Christchurch City Council

New Medium Density Residential Standards (MDRS) Assessment of Housing Enabled

January 2022

the propertygroup

Contents

Quality control

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01	30 January 2022	Draft for review by PCG	Anna Harley	
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Executive Summary

The Property Group Limited (TPG) has been engaged by Christchurch City Council (Council) to undertake an analysis of the impact of the recent policy direction for urban growth under the National Policy Statement on Urban Development (NPS-UD) and in particular the new Medium Density Residential Standards (MDRS) for Christchurch City.

The NPS-UD and subsequent MDRS will make changes to the planning framework that guides the future development of Christchurch City. The focus of this assessment is the changes imposed by the MDRS which allow for an increase in medium density residential development throughout existing residential areas. The purpose of this analysis is to understand how those changes will impact the location and type of housing development that is enabled across the city.

TPG's analysis has utilised a GIS platform to build a capacity model across the cities residential zones on a parcel by parcel basis to reflect where medium density development is deemed feasible. Development of the model has been based on a series of assessments undertaken to determine yields to be applied across each parcel. This has included a residential market assessment, typology development and testing, and development feasibility analysis.

The key findings of the capacity assessment and analysis are summarised below.

An increase in potential for medium density development

This assessment demonstrates that the new policy framework enables medium density development in the majority of the cities residential areas, creating an estimated plan enabled capacity of 222,478 medium dwellings.

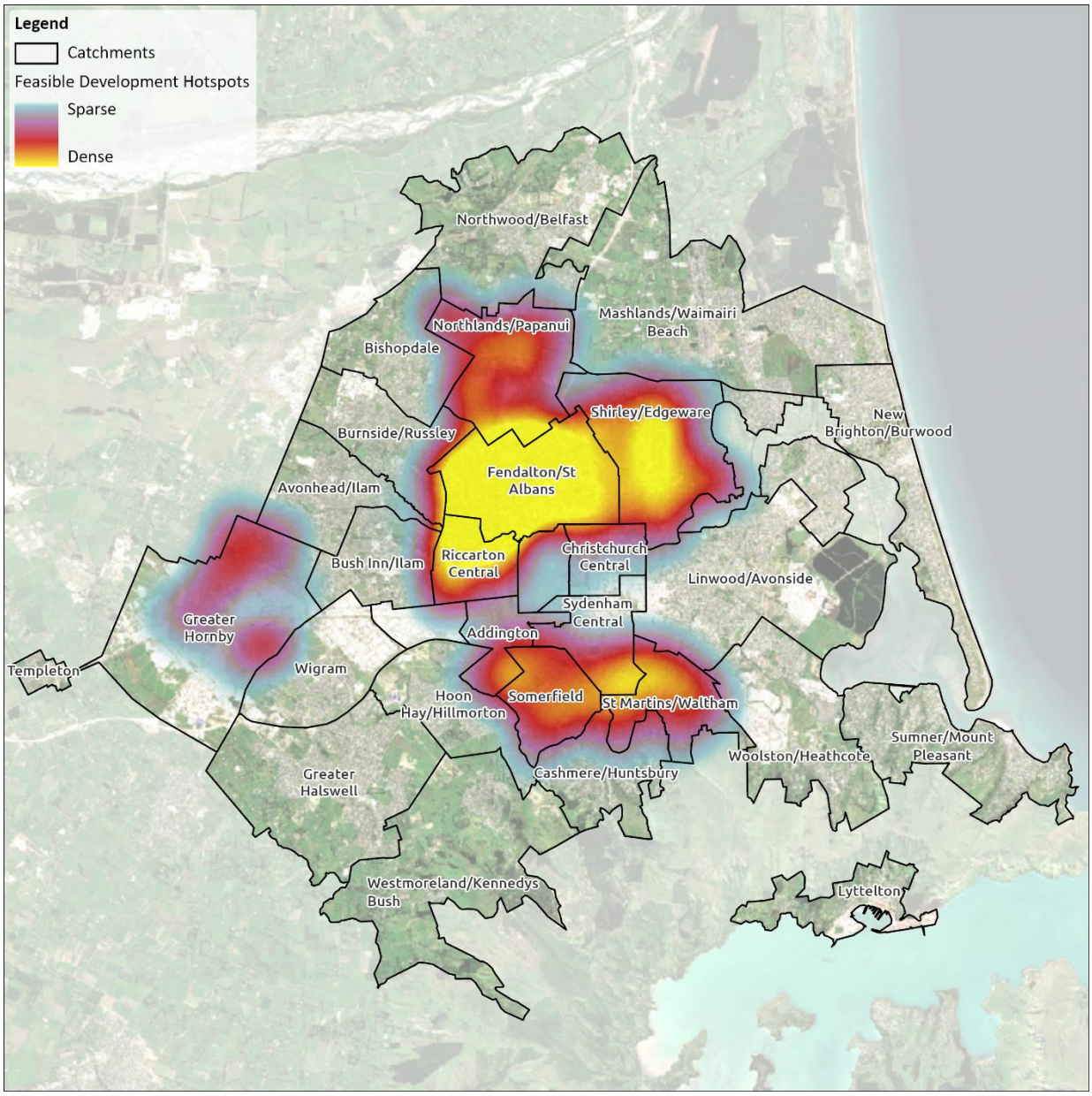
Potential for medium density residential development	
Total plan enabled capacity	**222,478 dwellings** (158,772 dwellings through comprehensive re-development and 63,706 through infill development)
Projected feasible capacity	**58,188 feasible dwellings** (37,441 dwellings through comprehensive re-development and 20,747 through infill development)

Growth of the accessible suburbs

The financial feasibility analysis undertaken as part of this assessment demonstrates that whilst medium density is enabled across the cities residential areas it is generally more feasible in those areas where residential sales are high enough to offset the costs associated with land acquisition and construction.

The map provided below illustrates that, based on a review of land value and development costs, currently medium density tends to be feasible in those suburbs in the within good proximity to the central city. The catchments of Addington, Fendalton/St Albans, Greater Hornby, Addington, Northlands/Papanui, Riccarton, Shirley/Edgeware, Somerfield, St Martins and Sydenham show the

largest capacity for feasible medium density development. These catchments are generally one suburb back from the city located where land values are higher than some of the other surrounding suburbs.



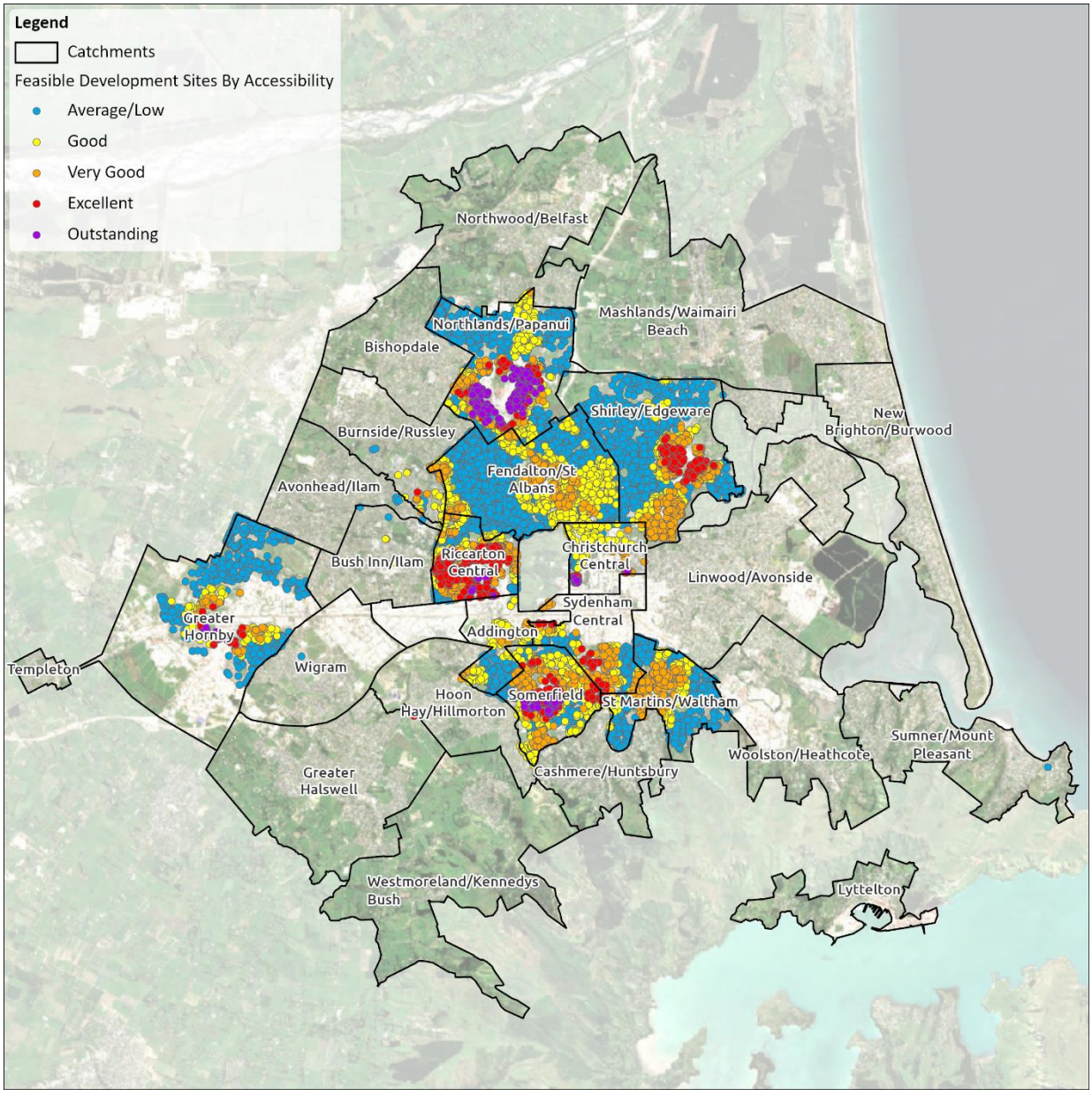
When the capacity identified in these suburbs is taken into consideration, there is potential that under the provisions of the new planning framework, they will absorb a significant proportion of residential growth anticipated in Christchurch. This has implications for the planning of infrastructure to support increases in resident populations in these areas. It also should be considered in line with plans to increase densities around centres.

Factors influencing delivery of medium density

Whilst it can be assumed that development will generally follow the order in which infrastructure is provided, evidence suggests the triggers for development differ depending on the type of project and the nature of the existing urban structure/land ownership. Based on the market evidence, the suburbs

with good connectivity and amenity are currently experiencing the higher numbers of medium density residential development.

Using Christchurch City Council's assessment of residential areas with a high degree of accessibility and (October 2021) the sites with feasible development potential an good accessibility ratings are shown below.



1. Introduction

The Property Group Limited (TPG) has been engaged by Christchurch City Council (Council) to undertake an analysis of the impact of the recent policy direction for urban growth under the National Policy Statement on Urban Development (NPS-UD) and in particular the new Medium Density Residential Standards (MDRS) for Christchurch City.

Scope of the Capacity Assessment

The assessment has included analysis of how medium density dwelling typologies could be developed across the city under the new policy framework including infill development and comprehensive town house development.

The objectives of the assessment include the following:

- To review and quantify the capacity for an increase in medium density development across the city's catchments under the new policy framework
- Identify the areas likely to see an uplift in medium density residential development based on analysis of the development feasibility.

The analysis has included the preparation of a capaciity model to demonstrate how meduim density housing could be achieved on each lot with development potential under the differing set of planning controls that would apply and exisistng market conditions across the city. Development of the model has been based on a series of assessments undertaken to determine yields to be applied across each parcel. This has included a residential market assessment, typology development and testing and development feasibility analysis. These assessments are included as appendices to this report.

Report Structure

Following this introduction, this report provides an overview of the results of the capacity assessment and an analysis of the impact of the new policy framework. The report is structured under the following sections:

- Sections 2 and 3, The Strategic Context and the Changing Policy Framework puts the capacity assessment into context by providing a review of relevant strategies, plans and policies and what they mean for residential development in Christchurch.
- Sections 3 and 4 provide a review of current residential densities and population growth. They provides an analysis of trends in the residential market to establish current and future residential demand
- Section 5 and 6 provide a review of the results of the capacity analysis and an assessment of what this means for the potential for residential development across the city.

2. Strategic Context

Under the governments Urban Growth Agenda (UGA) and direction of the former National Policy Statement on Urban Development Capacity, providing for population growth and enabling sufficient residential development in urban areas has been a key component of Christchurch City Council's planning framework over the last 11 years. Coupled with the earthquake recovery efforts, this focus on growth in urban areas has seen Christchurch undergo a period of change with redevelopment of the city centre as a focal point and residential growth occurring in the surrounding suburbs with a focus of growth around the local centres.

The new National Policy Statement on Urban Development (NPS-UD) which now replaces the National Policy Statement on Urban Development Capacity and The Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill 2021 (the subject of this assessment) will have a further impact on the planning framework that guides future urban development in Christchurch. These policies aim to further increase densities in the city centre and allow for more medium density residential development across the cities residential areas.

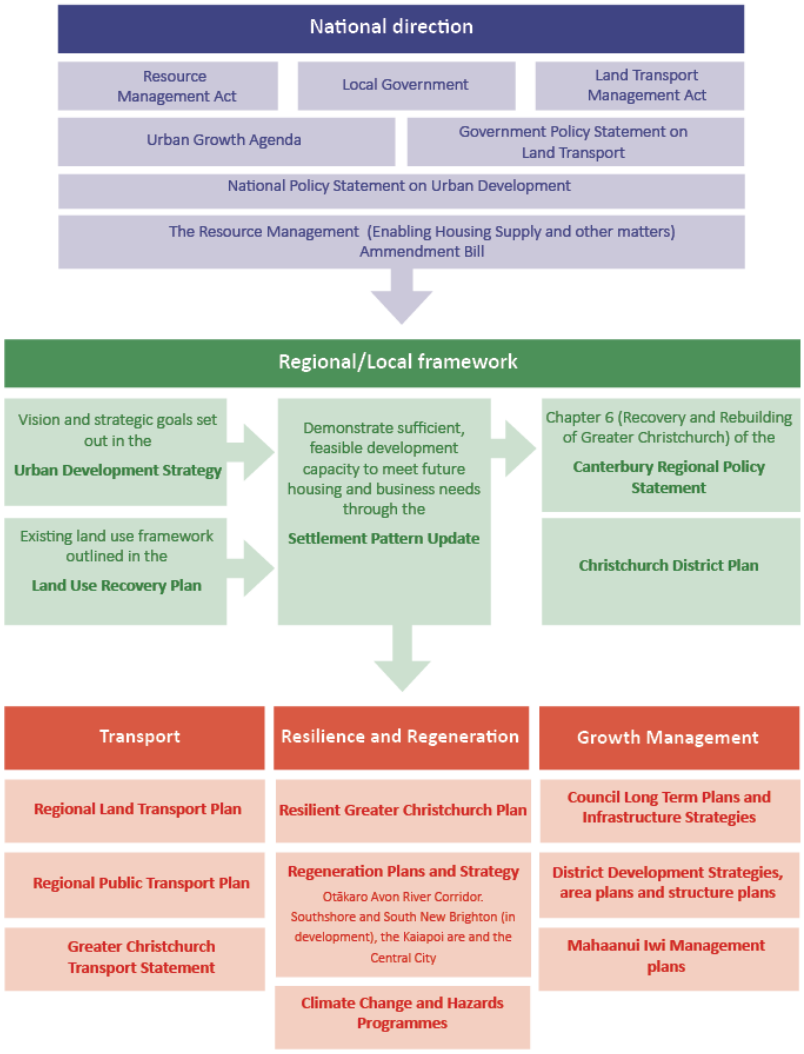


Figure 1: Policy Framework

Assessing the impact of the new policies has been undertaken within the context of how they will integrate within the existing policy framework. An overview of the relevant strategies, plans and policies that currently guide residential development is provided in the following sections with a more detailed overview provided in Appendix 1.

Planning for urban growth

Canterbury Regional Policy Statement

At the regional scale, the Canterbury Regional Policy Statement (CRPS) incorporates objectives to enable recovery and accommodate population growth, by providing for development (new land use, subdivision, infrastructure, housing) in a way that achieves the purpose of the RMA.

A settlement pattern for the region is identified in Map A of the CRPS. This map identifies the location and extent of urban development that will support recovery, rebuilding and planning for future growth and infrastructure delivery. The urban areas relevant to this assessment are shown in Figure 2.

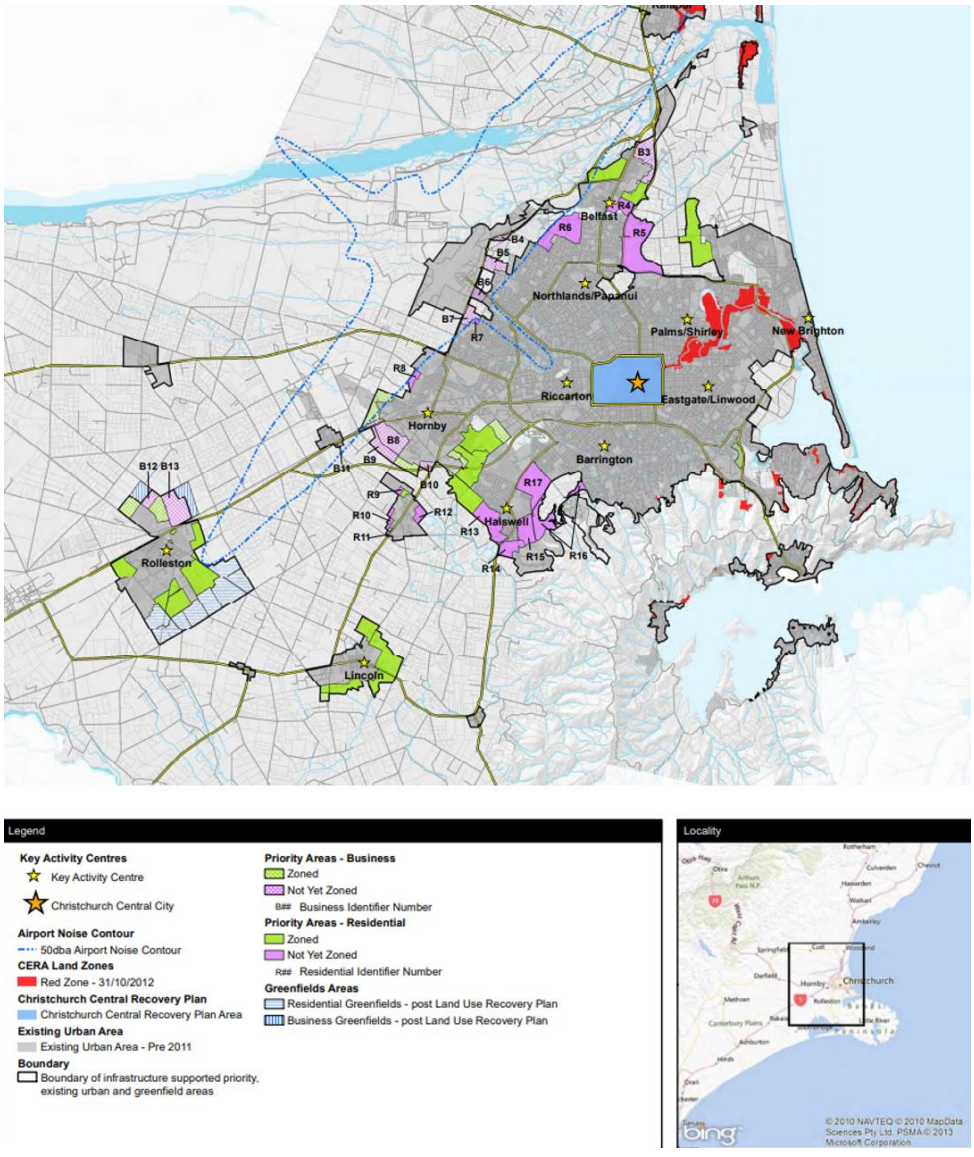


Figure 2: Greater Christchurch greenfield priority areas and future development areas (Map A CRPS)

Greater Christchurch Urban Development Strategy 2007

The Greater Christchurch Urban Development Strategy 2007 (UDS) sets a vision for Greater Christchurch and provides a broad settlement pattern for Greater Christchurch for the next 35 years. This provides the primary strategic direction for the Greater Christchurch area by identifying the location of future housing, development of social and retail activity centres, areas for new employment and integration with transport networks. It promotes an integrated and intergenerational approach to planning for urban growth, and seeks to ensure that development is managed in a manner that protects environments, improves transport links, creates liveable areas and sustainably manages population growth.

The UDS also establishes clear strategies, policies, and processes for organisations and the community to work collaboratively to manage growth. Guiding principles shape and guide decisions on planning, transport and infrastructure investment, while the strategic directions underpin and provide context for the specific actions listed in the Action Plan.

Our Space 2018-2048 – Christchurch Future Development Strategy

Our Space 2018-2048 complements the Greater Christchurch Urban Development Strategy (UDS) and has been prepared in order to satisfy the requirement to produce a future development strategy, outlined in the NPS-UD. This responded to the first HCA for Christchurch (discussed later in this document) and is implemented under Chapter 6 to the Canterbury Regional Policy Statement and relevant District Plans.

The document outlines land use and development proposals to ensure there is sufficient development capacity for housing and business growth across Greater Christchurch to 2048. The proposed settlement pattern is based upon maintaining the distinction between urban and rural areas by concentrating development at and around existing urban areas, both large and small.

The document was developed by the Greater Christchurch Partnership, which has worked collaboratively for more than a decade on planning and managing urban growth and development across Greater Christchurch (Christchurch City, Waimakariri District and Selwyn District). This Partnership brings together the leadership roles of local government, Te Rūnanga o Ngāi Tahu, the district health board, and Government agencies, and is guided by the vision, principles and strategic goals outlined in the UDS.

The UDS continues to provide the roadmap for growth planning in Greater Christchurch. Our Space therefore does not seek to replace this comprehensive strategy, but rather builds on it by considering and updating many of the key settlement pattern matters.

Redevelopment of the city centre

Christchurch Central Recovery Plan

In the past 11 years following the earthquake, Christchurch has undergone significant redevelopment, particularly in its city centre. This redevelopment has been driven by the Recovery Strategy for Greater

Christchurch - Mahere Haumanutanga and the Christchurch Central Recovery Plan (CCRP), which were developed in line with the Christchurch Earthquake Recovery Act 2011 (the Act).

The CCRPs overarching design concept is the development of a greener, more accessible city with a compact core and a stronger built identity. The CCRPs Blueprint provides a spatial framework for central Christchurch, or the "Frame". It describes the form in which the central city can be rebuilt as a whole, and defines the locations of 'anchor' projects, which will stimulate further redevelopment.

Residential development in the City centre is provided for in the CCRPs and this has been reflected in the District Plan provisions.

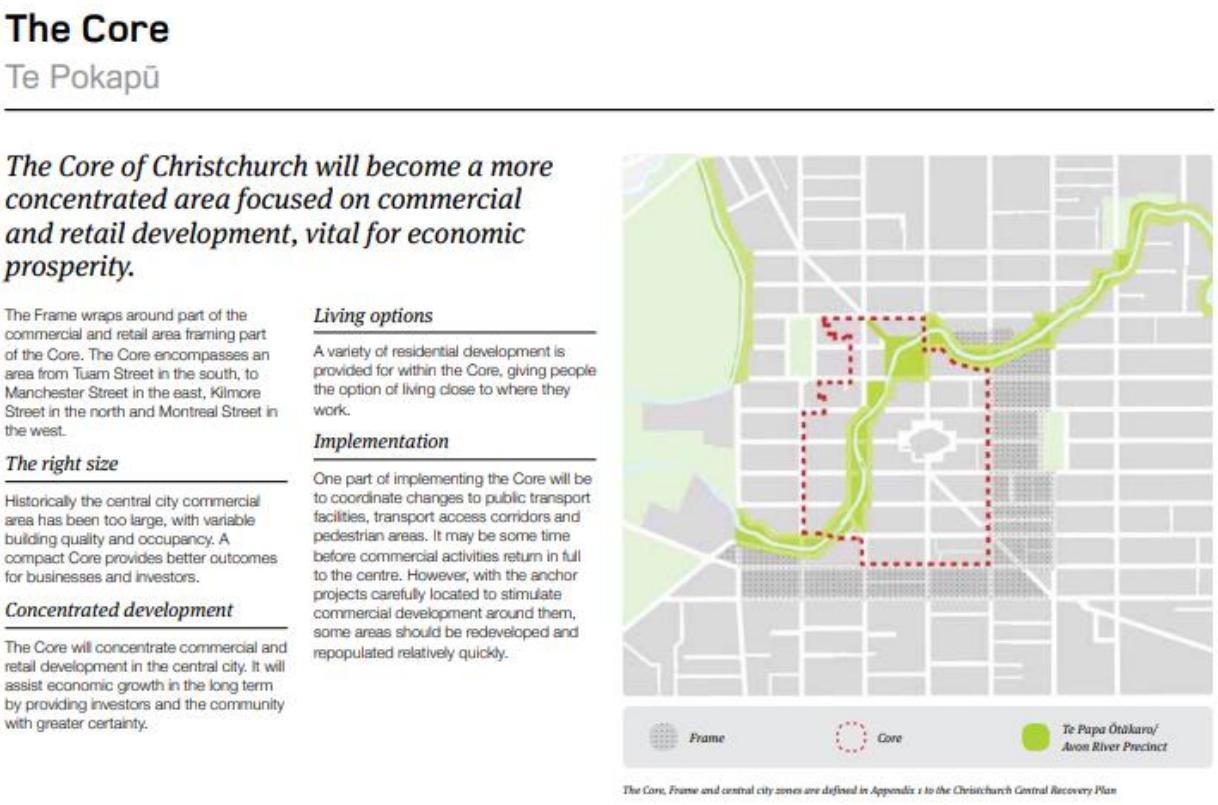


Figure 3: Christchurch Core (CCRP)

Density around the centres

The Christchurch District Plan has a policy to recognise and manage commercial centres as the focal points for the community and business through intensification within centres that reflects their functions and catchment sizes, and in accordance with a framework that:

- gives primacy to, and supports, the recovery of the Central City, followed by Key Activity Centres, by managing the size of all centres and the range and scale of activities that locate within them
- supports and enhances the role of District Centres; and
- maintains the role of Neighbourhood Centres, Local Centres and Large Format Centres.

Key Activity Centres are the existing and proposed commercial centres identified as focal points for employment, community activities and the transport network, and which are suitable for more

intensive mixed-use development. These are identified in Chapter 6, Map A of the Canterbury Regional Policy Statement as Papanui, Shirely, Linwood, New Brighton, Belfast/Northwood, Riccarton, North Halswell, Spreydon and Hornby.

Density around public transport

The National Policy Statement on Urban Development (NPS-UD) requires Tier 1 authorities to enable a minimum of 6 storeys in areas within a walkable catchment of existing and planned rapid transit stops. Whilst Christchurch does not currently have a mass rapid transit system, improvements to Christchurch's existing public transport network or the implementation of a mass rapid transit system could have a significant impact on the density of development that is enabled through the NPS-UD.

The NPS-UD defines rapid transit service as an existing or planned frequent, quick, reliable and high-capacity public transport service that operates on a permanent route (road or rail) that is largely separated from other traffic

Greater Christchurch Public Transport Futures Programme and Mass Rapid Transit Business Case

Greater Christchurch partners are collaborating on a study to understand the implications of a Mass Rapid Transit solution for Greater Christchurch as part of its Public Transport Future's Programme. This is in response to high growth and changing travel demand in the sub-region.

The Public Transport Futures programme consists of three packages: Foundations, Rest of Network, and Mass Rapid Transit (MRT). The first two packages outline the priority opportunity for improving Greater Christchurch's current public transport network. The development of these two packages was finished in late 2020; they are now in the implementation phase with Greater Christchurch councils' Long-Term Plans deciding the appropriate phasing and timing of investment.

The third package – Mass Rapid Transit – is a transformational package that lays the foundation for significant urban development and land use changes and transformation in transport accessibility. This work is required under the Government Policy Statement for land transport and listed in the Canterbury Regional Land Transport Plan (RLTP). In 2021, work was undertaken to identify and protect the corridors and to enable policy changes that support intensification and regeneration in key areas. The implementation of MRT is currently mode agnostic and it is anticipated that the MRT business case will determine the timing and methodology for MRT implementation.

Potential corridors for mass rapid transit and high frequency public transport services are identified in the Canterbury RLTP's 30 year vision.

3. The Changing Policy Framework

A summary of the polices in the NPS-UD and MDRS that will have a direct impact the provisions given for residential development in the Christchurch City District Plan are outlined in the following section. These are the changes that have been assessed through TPG's capacity analysis.

The National Policy Statement on Urban Development

Under the National Policy Statement on Urban Development (NPS-UD) Christchurch is identified as a Tier 1 urban environment. Tier 1 authorities are required to enable denser housing, particularly in centres and areas with good access to public transport.

The polices of the NPS-UD that will require changes to the district plan controls and will have an impact on the potential for residential development are mostly contained in Policy 3.

Policy 3: In relation to tier 1 urban environments, regional policy statements and district plans enable:

(a) in city centre zones, building heights and density of urban form to realise as much development capacity as possible, to maximise benefits of intensification; and

(b) in metropolitan centre zones, building heights and density of urban form to reflect demand for housing and business use in those locations, and in all cases building heights of at least 6 storeys; and

(c) building heights of least 6 storeys within at least a walkable catchment of the following: (i) existing and planned rapid transit stops (ii) the edge of city centre zones (iii) the edge of metropolitan centre zones.

(d) in all other locations in the tier 1 urban environment, building heights and density of urban form commensurate with the greater of: (i) the level of accessibility by existing or planned active or public transport to a range of commercial activities and community services; or (ii) relative demand for housing and business use in that location.

Currently the Christchurch City Central Area has height limits ranging from 10 storeys to 3 storeys. As required by Policy 3(a) of the NPS-UD, the city centre zones will be required to have heights and density controls that enable as much development capacity as possible, which effectively removes the height limits in the centre zone and implements a 6 story minimum within the walking catchment of the centre.

In addition Policy 11, removes the ability of Tier 1, 2 and 3 authorities to require car parking when applying for resource consent to construct new housing. This could lower development costs in Christchurch and potentially encourage development through increasing land use flexibility. The impact of this change to carparking polices has not been included in the scope of this assessment.

Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill 2021

The Resource Management (Enabling Housing Supply and Other Matters) Amendment Bill 2021 (the Bill) works with the NPS-UD to accelerate housing supply in areas of high demand. The Bill, which was passed into law in December 2021, enables greater levels of permitted residential intensification within low and

medium density residential zones in New Zealand's largest centres. This is achieved through two key instruments:

Medium density residential standards (MDRS) – requires Tier 1 authorities to adopt new medium density residential standards in residential zones, which enable people to build up to three units and three storeys on most residential zones, without the need for a land use resource consent, provided all other rules and standards in the district plan have been complied with. Exceptions to individual sites and areas will apply based on qualifying matters set out in the NPS-UD and councils must publicly notify their proposed changes to their district plans by the end of August 2022.

The Intensification Streamlined Planning Process (ISPP) – supports councils to implement the intensification policies of the NPS-UD and adopt the MDRS at least a year earlier, by amending the existing streamlined planning process under the RMA to be faster, easier, and less costly.

The MDRS apply to all residential zones in the Tier 1 urban environments, except:

- large lot residential zones and settlement zones
- areas predominantly urban in character that the 2018 census recorded as having a resident population of less than 5,000, unless a local authority intends the area to become part of an urban environment, or
- offshore islands.

Assessment of Zones where the MDRS applies

Based on a review of the provisions of the MDRS and the National Planning Standards , the following zones are considered within the scope of the MDRS provisions.

Table 1 Zones where MDRS applies

ODP Zone	Potential equivalent National Planning Standard zone	Within MDRS scope
• Residential suburban zone • Residential new neighbourhood zone • Residential Banks Peninsula zone (any within urban environment)	General residential zone	Yes
• Residential hill zone	Low density residential zone	Yes
• Residential suburban density transition zone • Residential medium density zone	Medium density residential zone	Yes
• Residential city centre zone	High density residential zone	Yes

• Residential large lot zone • Residential small settlement zone (with potential exception of Kainga Overlay Area 1 & 2)	Large lot residential zone	No
• Residential guest accommodation zone	Commercial zone	No
• Residential Banks Peninsula zone (any outside urban environment)	General or low density residential zone – but outside of urban environment	No
• Papakāinga/Kāinga Nohoanga Zone	Māori Purpose Zone	No

As shown below, the key changes are most significant for the Residential Suburban Zone and include removal of the 450m^2 minimum site area, increases in allowable height and building coverage, smaller outdoor living area requirements and a reduction in the recession plane requirements. Combined these changes will allow for a denser form of residential development to be achieved in the Residential Suburban Zone, dependant on the size of available development areas.

For the Residential Medium Density Zone there is less change. The provisions of this existing zone are similar to the MDRS, with density, landscaped area, height, and site coverage generally aligning. The MDRS is only slightly more permissive in regard to recession planes. The provisions under this existing medium density zone has resulted increasing examples of medium density development in the residential zones surrounding the centre over the last 10 years (refer to the following section 3 and Market Assessment provided at Appendix 2). It also means that the capacity for medium density through infill development has already begun to be exhausted in these areas. This is further analysed and tested as part of the capacity assessment outlined in this report.

Table 2 Comparison of density controls

	Residential Suburban Zone	Medium Density Zone	MDRS
Site Density	1 unit/ 450m2 minimum No minimum net site area for multi-unit residential complexes, social housing complexes, and older person's housing units	No site density applies Minimum subdivision area 200m2	Maximum 3 units per lot
Site Coverage (building coverage)	35% net site area covered by buildings 40% net site area for single storey multiunit complexes where all the buildings are single storey	50%	50%
Maximum building Height	8m	11m (unless subject to an overlay)	11m plus roof form up to 12m
Landscaped Area coverage	Minimum 20% for multi-unit developments	Minimum 20%	Minimum 20%
Height to boundary	2.3m plus recession plane angle	2.3m plus recession plane angle	4m + 60 degrees
Minimum building set backs	1m from internal boundaries 4.5 m from road boundary	2 m from road boundary	Front: 1.5m Side: 1m Rear: 1m
Minimum site area	450sqm	200sqm	-
Outdoor Living Space	90sqm with a minimum dimension of 6m	For one bedroom or studio: 16sqm minimum Minimum for balcony: 1.5m dimension and 6sqm area For two plus bedrooms: Minimum ground floor area: 30sqm	Ground floor 20sqm. With no dimension less than 3m Above ground floor level 8msqm with a minimum dimension 1.8m

4. Existing Residential Supply

Existing Residential Density

Currently, there are 153,531 existing homes in Christchurch City providing for an estimated resident population of 392,100 (Stats, NZ 2020). In line with the existing zoning patterns, the more densely populated areas are those suburbs surrounding the city centre and in areas surrounding the districts centres.

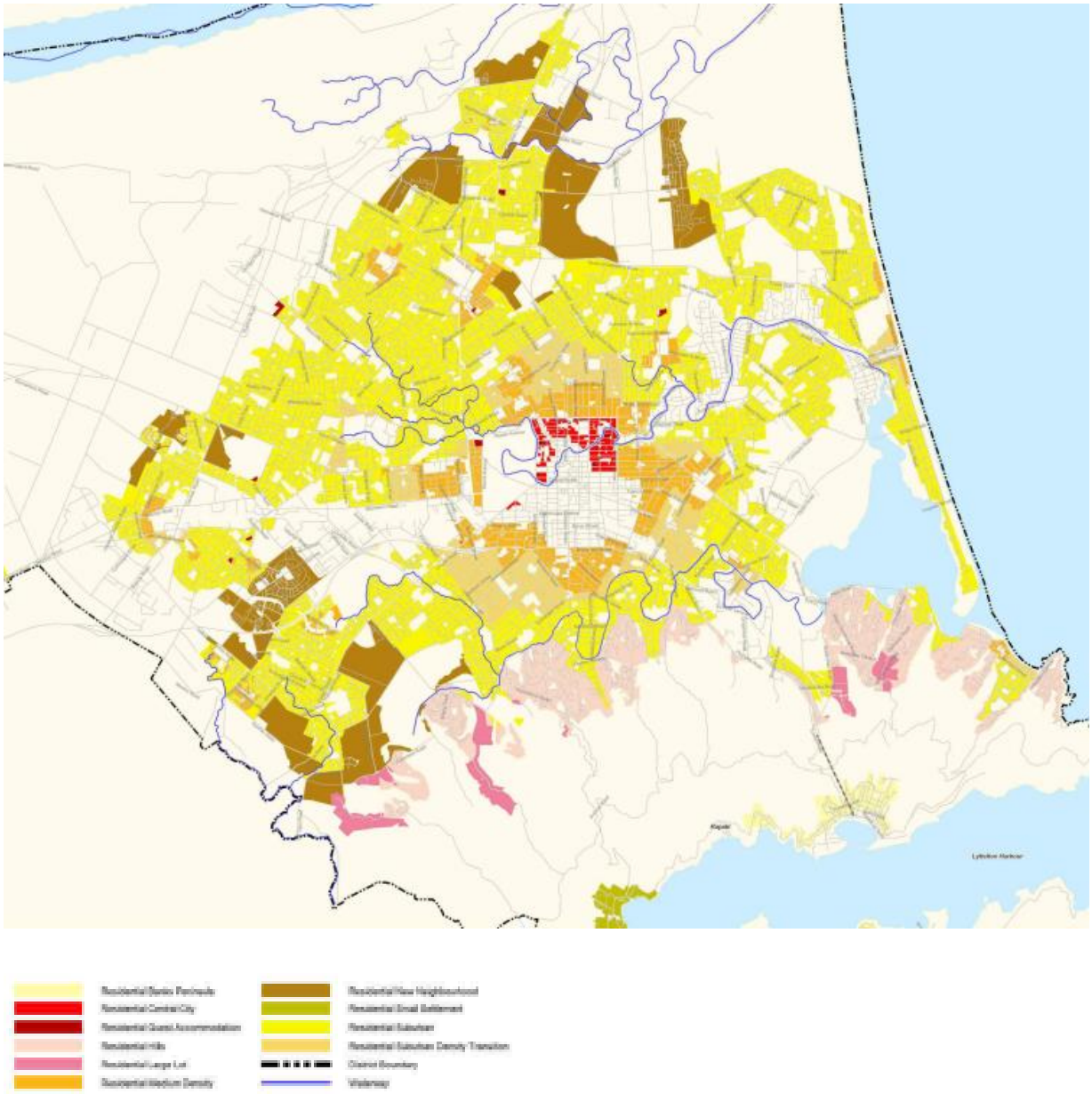


Figure 4 Residential Zones (Christchurch City District Plan)

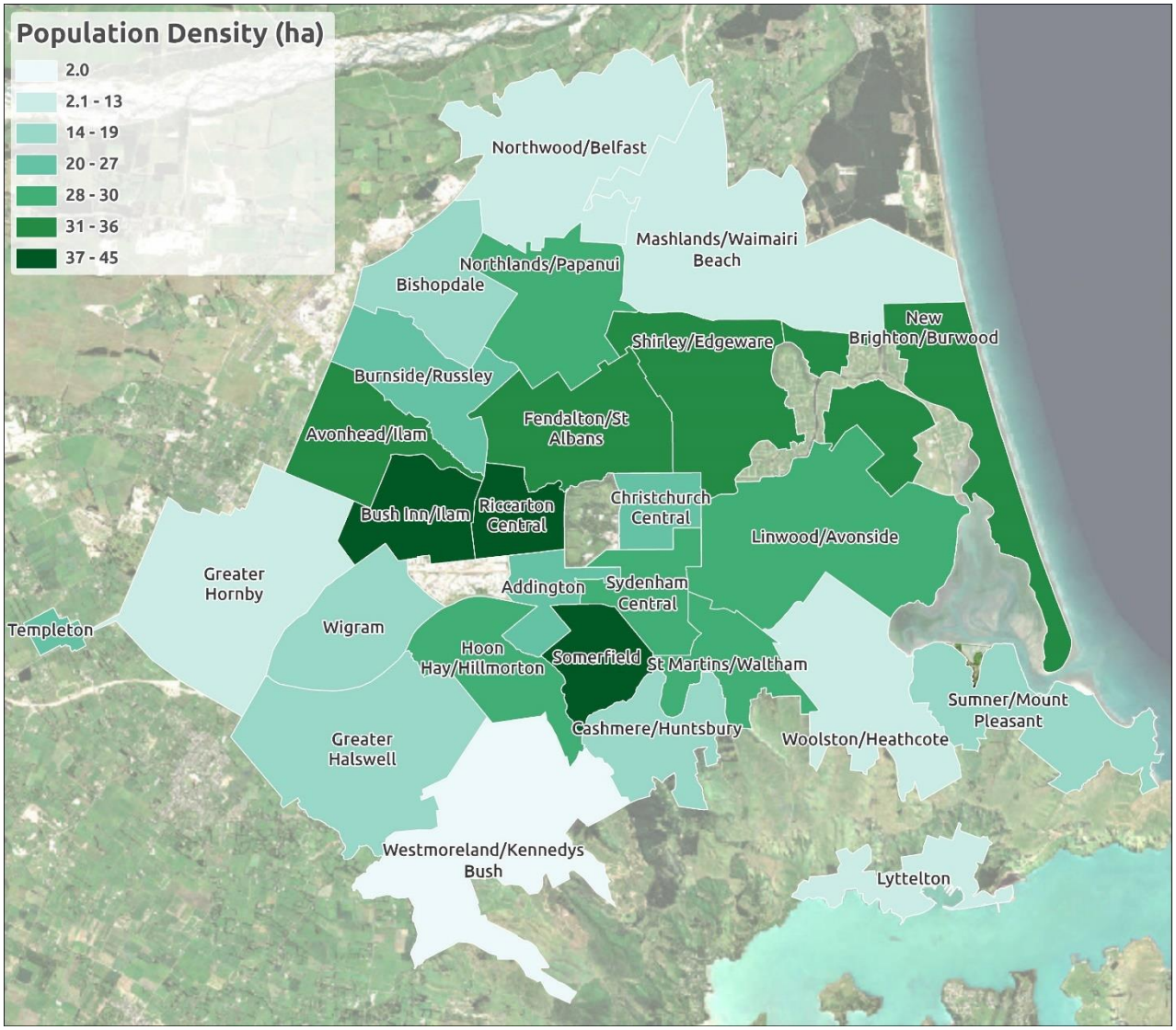


Figure 5: Population density (TPG, 2022)

New housing supply

In the last 24 months there has been a significant increase in the number of residential building consents issued within Christchurch City. This is reflective of the increased demand for new residential development and the strength of the residential property market.

However, prior to this the number of new dwelling building consents issued in Christchurch City decreased over the five-year period from 2015 to 2020 from 4,236 to 2903 (-1,333) reflecting a 31.5% reduction over this time. This compares a national increase of 49.5% increase over the same five-year period. This reflects the reduction of consents to a more 'normal' level following significant consenting activity associated with the Christchurch rebuild.

TABLE 3 RESIDENTIAL BUILDING CONSENTS SINCE 2015, CHRISTCHURCH AND NATIONALLY (SOURCE STATISTICS NZ)

Year ended June	2015	2016	2017	2018	2019	2020
Christchurch City	4,236	3,838	2,620	2,522	2,519	2,903
Annual change	-398	-1,218	-98	-3	-98	+384
% Change over 5 years						-31.5%
New Zealand	25,154	29,097	30,453	32,860	34,804	37,614
Annual Change	3,943	1,356	2,407	1,944	2,407	12,460
% Change over 5 years						49.5%

Of the new resource consents issued since 2018, 38% have been for medium density housing, with 10% making up developments within the inner city. As shown in Figure 6, the location of new residential development is unsurprisingly located in the growth areas of Halswel and Burwood but notably over 30% consents have been issued for residential development in the urban areas close to the centre.

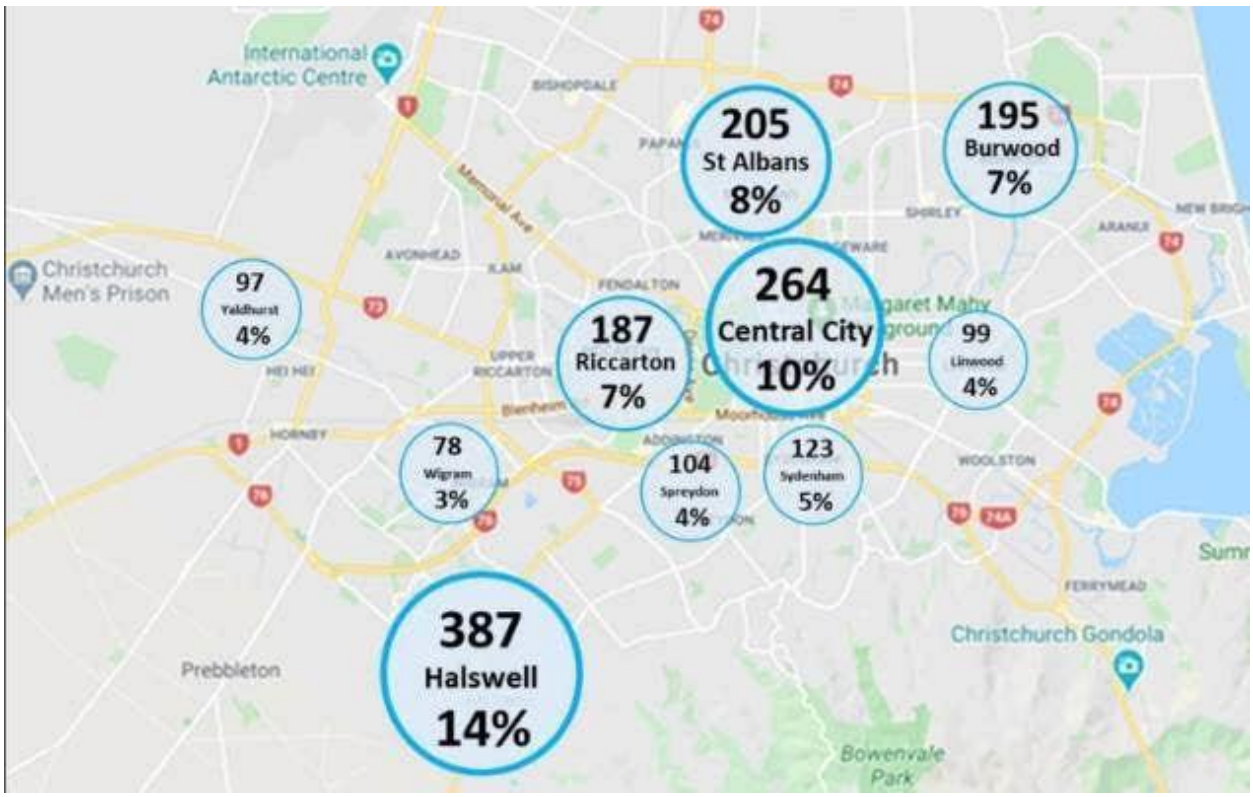


Figure 6: Location of new residential consents issued 2020 (BLACKBURN MANAGEMENT, 2020)

Increase in house prices and land values

Christchurch City has seen considerable increase in sale prices across the city post COVID-19 due to a range of factors. The latest statistics released by Quotable Value indicate that Christchurch had the biggest rise in average sale price up 40.2% over 2021.

The period of a reduction of supply together with strong buyer demand and historically low interest rates has resulted in steadily rising prices. Property listings in the region have been far less constrained than most other parts of the country for an extended period of time, with investors now attracted to Christchurch where prices are significantly more affordable than in Auckland and Wellington and much better yields are achievable (refer to the full Market Assessment provided in Appendix 2 for a more detailed analysis).

Amongst other factors, the feasibility of medium density development is influenced by the underlying land value of a property, if the underlying land value is too low, this impacts on the sale price of the finished units and therefore constrains the profit margin obtainable by the developer. As part of this assessment we have undertaken a review of recent vacant land sales and compared these against the August 2019 Rating Land Values, our analysis has indicated a 70-80% uplift in land value since the 2019 revaluation. As a high level approach we have then applied the uplift percentage across the city to provide an estimate of land values across all suburbs, to understand how current land values may be linked to the feasibility of development in the current environment.

Overview of the catchments used in this analysis

For the purposes of this analysis the cities residential suburbs have been broken into a series of catchments which reflect the differing residential areas of the city. The boundaries of the catchments are shown below. For the purposes of reporting the boundaries of the catchments are based on Stats NZ Statistical Area 2 (SA2) 2020 boundaries.

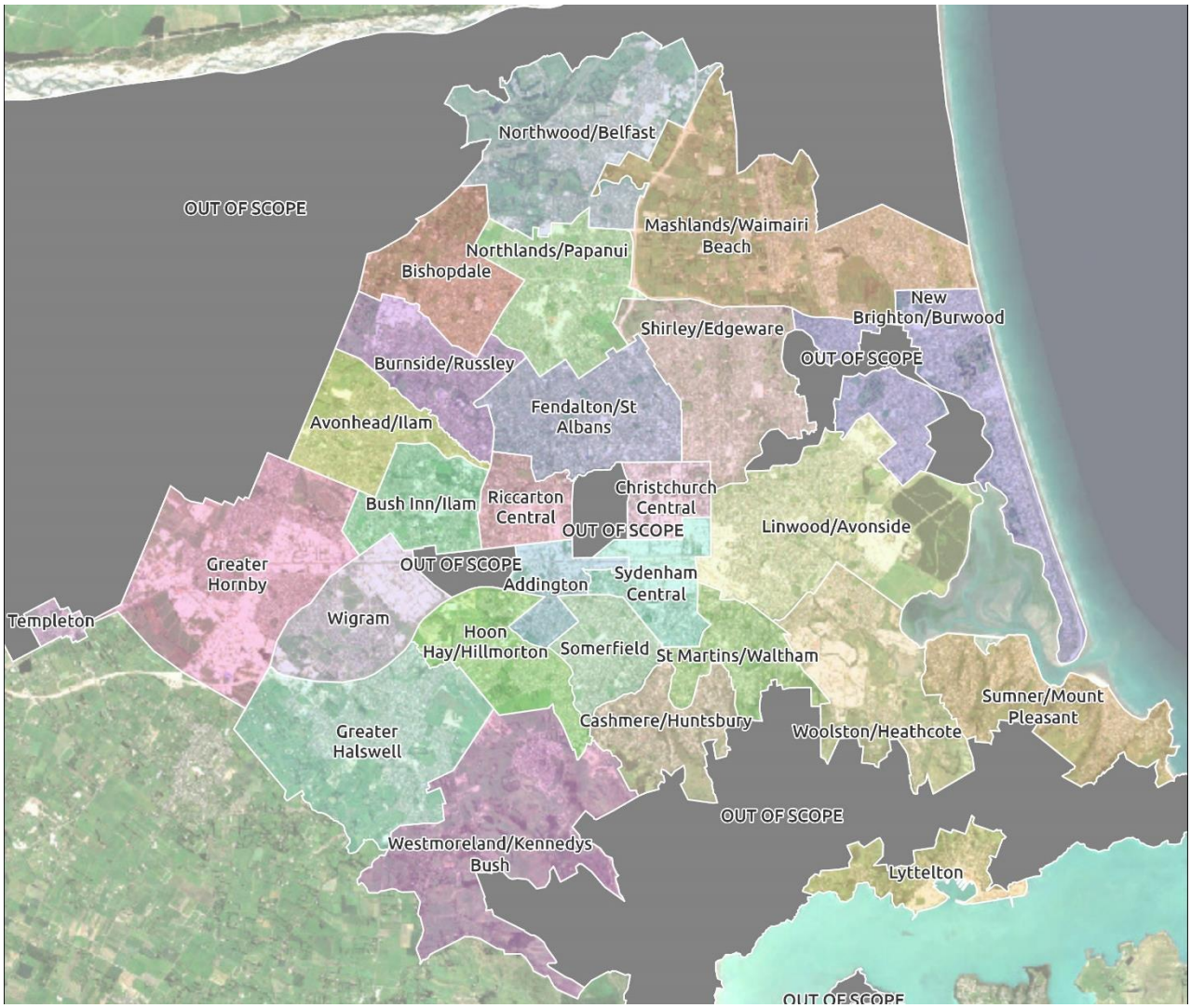


Figure 7: Boundary of the Residential Catchments

Each catchment has a different population and housing profile. This is reflected in the key statistics outlined in Table 3.

Table 3 Catchment Population and Housing Profile (NZ Stats, 2018)

Catchment	2018 population	% Christchurch population	total number of occupied dwellings	% of housing supply	Residential Density (person per ha)
Addington	5724	1.49	2067	1.35	26.36
Avonhead/Ilam	15552	4.05	5514	3.59	32.09
Bishopdale	10653	2.78	4023	2.62	18.93
Burnside/Russley	14343	3.74	4989	3.25	26.17
Bush Inn/Ilam	18360	4.78	5127	3.34	37.67
Cashmere/Huntsbury	8664	2.26	3261	2.12	17.21
Christchurch Central	7233	1.88	2742	1.79	25.67
Fendalton/St Albans	27879	7.26	10770	7.01	35.66
Greater Halswell	17892	4.66	6276	4.09	14.45
Greater Hornby	15552	4.05	5766	3.76	11.25
Hoon Hay/Hillmorton	11505	3.00	4155	2.71	28.11
Linwood/Avonside	28314	7.38	11376	7.41	28.62
Lyttelton	2934	0.76	1278	0.83	9.03
Mashlands/Waimairi	17817	4.64	6414	4.18	10.28
New Brighton/Burwood	25500	6.64	9960	6.49	32.07
Northlands/Papanui	19743	5.14	7545	4.91	28
Northwood/Belfast	12477	3.25	4713	3.07	10.17
Riccarton Central	12615	3.29	4113	2.68	44.55
Shirley/Edgeware	24570	6.40	9660	6.29	31.32
Somerfield	12774	3.33	5172	3.37	38.56
St Martins/Waltham	10680	2.78	4287	2.79	29.83
Sumner/Mount Pleasant	10635	2.77	4251	2.77	15.89
Sydenham Central	9819	2.56	4056	2.64	28.45

5. Population growth and housing demand

The greater Christchurch area has experienced significant population change following the 2010 and 2011 Canterbury earthquakes. The population of Christchurch City fell in 2011 and 2012 by 18,000 people, mainly due to people moving to adjacent greater Christchurch areas (such as Selwyn and Waimakariri districts). Christchurch City's population took several years to re-bound, to surpass the 2010 population of 376,000 people. (Canterbury District Health Board, 2022).

The estimated resident population as 30 June 2013 and 2018 for Christchurch City is noted below in comparison to the Canterbury Region and New Zealand together with projections for 2023. Between the Census years of 2013 and 2018, the population of Christchurch City increased 42,331 persons or 12.4%. Estimated resident population in 2021 is 392,100 people an increase of 8,300 persons (+2.1%) over three years. (Statistics NZ, 2021).

Table 4 Population Change (2013-2023) (source: Statistics NZ)

	2013	2018	2023
Christchurch City	341,469	383,800	402,400
Population Change		+ 42,331	+ 18,600
% increase		+ 12.4%	+ 4.8%
Canterbury Region	539,533	622,800	661,300
Population Change		+ 83,267	+ 38,500
% increase		+15.4%	+ 6.2%
New Zealand	4242,048	4,900,600	5,222,400
Population Change		+ 658,552	+ 321,800
% increase		+15.5%	+ 6.6%

Overall, estimated population forecasts indicate a projected resident population of 463,500 by 2048 an increase of 79,700 persons from 2018 to 2048 representing growth of 20.7%.

Table 5 shows the Statistics New Zealand population and household forecasts in Christchurch City from 2018 through to 2048. The period 2018 to 2033, as the short to medium term, is likely to be the most accurate and useful forecast information for immediate planning purposes.

In 2018, the dominant household type in Christchurch City was Families, which accounted for 68% of all households, this is projected to increase 72% in 2043. The total increase in Family households between 2018 and 2043 is estimated to be 26,600 or 26.3%, relatively this is the largest increase of all household types and suggests that demand for housing is likely to be for larger traditional family homes.

Table 5 Population and household forecasts in Christchurch City from 2018 through to 2048

	Forecast year						
Summary	**2018**	**2023**	**2028**	**2033**	**2038**	**2043**	**2048**
Population Forecast	383,800	402,400	417,000	430,600	453,800	453,800	463,500
Population Change	-	+ 18,600	+14,600	+13,600	+12,200	+11,000	+9,700
% Increase	-	4.8%	3.6%	3.3%	2.8%	2.5%	2.1%
Household Forecast	148,000	155,000	161,100	167,200	172,400	176,400	*
Average household size	2.5	2.5	2.5	2.5	2.5	2.5	*

Canterbury Housing and Business Development Capacity Assessment

A Christchurch Housing and Business Development Capacity Assessment was produced by the Greater Christchurch Partnership in 2021 to satisfy the requirements of the National Policy Statement on Urban Development (NPS-UD).

The HCA includes an assessment of expected housing demand to 2051 for Christchurch, Selwyn and Waimakariri, and the sufficiency of development capacity. It builds upon the 2018 Housing Capacity Assessment undertaken under the previous National Policy Statement on Urban Development Capacity (NPS-UDC), and responds to key changes in the policy requirements between the NPS-UDC and NPS-UD.

Key demand trends for Greater Christchurch identified through the assessment include:

- resident population is projected to grow from 536,880 in 2021 to 705,600 in 2051, an increase of 168,720 people
- the number of households is projected to increase by 77,100 or 37%;
- demographic profile is projected to change with an aging population resulting in strong growth in the number of 'couple only' and one person households.

An assessment of the housing capacity found there is sufficient urban capacity in the short term (next three years) within each territorial authority to accommodate population projections. There are however shortfalls in the medium term (next ten years) approximately 2,000 households within Selwyn and approximately 3,100 households within Waimakariri.

6. Analysis Approach

Factors influencing housing supply and delivery

In addition to plan enabled residential development, the market has a significant role to play in delivering new homes. Even where the district plan provisions allow for medium density residential development to occur it may not be feasible, financially to undertake development. The financial feasibility of a development is dependent on a number of factors including design, consenting and construction costs, underlying land value, and the revenues that can be generated from the residential development or the increase in capital value achieved. Population demand over time and developer appetite also has a role to play dictating the delivery and take up of new residential development over time.

For the purposes of this analysis, the capacity of medium density residential development under the new policy framework has been determined to show 'plan-enabled development capacity' on sites where there is a development opportunity identified and then also 'feasible development capacity' based on a review of shifting land values and areas where there is developer interest.

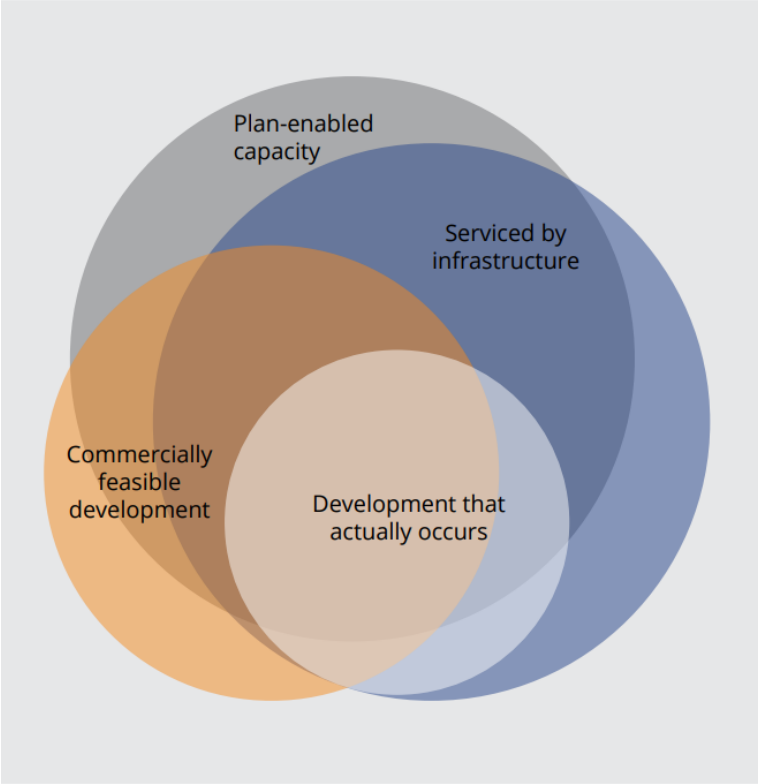


Figure 8: Development Capacity Types (Adapted from Our Space, 2018)

Methodology

Utilising a GIS platform, capacity modelling across the cities residential areas has been undertaken on a parcel by parcel basis reflecting the sites where medium density development could be achieved under the differing set of planning controls that would apply.

In summary the following key steps form the basis of the capacity analysis with a detailed overview of the key assumptions provided at Appendix 5.

1. Identification of development sites

Across each residential zone where the MDRS applies (refer to section of this Report 3), analysis has been undertaken to determine sites that have potential to accommodate new residential development.

To ensure this analysis reflects market conditions this based on both a review of both vacant land suitable for development and also sites where land values and existing use could warrant redevelopment potential. In summary, the following sites have been included as development sites in the model:

- Existing vacant sites – identification of appropriately zoned vacant sites excluding those designated for an alternative purpose
- Sites with re-development potential – identification of sites where the value of the existing improvements is low comparative to the land value. Based on a review of recent developments across the city where sites have a land value that makes up to 80% of the capital value have been considered as providing a development opportunity[1].
- Sites with infill potential – a review of existing residential lots has been undertaken to identify those where the existing building footprint leaves an adequate area for an additional dwelling/s and has sufficient road frontage to provide access to the additional development.
- Sites with potential for amalgamation and subdivision – a review of identified adjoining development sites that could present an opportunity for subdivision and/or amalgamation based on minimum lot size and land ownership.

[1] It is noted that previous assessments have identified development potential on sites where land value has been 70% of capital value. For this assessment 80% has been used to reflect recent market activity. If 70% was applied the number of sites that show development potential across the city would increase considerably (approximately 6,000 more comprehensive development sites).

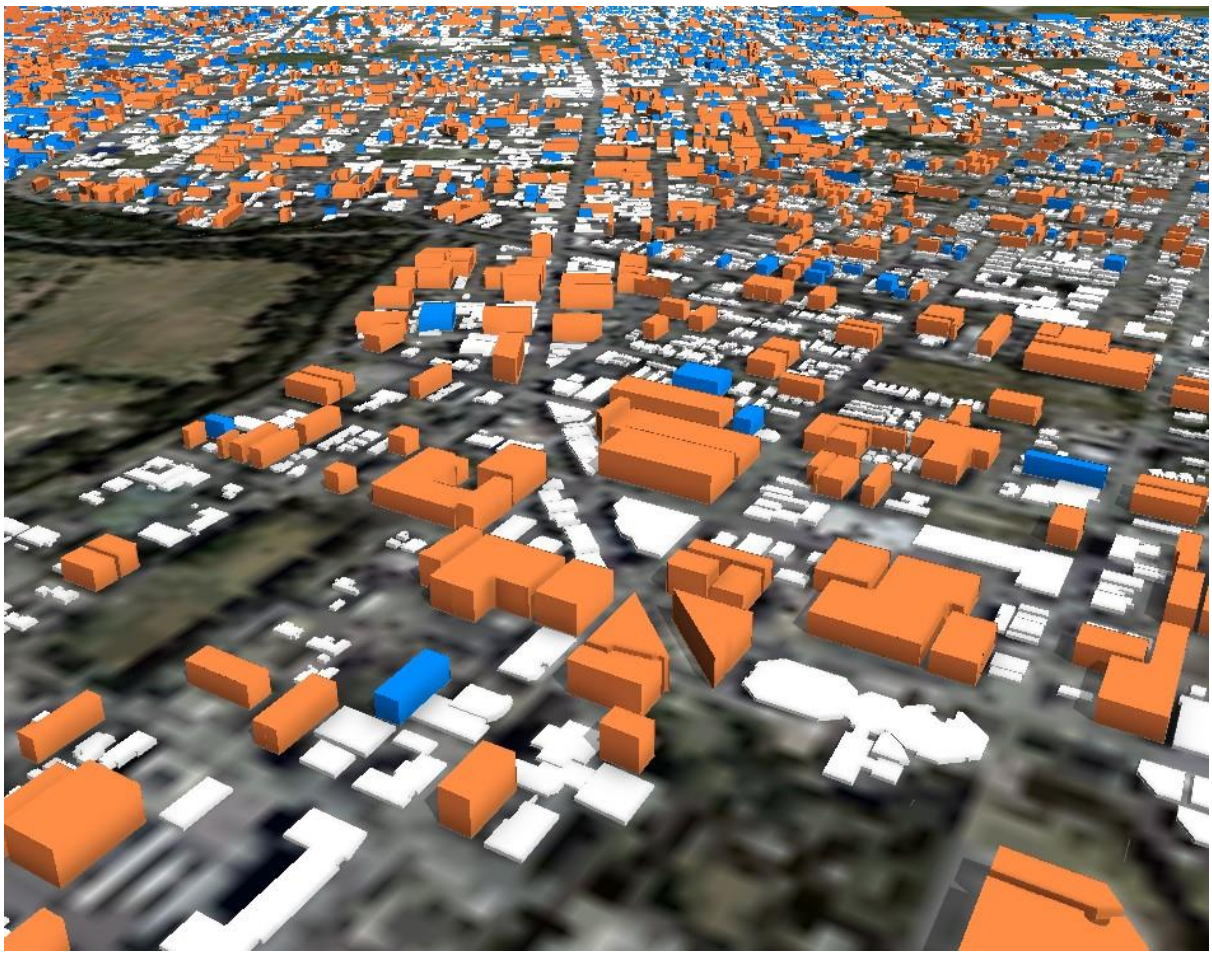
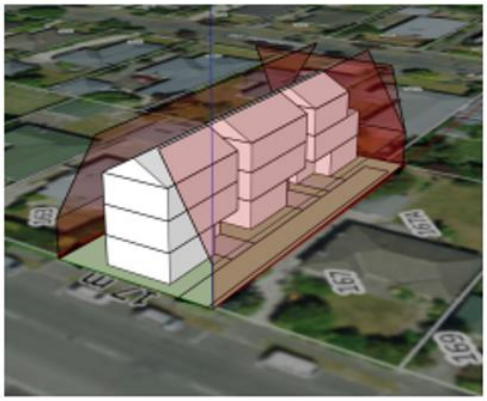


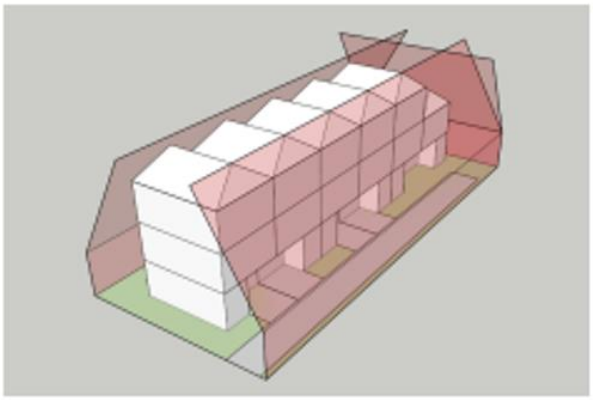
Figure 9: Example of the model baseline – development sites identified

2. Typology development and testing

Testing of the different yields that can be achieved under the different rules, on typical lot sizes across each zone has been undertaken and is included in Appendix 4.

Interestingly, the results of the typology assessment demonstrate that on a typical lot size the existing rules for the medium density zone achieve a greater yield than the MDRS. This is primarily due to the MDRS allowing for up to 3 dwellings rather than the number of dwellings being accommodated based on site coverage.





Multi-unit standalone and terraced housing

Mixed use development

Figure 10: Example of the typology development and testing (refer to Appendix 4 for detailed overview)

3. Establishing plan enabled capacity

Based on the results of the typology testing the resulting built form that achieves the greatest yield across the different lot sizes and zone parameters have been modelled across sites identified with development potential. From this the plan enabled development capacity is established.

4. Economic feasibility testing

To test development feasibility of the theoretical capacity an analysis of financial feasibility of a range of residential typologies has been undertaken across typical development lots (Refer to Appendix 4). The feasibility assessment is based on a Residual Land Value technique which assesses a site's development potential, in simple terms, by comparing the likely costs of development (including addressing issues of resilience) with the potential resale value. From this, the residual land value (the value a developer would pay to acquire the land) is derived to test feasibility. The model has been applied to a range of sites and different typologies.

Based on the results of the feasibility assessment the relative land values required to achieve a feasible medium density development have been established. A theoretical 'land value tipping point' of $1,000 per sqm has been identified to achieve a feasible medium density development. This has been review against the findings of the market assessment and is indicative of where medium density is occurring.

5. Establishing feasible capacity

Based on the results of the feasibility assessment and resulting built form that achieves the greatest yield across the different lot sizes and zone parameters have been modelled across sites identified with development potential. From this a feasible capacity for residential development is established.

Limitations and Assumptions

Due to the time constraints for this analysis, a high level approach to the capacity assessment has been undertaken. This has included typology testing and feasibility assessment on a range of typical sites to establish key assumptions that could be applied across the city rather than an in depth analysis of each different suburb.

To provide a more detailed assessment of feasibility and capacity it is recommended that further sensitivity analysis is undertaken. This should include testing of additional sites across each suburb and more detail review of land values based on the upcoming updates to the rating base. This would give a more accurate range of parameters for the model.

The following key points to note:

- The assessment is focused on the capacity for medium density development within residential zones subject to the relevant provisions of the MDRS, it does not assess additional residential capacity that exists in areas where medium density is not viable or other commercial areas of the city.
- Assessment of the feasibility of development potential in the Central Area and the was not included in the scope of this assessment.
- The model has been developed without cross refence to the modelling undertaken for the 2021 HCA. To provide an analysis of how the new policy framework medium density development would impact the overall capacity for housing supply a comparison the assumptions of both models should be reviewed for alignment and a revised capacity assessment undertaken.
- The analysis has not incorporated consideration of those areas that would not be subject to the MDRS as a result of qualifying matters.

Summary of key assumptions

A detailed overview of the assumptions used to undertake the analysis are provided in Appendix 4 and 5. A summary of the key assumptions is provided below:

Sites identified with development potential

- Existing vacant sites that are appropriately zoned
- Sites with earthquake prone buildings
- Sites with re-development potential - where the land value that makes up to 80% of the capital value based on a review of recent development activity
- Sites with infill potential – where there is sufficient vacant space within a lot (minimum 50sqm) and adequate road frontage (minimum 10m)
- Sites with potential for amalgamation – adjoining identified development sites in joint ownership

Areas excluded from the capacity analysis

- All zones where the MDRS does not apply
- Green field development sites, as the outcome for medium density development in these areas will differ than that which is covered by the MDRS
- High Flood Risk
- Tsunami Inundation
- Extreme Liquefaction Management Zone
- Slope Hazard/Land Instability
- Port Influence
- Noise Boundaries
- Community Facilities
- Sites of Cultural Significance
- Airport Protection
- Heritage and Character Sites
- Areas of Ecological Significance
- Natural Landscapes
- Protected Vegetation
- Red Zone
- Contaminated Sites
- Areas within the flight path restrictions or within the utility buffer requirements given in Operative District Plan.

Development Costs and Revenues applied to the development feasibility analysis are included in the market Assessment included at Appendix 2.

7. Results of the Medium Density Enablement Analysis

A summary of the key findings of the analysis is provided below in Table 8 with a more detailed overview of the results by catchment and zone provided in the following sections.

Table 8: Summary of medium density development potential

Potential for medium density residential development	
Total plan enabled capacity	**222,478 dwellings** (158,772 dwellings through comprehensive re-development and 63,706 through infill development)
Projected feasible capacity	**58,188 feasible dwellings** (37,441 dwellings through comprehensive re-development and 20,747 through infill development)

The results of the enablement assessment show that there is feasible capacity for an estimated 58,188 medium density dwellings that could occur across the city under the new policy framework based on current market conditions. This would make up a significant portion (57%) of the 101,994 feasible dwellings identified in the 2021 Greater Christchurch Housing Development Capacity Assessment.

It is noted that the 2021 Development Capacity Assessment was prepared prior to the release of the MDRS and the impact on capacity for housing across this city will be undertaken as part of the update to this assessment.

Catchment overview

To understand where the capacity for medium density is located a breakdown of the dwelling capacity by catchment is provided in Table 9.

Table 9 demonstrates that the existing residential areas hold a significant plan enabled dwelling capacity under the new policy framework. However, when these areas are assessed for development feasibility this capacity in the outer suburbs reduces. This can be explained by the lower land values further out from the city meaning the market values for medium density development in this area are currently not high enough to achieve a feasible outcome.

The catchments of Addington, Fendalton/St Albans, Greater Hornby, Northlands/Papanui, Riccarton, Shirley/Edgeware, Somerfield, St Martins and Sydenham show the largest capacity feasible medium density development. These catchments are generally one suburb back from the city located where land values are higher than some of the other surrounding suburbs. The heat maps provided at Figure 11 and 12 shows the concentration of both plan enabled and feasible development sites across the city. This further illustrates the focus of medium density potential in the more accessible suburbs.

Table 9 Development Capacity by Catchment

Catchment	Theoretical dwelling capacity		Feasible dwelling capacity		
	comprehensive	Infill	comprehensive	infill	**Total**
Addington	593	1,104	593	1,104	1,697
Avonhead/Ilam	2,063	2,943	16	19	35
Bishopdale	1,368	786			0
Burnside/Russley	2,115	2,148	31	169	200
Bush Inn/Ilam	1,933	976	6	5	11
Cashmere/Huntsbury	2,322	2,878			0
Fendalton/St Albans	4,905	10,902	4,905	10,902	15,807
Greater Halswell	3,758	27,386		6	6
Greater Hornby	2,330	5,155	2,330	5,155	7,485
Hoon Hay/Hillmorton	2,976	424	14		14
Linwood/Avonside	3,415	4,358			0
Lyttelton	1,850	948			0
Mashlands/Waimairi Beach	4,055	27,744			0
New Brighton/Burwood	3,158	1,067			0
Northlands/Papanui	3,787	6,558	3,787	6,558	10,345
Northwood/Belfast	4,545	17,556	3	15	18
Riccarton Central	953	4,726	953	4,726	5,679
Shirley/Edgeware	4,141	4,082	4,141	4,082	8,223
Somerfield	1,507	1,090	1,507	1,090	2,597
St Martins/Waltham	2,009	1,607	2,009	1,607	3,616
Sumner/Mount Pleasant	3,218	8,354		14	14
Sydenham Central	450	1,989	450	1,989	2,439
Templeton	227	66			0
Westmoreland/Kennedys Bush	3,830	17,391			0
Wigram	1,139	5,832	2		2
Woolston/Heathcote	1,059	702			0
Total	**63,706**	**158,772**	**20,747**	**37,441**	**58,188**

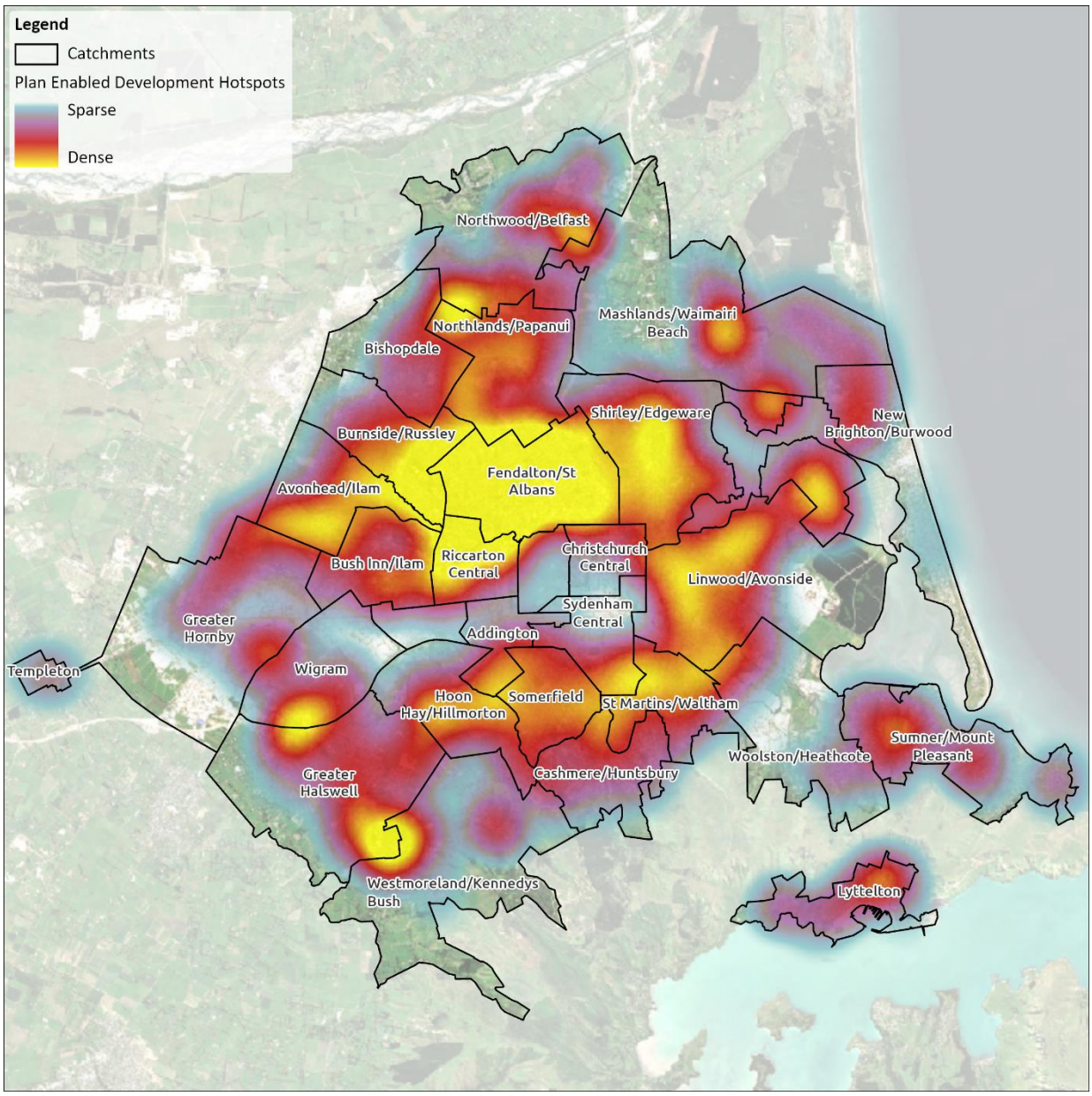


Figure 11 Plan enabled Medium Density development

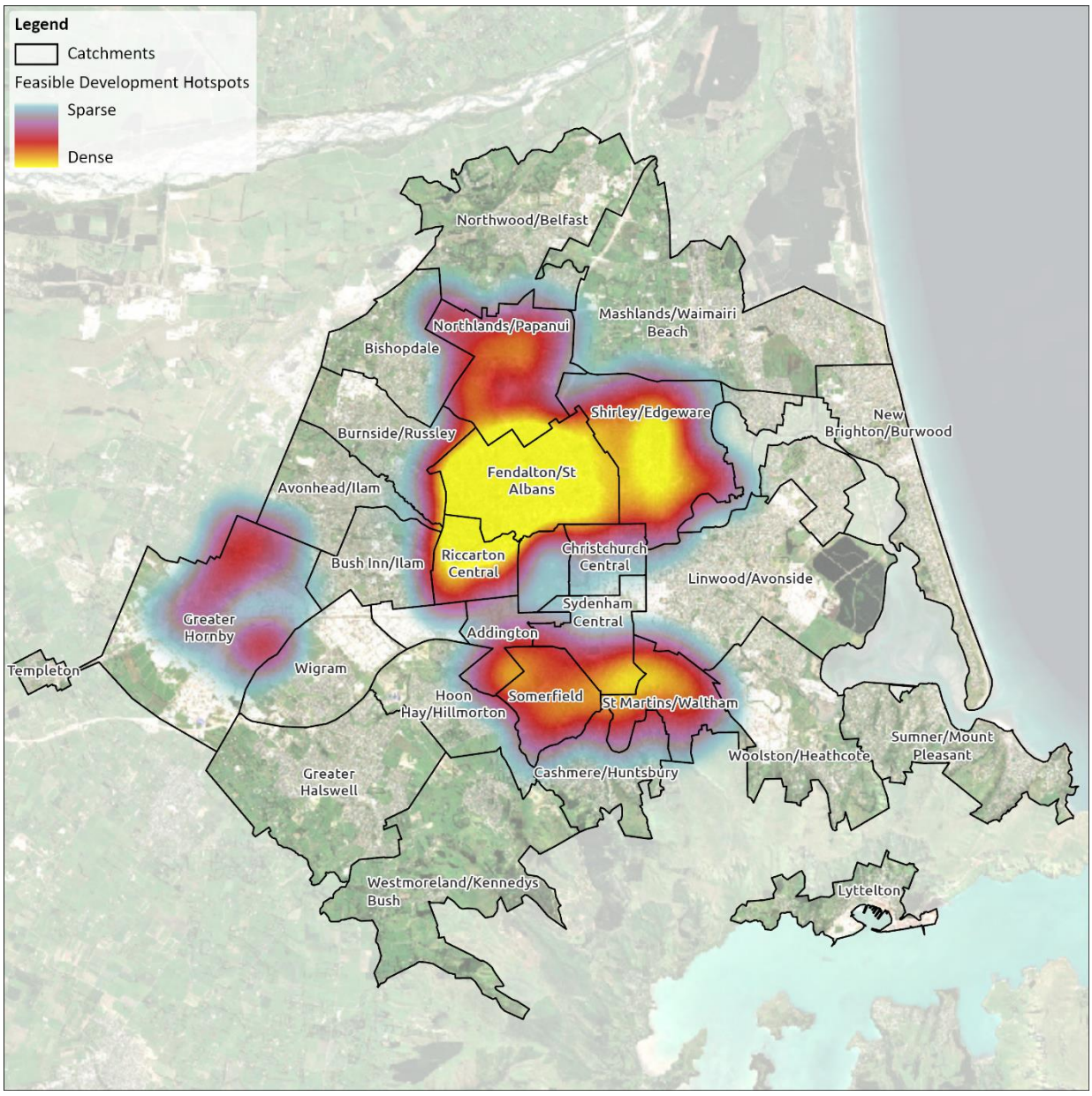


Figure 12 Locations Feasible medium density Development

Development potential by zone

In addition to the assessment of capacity by catchment, when the results of the assessment are shown by zone it demonstrates that the majority of the development capacity is located within the Residential Suburban Zone. While this is partly explained by the fact that this zone covers a larger area of Christchurch, it also demonstrates that the availability of development sites in the medium density zone and areas closest to the centres has already begun to be developed. This is evidence of the existing medium density zone provisions being aligned to that imposed by the MDRS.

Feasible capacity is reduced significantly where the balance between acquisition/construction costs and achievable price points does not achieve a development profit. This is evidenced in the Residential Banks Peninsula zone where the land values are not high enough to achieve a feasible outcome.

In locations such as Residential Hill's zone site constraints alongside land values also reduces the feasible capacity.

Table 10 Dwelling Capacity by Zone

Zone	Plan Enabled Capacity		Feasible Capacity	
	Infill	Redevelopment	Infill	Redevelopment
Residential Banks Peninsula	1,850	948	-	
Residential Hills	6,251	20,903	230	311
Residential Medium Density	2,722	10,651	1,779	8,333
Residential New Neighbourhood	12,941	88,047	1,667	9,066
Residential Suburban	36,186	33,017	14,408	15,626
Residential Suburban Density Transition	3,756	5,206	2,663	4,105
	63,706	**158,772**	**20,747**	**37,441**

Impact on Residential Density

The enablement of medium density housing will also have an impact on the residential density across the city, especially in areas that already fairly densely populated and where medium density is feasible. An assessment of how the impact of feasible development may impact density across each catchment is provided below. Notably, Riccarton and Northlands/Papanui have the potential to have the most significance shift towards higher levels of residential density. This will have implications for infrastructure planning to these areas. This includes ensuring that anticipated development capacity can be accommodated within existing networks and also the incoming population are supported by sufficient community and social infrastructure.

Table 11 Potential impact on residential density

Catchment	Current Population (Census 2018)		Change with feasible medium density development applied		
	Population	Density (ha)	Population Increase	Density (ha)	Increase in density
Addington	5,598	26.36	9,162	43.14	16.78
Avonhead/Ilam	15,636	32.09	15,710	32.24	0.15
Bishopdale	10,707	18.93	10,707	18.93	0.00
Burnside/Russley	13,941	26.17	14,361	26.96	0.79
Bush Inn/Ilam	17,193	37.67	17,216	37.72	0.05
Cashmere/Huntsbury	8,718	17.21	8,718	17.21	0.00

Fendalton/St Albans	26,553	35.66	26,553	35.66	0.00
Greater Halswell	17,889	14.45	17,902	14.46	0.01
Greater Hornby	15,636	11.25	31,354	22.57	11.32
Hoon Hay/Hillmorton	11,430	28.11	11,464	28.19	0.08
Linwood/Avonside	28,608	28.62	28,608	28.62	0.00
Lyttelton	2,985	9.03	2,985	9.03	0.00
Mashlands/Waimairi Beach	17,763	10.28	17,763	10.28	0.00
New Brighton/Burwood	25,806	32.07	25,810	32.07	0.00
Northlands/Papanui	19,503	28	41,190	59.13	31.13
Northwood/Belfast	12,432	10.17	12,470	10.20	0.03
Riccarton Central	11,784	44.55	23,710	89.63	45.08
Shirley/Edgeware	24,534	31.32	41,802	53.37	22.05
Somerfield	12,939	38.56	18,393	54.81	16.25
St Martins/Waltham	10,797	29.83	18,391	50.81	20.98
Sumner/Mount Pleasant	10,563	15.89	10,592	15.94	0.05
Sydenham Central	9,753	28.45	14,875	43.39	14.94
Templeton	1,797	27.17	1,797	27.17	0.00
Westmoreland/Kennedys Bush	3,099	1.95	3,099	1.95	0.00
Wigram	8,595	15.9	8,599	15.91	0.01
Woolston/Heathcote	8,247	12.5	8,247	12.50	0.00

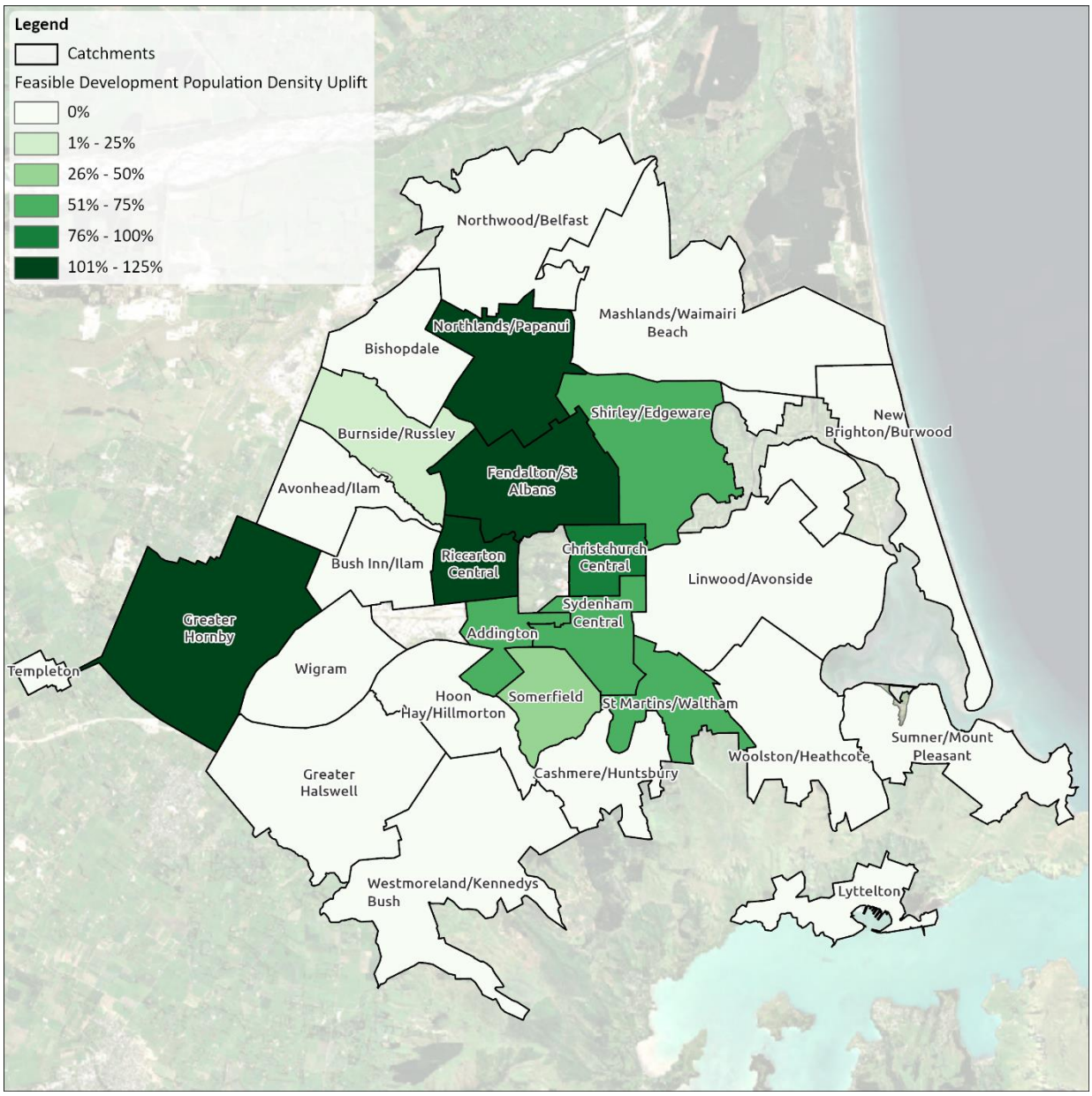


Figure 13 Locations with a potential shift in density

8. Take up

Across each catchment, understanding where development will take place first is challenging.

Whilst it can be assumed that development will generally follow the order in which infrastructure is provided evidence suggests the triggers for development differ depending on the type of project and the nature of the existing urban structure/land ownership.

Based on the market evidence, the suburbs that are located closer to the city with good amenity are currently experiencing medium density infill development.

Figure 14 below demonstrates the sites with feasible development potential that are also in areas with good accessibility ratings. This is based on Christchurch City Council's assessment of residential areas with a high degree of accessibility (October 2021).

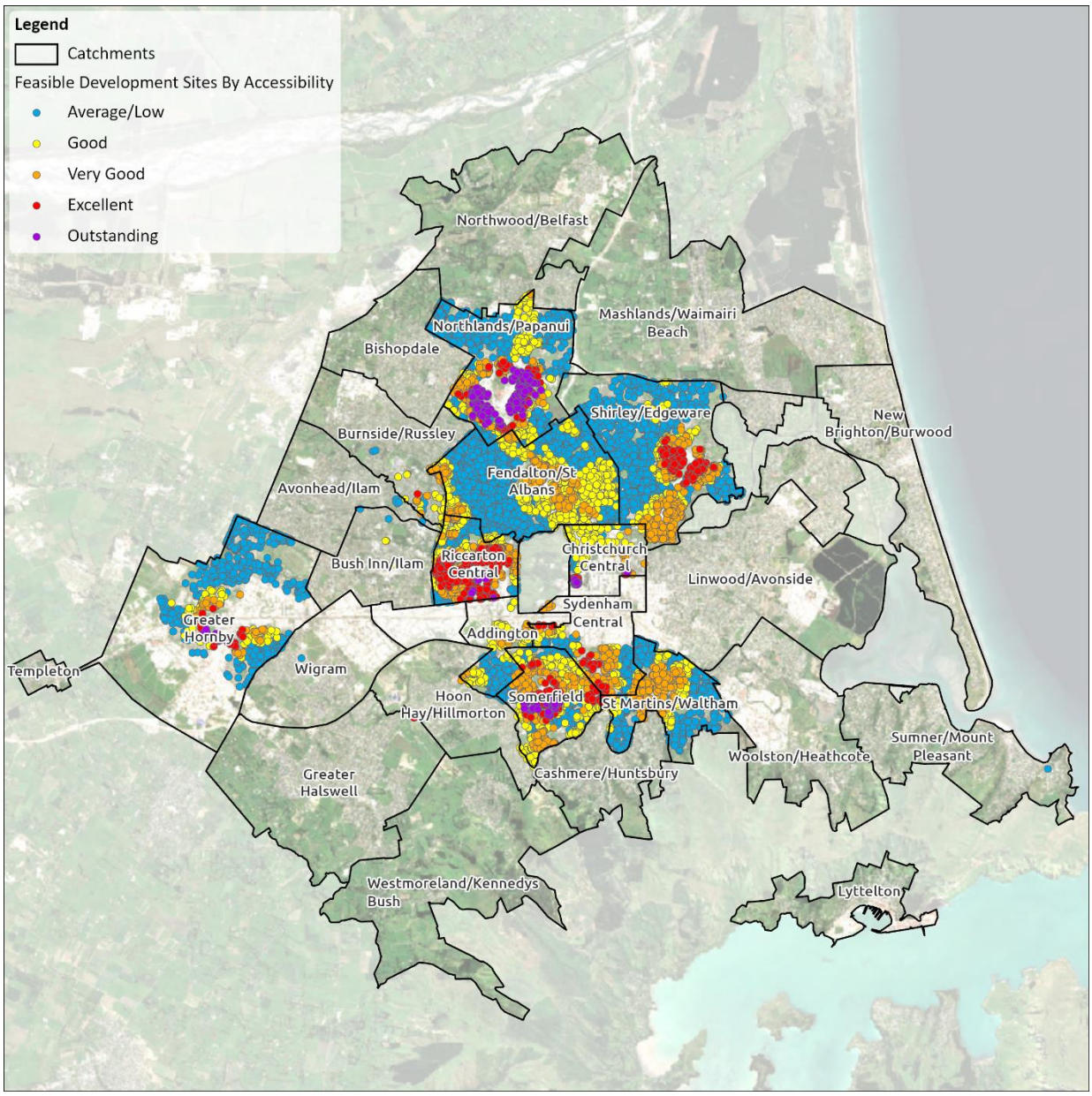


Figure 14 Assessment of accessibility

9. Conclusions

This assessment demonstrates that the new policy framework and implementation of MDRS medium density development will become enabled in the majority of the cities residential areas, creating an estimated “plan enabled” capacity of 222,478 medium density dwellings.

However, when the realities of development costs and rising land values are factored in, the capacity for medium density development considerably reduces and it is anticipated that it is most likely to occur in those catchments that are generally one suburb back from the city in areas with good accessibility and amenity.

When the capacity identified in these suburbs is taken into consideration, there is potential that under the provisions of the new planning framework, they will absorb a significant proportion of residential growth anticipated in Christchurch. This has implications for the planning of infrastructure to support increases in resident populations in these areas. It also should be considered in line with plans to increase densities around centres.