g. home office). Trends in industrial and retail sectors can also be assessed in terms of value of goods (GDP - industrial) and expenditure (sales - retail).

Figure 15: Employment composition of Greater Christchurch between 2000 and 2016²².



Nine sectors generated most of the employment growth (over 98%) in Greater Christchurch over the last 16 years:

- Construction sector (31% of employment growth)
- Professional, Scientific and Technical Services (18%)
- Healthcare and Social Assistance (10%)
- Retail trade (9%)
- Administrative and Support Services (8%)
- Public Administration and Safety (6%)
- Education and Training (6%)
- Accommodation and Food Services (6% each)
- Wholesale (5%)

²² using the one digit ANZSIC classifications of activities from the Statistics NZ Longitudinal Business Frame data.

In summary, the growth (and decline) in sector employment groupings have been driven by the following factors:

- Earthquake rebuild – substantial growth in employment directly involved in construction and indirectly in supporting sectors (e.g. manufacturing, wholesale)
- Population demand – population growth, income/wealth effects and demographic changes (aging) resulting in greater employment in retail and office (services and support) groups
- Trade demand – growth in sectors (e.g. dairy manufacturing) which have maintained a competitive advantage and where exports have grown, but decline in sectors affected by continued increase in competition from developing countries (import growth) and the movement of production offshore
- Tourism demand – significant post-earthquake disruption now largely returned to previous levels for guest nights, however the level of spend generated by tourism has increased leading to a net positive contribution to growth in employment in the retail, services and accommodation sectors
- Technology change – impacting most sectors in the economy and increasing productivity per worker with implications for the quantum of employment required to deliver the same level of output and associated land/floorspace requirements
- Economies of agglomeration – are benefits that businesses obtain by locating near each other in urban economies and is similar to the concept of economics of scale (however it involves multiple business)
- Global and National crises – in particular the recent Global Financial Crisis that impacted the scale of economic activity and employment across the regional economy.

7. Business Demand

Te Tono-ā-Umanga

This section sets out the results of detailed modelling undertaken to forecast employment growth for the three high level urban business sectors (retail, office, industrial), to enable future business space requirements to be established to 2048. From the overall population projections outlined in section 3.1, employment projections are translated into floorspace and land requirements by location, in order to subsequently compare forecast land demands against the supply of business land enabled through the planning documents of each Council.

7.1 Projections and distribution of demand

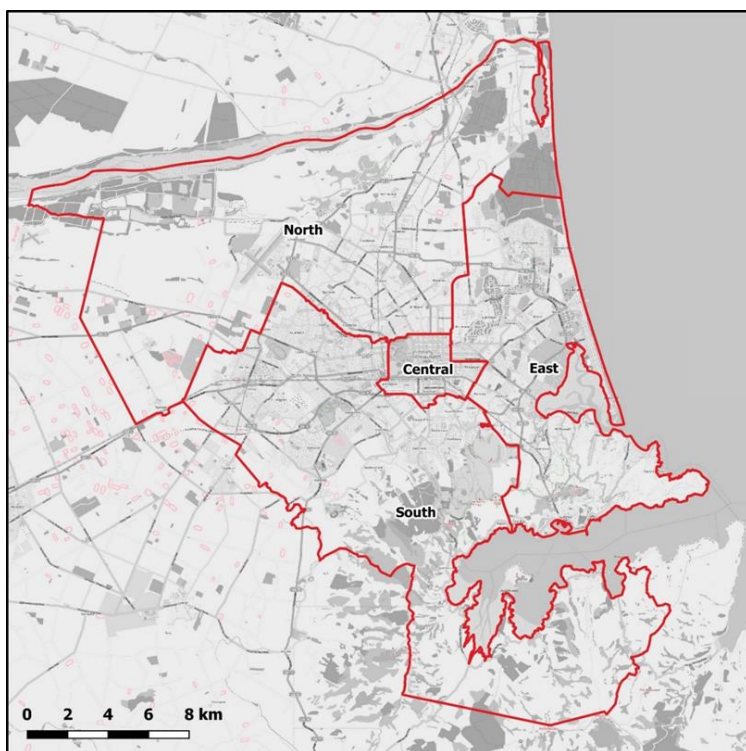
Two complementary modelling approaches were commissioned to inform the capacity assessment. A multi-regional economic input-output model (the 'EFM')²³ produced a comprehensive evaluation, including assessment of direct, indirect (i.e. through supply chains) and induced (i.e. brought about through consumer spending) impacts to generate employment forecasts for Greater Christchurch. The outputs of the EFM were employment projections by ANZSIC²⁴ category.

For Christchurch City, the projections by ANZSIC categories were aggregated up into the three sectors of retail, office and industrial, with ANZSIC categories split in some cases between the three sectors. This is on the basis that the ANZSIC categories do not distinguish between those activities undertaken within or outside business areas, or the different types of premises that employees in the same sector may work in. For example, a proportion of employees coded within industrial categories work within other more commercial (office) arms of a business in other locations.

Unlike industrial and office demand, demand for retail activities in the City was derived from a separate retail model²⁵. This was tested against the outputs of the EFM in terms of retail employment.

The models disaggregate data for Christchurch City into four quadrants as shown in *Figure 16*. Technical reports are available which explain the methodology and assumptions used in the models.

Figure 16: Business quadrants across Christchurch City



For Selwyn and Waimakariri, the projections by ANZSIC categories were distributed to zones to establish the demand by commercial and industrial activity. This was not disaggregated to sub-areas or defined to a finer grain for the purpose of this assessment. It is noted that the modelling of demand for Selwyn and Waimakariri Districts is constrained by the existing supply of land.

²³ Market Economics, Economic Futures Model (EFM)

²⁴ Australian and New Zealand Standard Industrial Classification

²⁵ produced by Property Economics

7.2 Retail Demand

Table 7: Retail demand summary for Greater Christchurch (hectares)

Area	Short (3 years)	Medium (10 years)	Long (30 years)
Christchurch	16	53	161
Selwyn	1	6	12
Waimakariri	4	8	11
Greater Christchurch	21	67	184

Christchurch City

It is estimated that the Christchurch City area currently generates just under \$5 billion per year in retail expenditure. By 2048 it is forecast that retail expenditure (including the 14% net inflow) will increase by \$260m, \$900m and \$2.9 billion in the short, medium and long terms respectively, relative to the current level of net retail demand.

The current level of annual retail expenditure is estimated to sustain around 903,300sqm of retail floorspace (Gross Floor Area, or GFA), increasing by around 525,000sqm to nearly 1,430,000sqm by 2048.

The assessment concludes that the Christchurch City net additional land requirement for retail and commercial service activities is estimated to be around 161 hectares by 2048. By sub-area or quadrant, the results suggest that over the long term, retail demand will be greatest in the northern and southern quadrants with a land requirement of 24ha and 40ha respectively. These demands correspond to areas of significant population and household growth projected and planned for, in these parts of the City.

Selwyn District

The demand for retail floorspace in Selwyn represents projected expenditure growth for retail activity of \$30.7 million over the short term, rising to \$143.2 million over the medium term and \$314.3 million over the long term.

The future level of retail expenditure is estimated to sustain additional floorspace of around 19,000sqm in the medium term, increasing to around 42,000sqm by 2048. In terms of land, this demand converts to approximately 6 hectares in the medium term and 12 hectares in the long term.

The results are for retail activity in the context of the Business 1 zone, being the commercial and retail centres serving the district's townships. This includes the activity centres of Rolleston and Lincoln together with the more localised town centres of Prebbleton and West Melton, and neighbourhood and local centres servicing residential subdivisions.

Waimakariri District

The demand for retail floorspace in Waimakariri District represents projected expenditure growth for retail activity of \$161.4 million over the short term, \$294.1 million over the medium term and \$421.5 million over the long term. The greater level of expenditure anticipated in Waimakariri District reflects current and emerging developments, including Ravenswood and current levels of expenditure being retained in the District over the long term.

The future level of retail expenditure is estimated to sustain additional floorspace of around 39,000sqm in the medium term, increasing to around 56,000sqm by 2048. In terms of land, this demand converts to approximately 8 hectares in the medium term and 11 hectares in the long term.

The results are for retail activity in the context of the Business 1 (town) and Business 4 (small neighbourhood) zones, which includes the town centres of Rangiora, Kaiapoi, Ravenswood, and Pegasus, together with smaller groups of shops serving local communities.

The results are based on an assumption that there is reduced leakage of expenditure in recent times to the City, based on the most recent expenditure data and may reflect the increased movement in population to new subdivisions in Rangiora and Kaiapoi. The recovery and future development of the town centres at Rangiora, Kaiapoi and Ravenswood will continue to attract residents and visitors to shop in Waimakariri District.

Greater Christchurch

The results at a Greater Christchurch level indicate a significant growth in expenditure over the long term, rising from \$452.1 million over the short term to \$3,625.8 million over the long term. This is driven by population growth and reflects the role of Greater Christchurch and its contribution to the South Island economy.

7.3 Office Demand

Table 8: Office demand summary for Greater Christchurch (hectares)

Area	Short (3 years)	Medium (10 years)	Long (30 years)
Christchurch	20	28	85
Selwyn	3	23	45
Waimakariri	13	14	19
Greater Christchurch	36	65	149

Christchurch City

The assessment concludes that within Christchurch City, there is forecast to be a land demand for commercial office development of 20 hectares over the short term, 28 hectares over the medium term and 85 hectares over the long term. Over half of this demand is projected within the central quadrant, suggesting that as the redevelopment and rebuild of Christchurch is completed, much of the recent growth in suburban locations, particularly the North and South quadrants of the City, will start to come back into the Central City and its periphery.

This reverses the trend seen over at least the last decade and exacerbated by the earthquake of a dispersal of office based employment in suburban locations. The central city can be expected to recover and to become a hub for retail, commercial and other sector employment.

Selwyn District

The results for office demand represent the demand for non-retail activities in commercial centres and is anticipated to be primarily in the commercial centres of Rolleston and Lincoln, being the major focal points for the community and business activity.

Waimakariri District

The results for office demand represent the demand for non-retail activities in commercial centres and is anticipated to be primarily in the commercial centres of Rangiora and Kaiapoi.

Greater Christchurch

Like retail growth, the increasing demand for office space is driven by population and the role of Christchurch in serving this population and the wider economy of the South Island. As discussed in the supporting technical report, the specialisation that occurs in office based sectors reflects the spatial concentration of activity in an urban economy and the benefits of connectivity and a highly skilled labour force.

7.4 Industrial Demand

Table 9: Industrial demand summary for Greater Christchurch (hectares)

Area	Short (3 years)	Medium (10 years)	Long (30 years)
Christchurch	89	32	482
Selwyn	27	29	53
Waimakariri	90	71	102
Greater Christchurch	206	132	637

Christchurch City

A number of scenarios were tested for assessing the likely industrial land demands in Christchurch for the next 30 years, to reflect the degree to which existing industrial land would be utilised by new industries as opposed to requiring new greenfield land.

Results from the adopted scenario indicate an industrial land requirement for Christchurch of 89 hectares in the short term, extending to over 480 hectares by 2048 (with allowance for both infrastructure requirements and the NPS-UDC additional margins).

For Christchurch City, the EFM forecasts that demand will continue to be greatest in the southern quadrant and to a lesser extent the north, with both the eastern and central quadrants having only modest land demands over the planning period. It must be remembered that the EFM is an unconstrained model which does not consider recent policy shifts and supply constraints that may change the trajectory of past trends (i.e. it projects demand forward from current locations at forecast growth rates). It is therefore possible that the south and north quadrants could have higher land demands as a result of the declining desirability in the east, and the east-west employment and population shift exacerbated by the earthquakes.

Demand in the central quadrant may also be less than projected on the basis that the Central City Mixed Use Zone is now also plan-enabled for higher value commercial and residential uses. It is therefore important to continue to monitor the spatial distribution of uptake by this sector over time.

Selwyn District

The projected demand of 53 hectares over the long term is for land in the Business 2 zone in Rolleston and Lincoln, the former being a major hub of industrial activity in Greater Christchurch. It is important to note that 'industrial' demand presented for Selwyn and Waimakariri reflects the demand for multiple activities that have traditionally located in the industrial zones including activities that are not traditionally thought of as 'industrial' (like retail and office). Also there is some industrial demand that will be located in other non-industrial zones (like rural manufacturing) which are excluded from the assessment of demand for Business 2 zone.

In the short term the requirement is around 9 hectares per annum. In the medium term, the level of demand does not increase significantly. This reflects the ending of the earthquake rebuild and the reduction in demands for inputs to the rebuild efforts, which has flow on impacts to sectors that tend to locate in industrial zones.

In the long term, the projections indicate that 2 hectares per annum will be required. Stakeholder feedback has indicated that demand for vacant industrial land in Rolleston in particular may be higher than what has been projected. However, at the time this report was compiled, there was no evidence provided to Council to substantiate the levels of demand outlined, but further engagement and scenario testing is recommended to validate the current estimates.

Waimakariri District

For Waimakariri District the results from the Growth model indicates that the demand for industrial land is around twice the level observed in Selwyn. However, like Selwyn, there is a reduced rate of growth associated with the end of the rebuild and an associated reduction in demand for land by sectors that tend to locate in industrial zones.

Greater Christchurch

At a Greater Christchurch level, the demand for industrial demand slows down significantly over the period from 2021 to 2028 with the end of the rebuild. The long term projections indicate growth in industrial demand although the sector will decline as a proportion of total employment (32% in 2018 to 22% in 2048). This reflects global trends including a shift towards service oriented sectors and the decline in manufacturing.

Reflecting the nature of the models, the growth in demand is projected in the locations of existing activity. However, it is possible that past trends continue and there are higher demands in the south west (e.g. Hornby, Rolleston) and north (e.g. Belfast) with a preference for the flexibility of greenfield over brownfield land and the benefits of these locations in terms of accessibility.

8. Business Development Capacity Te Kaha Whanake Umanga

In a similar manner to housing (refer to *Figure 14*), for the supply of new business land to effectively meet future demand across the short (1-3 years); medium (3-10 years) and long term (10-30 years) through to 2048, the following are required:

- land is appropriately zoned in relevant district plans for housing (plan-enabled capacity)
- key network infrastructure is available to the development site (serviced capacity)
- the development is sufficiently commercially attractive (commercially feasible).

This section provides a summary of the assessment of plan-enabled and serviced capacity across Greater Christchurch. The following Section 9 addresses the feasibility of this capacity and ultimately reports on the current sufficiency over the short, medium and long term.

Table 10: Greater Christchurch plan enabled capacity (hectares)

Area	Minimum Total net capacity	Maximum Total net capacity
Commercial	168	196
Industrial	1,288	1,367

The significant quantum of industrial land that is vacant or could be redeveloped reflects a number of factors including:

- the recent zoning of land for industrial activities in the City through the replacement District Plan process;
- the large quantum of vacant land that has been available in recent years;
- the redevelopment potential estimated in Selwyn and Waimakariri, which could be less than estimated.

For Christchurch City, plan enabled capacity for all business activity draws on the Christchurch City Council's existing Vacant Land Register (VLR), which includes information on the total quantum and size of vacant parcels in both industrial and commercial zones (both partially and wholly vacant sites), zoning, location and other attributes of each parcel.

This information has been collected over a number of years and is based primarily on changes in the built form, identified through building consent data for construction and demolitions, and reviewed, where necessary, against aerial/ satellite photography. GIS layers are used to ensure parcel and zoning information is accurate.

In addition, land use surveys of all commercial centres was undertaken to quantify actual retail floorspace and estimates of out of zone commercial activity. This identified the amount of existing occupied retail floorspace both in zone and out of zone, as well as quantifying vacant sites and floorspace.

It should be noted that the redevelopment potential of existing developed sites was not incorporated, aside from consented or known developer intentions. Estimates of supply are therefore conservative and potential shortfalls in supply may be addressed through redevelopment opportunities. Also not accounted for is vacant floorspace for industrial activities. Data has been sourced²⁶ but the coverage is not City-wide so it does not capture vacant floorspace.

Plan-enabled capacity for Selwyn and Waimakariri district areas was derived from the respective Growth Models commissioned by these councils. The task of determining plan enabled capacity forms part of the Growth Model, developed for Waimakariri and Selwyn District Councils²⁷.

8.1 Plan-enabled capacity – Commercial²⁸

Christchurch City

Table 11: Vacant commercial land in Christchurch City (by quadrant)

Area	sub-market area	Vacant (Whole)	Vacant (Part)	net capacity ²⁹	Total net capacity
Christchurch					129
	Central	28	7	42	
	East	11	8	23	
	North	21	8	30	
	South	24	8	34	

Source: CCC Vacant Land Register

²⁶ from JLL Real Estate Intelligence Service

²⁷ developed by Market Economics Limited

²⁸ office and retail vacant land is aggregated as these activities largely occupy the same zones

²⁹ includes additional capacity from vacant floorspace and known redevelopment projects

Table 11 identifies an existing supply of 129 hectares of vacant commercially zoned land in Christchurch City, which equates to 23% of total supply zoned for commercial activities. This includes 25 hectares of vacant land with a mixed (primarily commercial) zoning in the Central City. The large quantum of vacant land in the Central quadrant is in the Central City Business and Mixed Use Zones and reflects the significant earthquake related demolitions and surplus of vacant commercial floorspace. It is important to note that commercial activity also occurs outside of these centres, within industrial, specific purpose zones (e.g. hospital or airport) and residential zones in particular.

The results indicate a fairly equitable distribution of vacant commercial land around the City, except for in the East. The Eastern quadrant, like the Central quadrant was severely affected by the Canterbury earthquakes and has suffered from a consequential loss in both population and employment opportunities.

Table 12: Size and location (by quadrant) of vacant commercial land parcels in Christchurch City

QUADRANT	<1000m ²	1000m ² - 5000m ²	5000m ² -1 ha	1ha -2ha	2ha – 5ha	>5ha
North	14.95	12.48	17.44	41.01	14.11	---
South	6.97	15.31	9.63	34.63	9.54	23.92
East	27.8	13.93	21.73	18.91	17.64	---
Central	44.90	35.31	6.88	8.46	4.44	---
All vacant commercial land parcels (%)	26.53	22.55	11.76	23.60	9.51	6.05

Source: CCC Vacant Land Register

As would be expected, the majority of commercially zoned land parcels are small, and many of these small sites are located in and around the CBD (noting that there is no minimum lot size in the Commercial Central City Business Zone). It otherwise appears that there is presently a range of vacant commercial lot sizes across the City which provides sufficient choice for businesses. Notwithstanding this, the size of lots is less important for commercial activities reflecting the varying tenure and site configuration variables.

Selwyn and Waimakariri Districts

Table 13: Vacant commercial land in Selwyn and Waimakariri Districts (hectares)

Area	sub-market area	Vacant ³⁰	Vacant potential ³¹	net capacity	Total net capacity
					39 - 67
Selwyn	N/A	26	10	26-36	
Waimakariri³²	N/A	13	18	13 - 31	

Source: WDC/ SDC, Market Economics Limited

The estimate of plan enabled capacity in Selwyn is in the Business 1 zone, which as described earlier, comprises the commercial and retail centres serving the district's townships. The quantum of vacant land represents 76% or 26 hectares of the total capacity. There is projected to be an additional 10 hectares of Vacant Potential land available, but its availability is contingent on developers making more optimal uses of the available land.

In the context of Waimakariri, the estimate is for the Business 1 and 4 zones, being the larger centres of Rangiora, Kaiapoi, Ravenswood (under development) and Pegasus together with neighbourhood and local centres. The quantum of vacant land equates to 42% of the total land supply.

³⁰ 'Vacant' land includes properties that have no floorspace or building footprint in 2016, excludes the vacant floorspace in existing buildings

³¹ 'Vacant Potential' includes properties that have low levels of floorspace and could accommodate more floorspace within the property (potential for redevelopment)

³² Business 1 and 4 zones

8.2 Plan-enabled capacity - Industrial

Christchurch City

Table 14: Vacant industrial land in Christchurch City (by quadrant in hectares)

Area	sub-market area	Vacant (Whole)	Vacant (Part)	net capacity	Total net capacity
Christchurch					934³³
	Central	6	2	8	
	East	27	36	63	
	North	-	-	425	
	South	176	260	438	

Source: CCC Vacant Land Register

As summarised above, Christchurch has 934 hectares of zoned industrial land that is either wholly or partly vacant. Vacant industrial land is 38% of the total supply zoned for these activities.

Additional capacity is available for industrial use within the Commercial Central City Mixed use Zones (i.e. industrial activities are permitted). However this land has not been counted as industrial land supply for the purposes of this assessment on the basis that it is also now enabled for commercial and residential uses and it is considered more likely that land will be developed for these higher value uses than for industrial.

Table 15: Size and location (by quadrant) of vacant industrial land parcels in Christchurch City

QUADRANT	<1000m ²	1000m ² - 5000m ²	5000m ² -1 ha	1ha -2ha	2ha – 5ha	>5ha
North	0.16	3.54	4.75	13.59	22.46	55.49
South	0.55	6.70	12.34	12.70	23.23	44.48
East	4.73	19.46	27.19	20.00	10.14	18.48
Central	64.21	30.10	5.69	--	--	--
All vacant industrial land parcels (%)	1.38	6.54	10.00	13.6	21.39	47.08

Source: CCC Vacant Land Register

Table 15 indicates that there is existing choice in sizes of vacant lots. The significant areas of large unsubdivided lots in industrial zones in the North and South quadrants reflects the recently zoned greenfield areas in Belfast and south-west Hornby.

There are a range of smaller sized vacant sites in the east, and in and around the CBD (Central) area. This is consistent with subdivision patterns in these older industrial areas, and the types of activities that have historically located there. Discussions with the development sector indicate that in the Christchurch context, demand is being driven by smaller local enterprises that have outgrown their former sites and seek purpose built premises with 'room to grow'. Both Christchurch City and Selwyn Districts have also seen greater demand for large sites to accommodate buildings such as for the storage and distribution industries, which can be up to or over one hectare in size. Sites of this size result in faster take-up rates of industrially zoned land, a factor which has probably contributed to low rates of vacant floorspace in the wider Hornby area.

In reality, size of lots is only one element of demand for industrial land and will be strongly influenced by type of activity under consideration, and the size of lots which the market makes available.

Selwyn and Waimakariri Districts

Table 16: Vacant industrial land in Selwyn and Waimakariri districts (hectares)

Area	sub-market area	Vacant	Vacant potential	net capacity	Total net capacity
					354 - 433
Selwyn	N/A	245	27	245-272	
Waimakariri³⁴	N/A	109	52	109 - 161	

Source: WDC/ SDC, Market Economics Limited

³³ includes 50ha of greenfield priority area for business not yet zoned for industrial purposes

³⁴ Business 1 and 4 zones

The data presented in the *Table 16* provides a range of available supply in the Business 2 zone (Rolleston and Lincoln) in Selwyn and Business 2 zone³⁵ in Waimakariri Districts based on the two measures as part of respective Growth Models.

The quantum of Vacant land in Selwyn represents 90% of the total capacity while in Waimakariri the quantum of vacant land represents 68% of the total capacity. The balance within the respective districts represents the Vacant Potential, which is the redevelopment potential of underutilised sites.

Additional anecdotal evidence from stakeholders also signalled that there may be reduced supply due to the potential for a lag between when land is sold and when the modelling records the land as being occupied. No evidence was provided at the time this report was written, but is a matter that will require ongoing monitoring and refinement. Overall it is considered that the results presented in this report provide a reasonable proxy of the supply currently available.

8.3 Availability of infrastructure

As outlined in section 4.2 above, the spatial planning work over the last decade also means the majority of plan-enabled business land is now serviced with the necessary development infrastructure. Development of plan-enabled capacity in Selwyn and Waimakariri has no significant development infrastructure constraints. In Christchurch, some short and medium term wastewater constraints exist for industrial land in the south and north quadrants and a few areas are not planned to be serviced even in the long term and so are discounted when subsequently assessing sufficiency³⁶.

Commercial

Table 17: Infrastructure constraints for vacant plan-enabled commercial land across Greater Christchurch

Area	Short term 2018-2021	Medium term 2021-2028	Long term 2028-2048
Christchurch			
plan-enabled capacity	129	129	129
constraints	9.4	0	0
net serviced capacity	119.6	129	129
Selwyn			
plan-enabled capacity	26-36	26-36	26-36
constraints	0	0	0
net serviced capacity	26-36	26-36	26-36
Waimakariri			
plan-enabled capacity	13-31	13-31	13-31
constraints	0	0	0
net serviced capacity	13-31	13-31	13-31
Greater Christchurch			
plan-enabled capacity	168-196	168-196	168-196
constraints	9.4	0	0
net serviced capacity	158.6-186.6	168-196	168-196

In the context of Christchurch, there is only one area that is not serviced in the short term, being the Commercial Core zone at Belfast/ Northwood, which has no wastewater and water supply infrastructure.

There are no constraints in respect of development infrastructure for commercial zoned land in Selwyn and Waimakariri, with the servicing of new neighbourhood centres in the Falcon's Landing subdivision and Geddes/Dryden Trust Special Housing Area occurring in the short term in conjunction with the housing development around these centres.

³⁵ Business 2 zone comprises industrial and commercial areas which are characterised by large-scale buildings, low density of development and industrial type activities

³⁶ Chaney's in the north has some dry industry already established in the area relying on septic tanks

Industrial

Table 18: Infrastructure constraints for vacant plan-enabled industrial land across Greater Christchurch

Area	Short term 2018-2021	Medium term 2021-2028	Long term 2028-2048
Christchurch			
plan-enabled capacity	934	934	934
constraints	327	226	226
net serviced capacity	607	708	708
Selwyn			
plan-enabled capacity	245-272	245-272	245-272
constraints	14	0	0
net serviced capacity	231-258	245-272	245-272
Waimakariri			
plan-enabled capacity	109-161	109-161	109-161
constraints	0	0	0
net serviced capacity	109-161	109-161	109-161
Greater Christchurch			
plan-enabled capacity	1,288-1,367	1,288-1,367	1,288-1,367
constraints	341	226	226
net serviced capacity	947-1,026	1,062-1,141	1,062-1,141

In Christchurch, wastewater and water supply constraints exist for industrial land in the South (South West Hornby, Springs Road and Awatea) and North (Chaney's, North Belfast, Wairakei Road, Memorial Avenue (MAIL)) quadrants in the short term (not serviced), medium term (not programmed to be serviced) and long term (not identified in an Infrastructure strategy). Those areas not planned to be serviced even in the long term are discounted when subsequently assessing sufficiency but which provide capacity for existing and future industrial activities e.g. Chaney's.

Notwithstanding that, development in some of these areas could be advanced by developers providing a connection outside of their landholdings to the City Council's network.

Other Infrastructure (beyond Council infrastructure)

Information on the supply of other infrastructure (including land transport, telecommunications, energy and other infrastructure not controlled by Councils) was sourced directly by such providers or indirectly through ChristchurchNZ. Feedback suggests that access to 'other infrastructure' is either available or likely to be available to service all business land needs over the next 30 years.

9. Business Feasibility and Sufficiency

Te Whaihuanga me te Āhua ā-Umanga

The NPS-UDC requires an assessment of whether or not any identified development capacity for business land would be commercially feasible to develop. Policy PB3 requires councils to assess the current feasibility of development capacity from the perspective of a developer, and the NPS defines feasibility as “development that is commercially viable, taking into account the current likely costs, revenue and yield of developing.”

The methodology applied to assessing the feasibility of land has involved multi-criteria analysis (MCA) as recommended in NPS-UDC guidance. Input on the criteria to be used and the relative importance of different criteria was sought from representatives for the development sector (including the Property Council, CBRE, Colliers, JLL and the Manufacturers Network - previously known as the New Zealand Manufacturers and Exporters Association).

An evaluation was then completed of geographic areas (described below as “clusters”) identified for business activities in District Plans and the Regional Policy Statement in the urban areas of Christchurch, Rolleston, Lincoln, Prebbleton, West Melton, Rangiora, Kaiapoi and other townships that are contained within the Greater Christchurch boundary. Significant landowners within these clusters were provided an opportunity to inform this assessment.

The assessment undertaken using a defined set of criteria was to determine which locations are suitable and available for development as a proxy for feasibility. This criteria included consideration of:

- site/ configuration
- proximity to housing
- visibility to customers (For Commercial sites)
- access to arterial roads (For Industrial sites)
- public transport accessibility
- planning constraints
- development constraints
- natural constraints
- infrastructure
- features/ environment
- market availability
- legal/ property tenure
- resource consent
- price

9.1 Feasibility - Commercial

Most commercial-zoned sites in Christchurch City are likely feasible for some form of commercial activity. The centres listed below have vacant land that is considered not feasible for the reasons listed below and which was discounted from the plan-enabled capacity calculations.

Table 19: Centres with vacant land that is considered not feasible for commercial development

Site	Size (m2)	Reasons
Christchurch	15,032	
18A Belfast-Northwood	4,750	Narrow strip of land between the river and SH74. District Plan Outline Development Plan rules make buildings in this area a non-complying activity.
32A Central City Business	2,048	Site has recent consent to rebuild a historic church
32F Central City Mixed Use	5,058	Three sites with recent consents for apartment complexes.
50A Redmund Spur	3,176	Centre is not connected to the road network or servicing, is relatively isolated and does not seem at the moment to have a sufficiently large existing residential catchment to support most commercial activities.

In the context of Selwyn, the conclusion from the MCA was that most areas scored highly, indicating that while some areas had constraints, they are unlikely to be so significant that it makes the land unfeasible to develop from a market perspective. This is consistent with the advice provided at the one on one engagement discussions held with the significant land owners who signalled an interest in meeting.

A similar conclusion was reached from the MCA for commercial areas in Waimakariri, and therefore no areas were deemed to be not feasible.

9.2 Sufficiency – Commercial

Table 20: Sufficiency of commercial supply for Greater Christchurch and by Territorial Authority

Area	Short term 2018-2021	Medium term 2021-2028	Long term 2028-2048
Christchurch			
Demand	36	81	246
Supply ³⁷	118	128	128
Sufficiency	82	47	-118
Selwyn			
Demand	4	29	57
Supply	26-36	26-36	26-36
Sufficiency	+22 to +32	-3 to +7	-31 to -21
Waimakariri			
Demand	18	22	30
Supply	13-31	13-31	13-31
Sufficiency	-5 to +13	-9 to +9	-17 to +1
Greater Christchurch			
Demand	58	132	333
Supply	157-185	167-195	167-195
Sufficiency	99-127	35-63	-166 to -138

Christchurch City

As shown above, Christchurch City has sufficient commercial land over the short and medium terms. However a projected shortfall of 118 hectares is forecast over the long term, which it expected to be realised within about 20 years.

Over the long term, a shortfall is anticipated for commercial land for all quadrants, reflecting the shift in the economy's employment composition to a projected higher proportion of commercial employees. The largest shortfall is within the Central quadrant, at 77 hectares. It must be borne in mind that the sufficiency of commercial land development depends inherently on the assumptions used to calculate demand and supply forecasts. In the case of commercial land in Christchurch City, average building storey height of 3.3 was adopted for the Central quadrant. A higher average building storey height assumption would obviously have a bearing on overall commercial land sufficiency citywide, but particularly for this quadrant where taller buildings are more likely.

Selwyn District

A comparison of projected demand against available plan-enabled supply utilising the Vacant supply measure indicates that Selwyn has sufficient commercial land in the short term, but that there is an undersupply within the medium term. A projected shortfall of 31 hectares is forecast over the long term, once again using the Vacant land supply measure. Vacant Potential supply may provide additional capacity sufficient to meet the medium term needs, although it is dependent upon more optimal uses of business land. The variations between the Vacant and Vacant Potential supply estimates emphasise the need for regular monitoring to gauge the extent to which commercial land is utilised or redeveloped to more optimal ratios in Selwyn than what is currently the case.

Waimakariri District

A comparison of projected demands against available plan-enabled supply indicates that Waimakariri has a potential shortfall of land of around 17 hectares (when considering only vacant commercial land with future demand) as outlined in *Table 20*. If the potential redevelopment of existing underutilised commercial land is included in the total supply available, this changes the overall result from a shortfall of 17 hectares to a surplus of 1 hectare.

Greater Christchurch

Sufficiency	99-127	35-63	-166 to -138
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The results on sufficiency at a Greater Christchurch level indicate a sufficient supply of feasible commercial land to meet demand in the short and medium term. In the long term, there is an apparent shortfall. However, as stated above, this is premised on a number of assumptions to calculate demand and supply and further testing of these assumptions will be required together with active monitoring of take-up rates and projected changes in demand. The redevelopment of under-utilised sites and use of existing vacant floorspace may also affect the extent to which there is sufficient land.

³⁷ Serviced and feasible land

9.3 Feasibility – Industrial

Most industrial-zoned sites in Christchurch City are likely to be feasible for some form of industrial activity. There was not significant variability between the scores. Notwithstanding this, the following clusters have vacant land that is considered not feasible for the following reasons:

Table 21: Clusters with vacant land that is considered not feasible for industrial development

Site	Size (m2)	Reasons
Christchurch	9,610	
26C Bower Avenue	1,896	Several sites have very significant natural hazards constraints.
46C Woolston / Ferrymead	5,185	Site of a demolished apartment complex intended to be rebuilt
52B Lyttelton	2,529	Site has recent consent to rebuild a historic fire station

In the context of the significant supply of industrial land within Christchurch City identified in the preceding section, this one hectare of 'unfeasible' land would appear to be insignificant.

9.4 Sufficiency – Industrial

Table 22: Sufficiency of industrial supply for Greater Christchurch and by Territorial Authority

Area	Short term 2018-2021	Medium term 2021-2028	Long term 2028-2048
Christchurch			
Demand	89	32	482
Supply ³⁸	607	708	708
Sufficiency	518	676	226
Selwyn			
Demand	27	29	53
Supply	231-258	245-272	245-272
Sufficiency	204-231	216-243	192-219
Waimakariri			
Demand	90	71	102
Supply	109-161	109-161	109-161
Sufficiency	19-71	38-90	7-59
Greater Christchurch			
Demand	206	132	637
Supply	947-1,026	1,062-1,141	1,062-1,141
Sufficiency	741-820	930-1,009	425-504

Christchurch City

In the City, there is likely to have sufficient, feasible and serviced industrial land supply to meet projected needs for the next 30 years. There is 885 hectares of vacant industrial land in Christchurch City that is zoned for industrial purposes (along with a further 50 hectares of rural zoned land that is identified in the Canterbury Regional Policy Statement as potential future industrial land).

Whilst some of this land (around 225 hectares) has infrastructure servicing and other constraints that may limit the ability to bring the land to market over the planning period, even excluding this land would still leave a balance of over 700 hectares available to meet a projected long term demand for 482 hectares of industrial land in the City (a surplus of 226 hectares).

³⁸serviced and feasible land

Some of this constrained land will nonetheless also be utilised for industrial purposes over the long term as a result of developer-led provision of infrastructure, reconsideration of infrastructure funding priorities and/or because some land can be used for industrial purposes, even without being fully serviced.

Selwyn

The assessment of sufficiency indicates that the Selwyn district is likely to have sufficient, feasible and serviced industrial land supply to meet projected needs for the next 30 years. This plan-enabled land is serviced and relatively free from any development constraints that may limit its feasibility to be developed or redeveloped for some form of industrial activity. Ongoing stakeholder engagement and monitoring of the uptake of industrial land is required to quantify whether this projected over-supply reflects the market realities

Waimakariri

The assessment of sufficiency indicates that the Waimakariri district is likely to have sufficient, feasible and serviced industrial land supply to meet projected needs for the next 30 years. However there are some questions around the distribution of industrial land, including the range of property sizes and tenures, to meet foreseeable demands. Monitoring of vacant land and take-up rates around Rangiora and Kaiapoi will be important to understand the locations of greatest demand and whether land supply is being responsive to those demands over time.

Greater Christchurch

Sufficiency	741-820	930-1,009	425-504
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At a Greater Christchurch level, there is a significant quantum of industrial land, which is more than sufficient to meet future demand. This is even without including land that is not serviced but will continue to be utilised for industrial activities e.g. Chaney's, and land that may be serviced as a result of provision by developers and/or the reconsideration of funding priorities. However, there remains a need for monitoring and future capacity assessment to consider the supply at a finer grain and whether it is meeting the needs of specific industries.

10. Housing and Business Interactions

Ngā Taunekeneke a te Whare me te Umanga

The urban form of Greater Christchurch has principally been shaped by the creation and subsequent expansion of the colonial settlements laid down in the 19th century. During the latter part of the 20th century, the pattern of development was particularly influenced by the change in dominant transport mode from foot, bicycle and tram to the private car. This contributed to the trend of suburban growth including the dispersal of office and retail activities from the central city to suburban locations and the widespread development of shopping malls. The availability of significant areas of flat land that were relatively easy to subdivide and service also meant the Greater Christchurch area grew with lower densities than other New Zealand cities.

More recently, the impacts of the earthquakes has seen a relocation of households and businesses from the more damaged central and eastern areas of the City, and eastern Kaiapoi, to areas to the west, reinforcing and accelerating established growth trends. These changes have had a major impact on the transport network across Greater Christchurch.

Although there remains significant rural zoned land within the Greater Christchurch area, much of this is constrained, especially around the City’s edge, by a range of environmental, planning and physical factors. These include flood and coastal hazard areas, residential development restrictions within the airport noise contour, business and residential restrictions in the aquifer protection zone, operational and unremediated quarry sites, and areas of high landscape or ecological value.

10.1 Locational preferences and spatial impacts

The locational preferences for different types of households and businesses vary according of social and economic factors. Housing preferences relate to the homes and locations that suit people’s lifestyles and financial circumstances. They are also determined, at least in part, by where people work, their choice of school and desire to access different services and amenities. People are often required to consider the trade-offs between various housing and locational choices.

The way people are living is also changing, in part reflecting an ageing and more diverse population with a trend to less people per household. A detached house on a large section with private, open space constitutes the bulk of housing in Greater Christchurch. However, increasingly this type of housing may not suit, or be affordable, for all households.

Figure 17: Trade-offs for different residential locations in Greater Christchurch

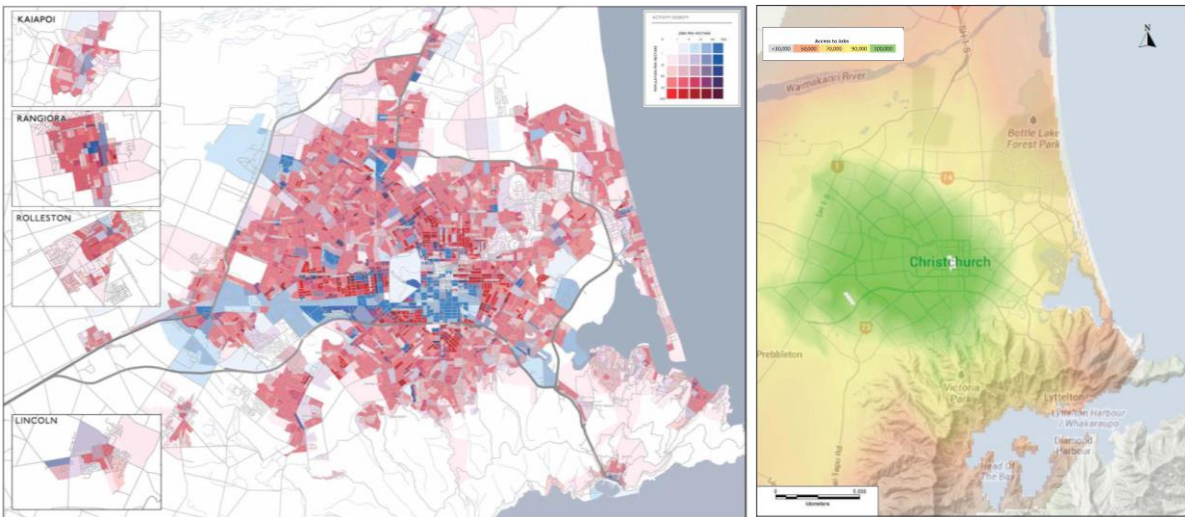


Location preferences for businesses vary widely according to the nature of the commercial and industrial activities. Feedback that informed the business feasibility assessment highlighted access to the strategic transport network as a necessary factor for industrial activities, while good proximity to residential areas (a nearby workforce and customer base) was important for office and retail activities. Proximity to associated business activities also influences the location choices of many businesses.

As outlined elsewhere in this document, current development capacity enabled through plans, and their underpinning planning policy, has sought to support locational choices within an integrated urban form that provides suitably located greenfield and intensification opportunities. This development capacity also reinforces the role the central city and activity centres as focal points for people to shop, work, meet, relax and often live.

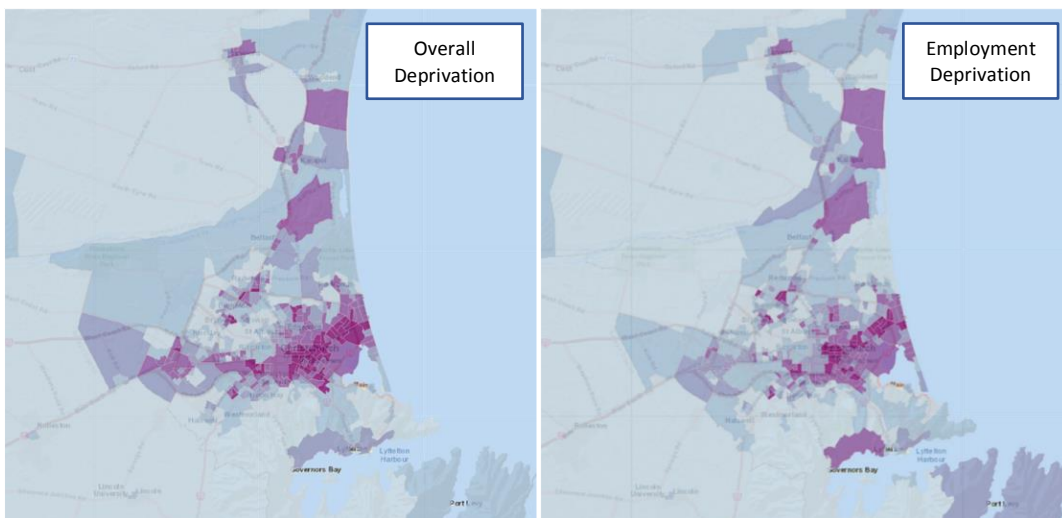
In this context, employment in Greater Christchurch is predominately focused in and around the central city, and along the strategic road network to the west. Consequently, access to jobs is highest in the central and western areas of the City (*Figure 18*), which has contributed to higher population growth in the western areas over time. Access to activity centres is also relatively high for much of Greater Christchurch, although accessibility is generally lower for people travelling by public transport, bicycle and walking.

Figure 18: Population and employment densities, and access to jobs, in Greater Christchurch



Access to this concentration of employment affects the socio-economic opportunities of different communities in the Greater Christchurch area, with higher levels of employment deprivation especially evident in the City’s eastern areas. Reduced access to jobs, coupled with a range of other important social and economic factors (including the impacts of the earthquakes), has placed some areas in the City’s east within the top 5% most deprived in New Zealand (*Figure 19*).³⁹

Figure 19: Overall and employment deprivations in Greater Christchurch

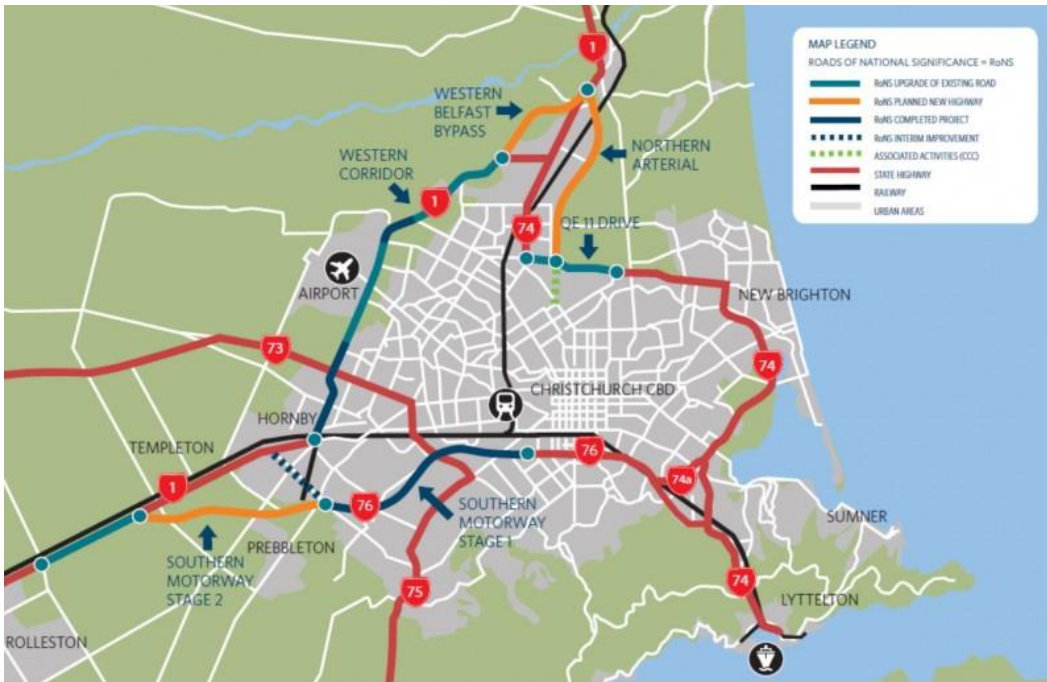


³⁹ New Zealand Index of Multiple Deprivation 2013 indicators are grouped under employment, income, crime, housing, health, education and access to services.

10.2 Transport and accessibility

The Greater Christchurch transport network currently provides reasonable ease of travel and access in the sub-region. The Roads of National Significance projects are anticipated to be completed by 2021.

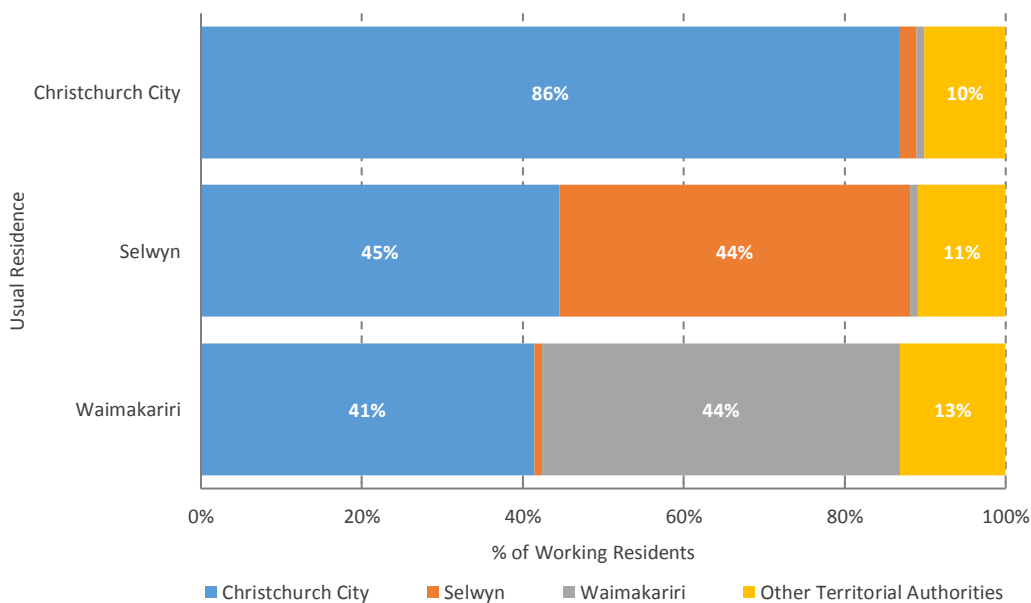
Figure 20: Strategic Road Network in Greater Christchurch



The 2013 Census data shows that 80% of workers employed in the Waimakariri district also lived in the district, while Selwyn was at a slightly lower share at about 70%. Most working residents in Christchurch City were employed in the city, with only 5900 working in Selwyn and Waimakariri, however a significant proportion travel between the City’s sub areas.

An important aspect of current travel patterns across the network is that over 40% of the Selwyn and Waimakariri workforce commute to the City for work (totalling some 22,000 people) and these are primarily single occupant vehicle trips. Data also indicates that average trip lengths have grown by between 5-10% over the last decade.

Figure 21: Workplace address for residents in Christchurch City, Selwyn and Waimakariri, 2013



Recently completed strategic business cases note the challenges relating to post-earthquake disruption and land use changes. Increased congestion and delays on parts of the network, weaker journey time reliability for all modes, and the reliance on the private motor car is constraining the ability of the transport system to move people and goods efficiently, and has led to localised pinch points and low corridor productivity. Road safety also remains a key challenge for the network.

In order to understand the effects of projected additional demand across Greater Christchurch on the transport network, high-level initial modelling of the population projections outlined in section 3.1 was undertaken using the Christchurch Transportation Model (CTM)⁴⁰. More detailed modelling will be necessary to provide more certainty of the implications for transport of growth and test the effects of approaches to encourage a greater proportion of trips by public transport, car sharing, walking and cycling. Therefore this interim modelling only gives an indication of what the implications possibly could be.

The results show that, if such projected population growth occurred, the network could experience some significant increases in traffic and travel demand over the next 30 years, which will increase delays in the sub-region and have some substantial impacts in some locations. Trips at peak times could take on average 15% longer by 2048 than they do now. This is much more severe than envisaged under previous population projections (which envisaged trips would take on average just 2% longer by 2048 than they do now). However this will vary greatly across the Greater Christchurch. The increase in travel times from the western areas of Christchurch City, Selwyn and Waimakariri into the Central City will be much worse, with travel times 60% longer by 2048 than they are now. These travel time delays are also likely to vary significantly from day to day, which will make it difficult for people to know how long their journey will be each day.

There could be a substantial cost to the regional economy from increased travel times, as freight will take longer to transport around Greater Christchurch, and to and from the airport, port, distribution centres and warehouses.

A sensitivity test for 2048 was also modelled to test the extent to which the location of growth has an impact on the transport network. The same projected population growth total for Greater Christchurch was used, but a higher proportion of the growth was distributed to Christchurch City, rather than Selwyn and Waimakariri Districts. The results of the sensitivity test demonstrated that the location of land use growth can significantly impact the distribution of trips and the resulting levels of congestion, with marginally better average speeds and travel times with a higher proportion of the growth distributed to Christchurch City.

10.2 Land use and price efficiency indicators

MBIE has developed price efficiency indicators to assist local authorities in understanding how well their land and development markets are functioning, and the potential impact of their land use regulations on these markets. They can be used as signals of whether plans have been providing enough development capacity to meet the demand for different types of land use activities.

The four price efficiency indicators include:

- Price-cost ratios: showing the extent to which land or construction costs have been contributing to home prices.
- Land ownership concentration: showing whether the market for new developable residential land is dominated by a few land owners.
- Rural-urban differentials: showing the impact on the value of sections at the urban edge from land regulations that constrain urban residential development capacity.
- Industrial zone differentials: showing whether zoning at specific locations matches current relative demands for different land uses.

The capacity assessment appendices include some interrogation of these price efficiency indicators, but further consideration of what these indicators mean for planning responses in Greater Christchurch will be a necessary part of preparing the future development strategy. It will be important to consider the indicators in the context of the capacity assessment findings and our understanding of local land and development markets.

⁴⁰ The CTM includes the recent and planned strategic road network improvements except for the planned thirds SH1 southbound lane on the Waimakariri bridge.

11. Completing the Settlement Pattern Review Te Whakaoti i te Arotake ā-Nohoanga

As stated above, this capacity assessment provides an evidence base to inform future planning responses across Greater Christchurch. Further work as outlined in this assessment will add to this evidence, including:

- ongoing quarterly monitoring of urban development indicators, including demographic projections
- continued engagement with the development sector to better understand perceived market needs
- further refinements to the commercial feasibility tools used as part of this assessment, including undertaking different feasibility scenarios (i.e. changing base build costs, profit margins, land values and sales price)
- further analysis of dwelling sufficiency at specific price points and for different housing typologies
- more research to understand how changing lifestyle choices impacts the demand for new dwelling types
- further refinement of business land survey methods
- exploring the extent to which redevelopment of existing business land can contribute to future needs
- sourcing information from related processes underway (outlined in the policy and planning context section 2.2)

The Partnership will consider the findings from the capacity assessment and ongoing monitoring of urban development indicators when completing the settlement pattern review as part of its work during the remainder of 2018.

11.1 Future Development Strategy

The NPS-UDC requires that Councils produce a future development strategy (FDS) which demonstrates that there will be sufficient, feasible development capacity in the medium and long term and sets out how minimum housing targets will be met.

The Partnership already has a strategy to guide growth, enable and manage future urban development and support quality urban environments - the Greater Christchurch Urban Development Strategy. This is why, rather than preparing a new standalone future development strategy, we are now reviewing the settlement planning aspects of the UDS and in so doing incorporating aspects required by the NPS-UDC. Once completed, this updated 2018-2048 settlement pattern will form part of the UDS.

In 2016 the Partnership reaffirmed the UDS vision:

'By the year 2041, Greater Christchurch has a vibrant inner city and suburban centres surrounded by thriving rural communities and towns, connected by efficient and sustainable infrastructure. There is a wealth of public spaces ranging from bustling inner city streets to expansive open spaces and parks, which embrace natural systems, landscapes and heritage. Innovative businesses are welcome and can thrive, supported by a wide range of attractive facilities and opportunities. Prosperous communities can enjoy a variety of lifestyles in good health and safety, enriched by the diversity of cultures and the beautiful environment of Greater Christchurch.'

This capacity assessment helps highlight projected future housing and business demands, clarifies the gaps in our knowledge, and establishes the additional work we can do to improve our understanding.

11.2 Engagement

The Partnership will release a draft 2018-2048 settlement pattern document in August 2018. This will outline proposals to address capacity shortfalls and confirm what more we need to do to realise the vision set out in the UDS. Stakeholder and community feedback will be sought, with an opportunity for formal submissions and the presentation of these as part of a hearings process. Further details will be provided in due course and additional information placed on the Partnership's website www.greaterchristchurch.org.nz/ourspace.

11.3 Challenges and Opportunities

In addition to the work to complete this capacity assessment, the Partnership received a [briefing paper](#)⁴¹ outlining key strategic issues and the wider strategic context in which the settlement pattern review is taking place. The paper identified the following challenges affecting settlement pattern and the realisation of UDS strategic goals:

- urban form
- intensification
- east-west development patterns
- growth prospects
- land use and transport integration
- role of public transport and new transport technologies/services
- managing the rural edge
- strategic importance of the airport
- housing the most vulnerable
- urban water quality
- resilience
- quality of place and placemaking
- funding implications and alignment.

In this context, options to provide for and manage the effect of projected population growth in Greater Christchurch will be a key consideration of the future development strategy. Integrated transport and land use planning responses will need to consider how to maximise positive interactions between housing and business areas and foster an urban environment that is liveable, safe, sustainable and healthy.

⁴¹ Settlement Pattern Review – Outcomes and Challenges: a briefing paper prepared for the Greater Christchurch Partnership (August 2017)