Greater Christchurch Partnership
Te Tira Tū Tahi
One Group, Standing Together

Greater Christchurch Settlement Pattern Update - Options Assessment report (version 1)

Purpose

This document supports the Draft Greater Christchurch Settlement Pattern Update (the name of the Greater Christchurch Future Development Strategy (FDS), herein referred to as the Update) and provides further details on an assessment of options that led to the preferred approach.

This document will continue develop over time, and will be informed by the feedback and information provided through submissions.

Current Framework

The existing land use approach is guided by the Greater Christchurch Urban Development Strategy[1] (UDS 2007) and has been incorporated within the Canterbury Regional Policy Statement[2] (CRPS Chapter 6, including Map A) and district plans for Christchurch City, Selwyn District and Waimakariri District.

The principal urban form policy directions outlined in these documents include:

- a more consolidated urban form, enabling redevelopment of existing urban areas and providing future greenfield development in locations on the edge of Christchurch City and the key surrounding towns in Greater Christchurch.
- encouraging a shift in the ratio of new households created in greenfield locations versus redevelopment in existing urban areas so that over time the majority are established through redevelopment (intensification)
- promoting the Central City and key activity centres as the primary locations for commercial activity, higher density housing, transport interchanges, and community facilities and services.

These policy directions are designed to facilitate outcomes that include[3]:

- providing for a range of housing development options across the housing continuum that take account of housing market circumstances and trends in demographic and societal change.
- maintaining and enhancing the vitality and attractiveness of key activity centres
- supporting the trend for similar or linked business activities to cluster in certain locations
- enabling greater levels of self-sufficiency of key towns across Greater Christchurch.
- maximising the existing infrastructure investment and capacity in these urban areas
- minimising the additional infrastructure investment required to accommodate a growing population and economy.

[1] http://www.greaterchristchurch.org.nz/projects/strategy
[2] https://ecan.govt.nz/your-region/plans-strategies-and-bylaws/canterbury-regional-policy-statement/
[3] see CRPS Chapter 6 section 6.4 for the full range of anticipated environmental results

- minimising the expansion of urban areas into more rural areas - protecting rural character, maintaining separation between individual settlements, and avoiding further encroachment on productive agricultural soils.

The rationale underpinning this approach was well documented in expert evidence compiled for Environment Court hearings on Proposed Change 1 to the CRPS. Expert evidence was prepared specifically to support the Environment Court hearings at that time. The statements of evidence hold true when considering the continuing relevance of the current planning approach and its promotion of a more consolidated urban form.

These resource management documents have been supported by aligned transport strategies and plans and by the approaches adopted in the Long Terms Plans and infrastructure strategies of the respective councils. Other agencies with responsibility for education and health service delivery and non-council infrastructure (energy, telecommunications, etc) have also planned investments on the basis of this land use framework.

Land Use Recovery Plan

The Land Use Recovery Plan (LURP 2013) was prepared to respond to the land use circumstances and immediate needs arising from the earthquakes. It adopted a similar planning approach to the UDS and Proposed Change 1 but was focused on the period to 2028 and addressed the needs at that time to enable and support earthquake recovery and rebuilding, including restoration and enhancement, for the area. Through statutory directions it:

- inserted Chapter 6: into the CRPS, confirming the planning policy framework, identifying greenfield priority areas on Map A, and setting intensification targets.
- made amendments to District Plans to implement some of the policies and methods outlined in Chapter 6, in particular:
    - zoning some of the greenfield land identified on Map A;
    - enabling additional redevelopment opportunities in Christchurch City through:
        - an Enhanced Development Mechanism
        - a Community Housing Redevelopment Mechanism
        - allowing two new houses to replace a demolished house
        - relaxing restrictions on secondary household units (e.g. granny flats) and older persons housing.

The LURP is still an adopted recovery plan, however having made these changes to statutory resource management documents, and with a planning horizon only to 2028, its relevance for future urban planning has diminished.

Reviewing the current framework

The National Policy Statement on Urban Development Capacity (NPS-UDC) requires local authorities in high growth urban areas to prepare a future development strategy (FDS) which demonstrates that there will be sufficient, feasible development capacity in the medium and long term (through to 2048). Associated guidance encourages "amending, refreshing, and building on existing strategies to meet the particular NPS-UDC requirements rather than developing an entirely new strategy"[4].

Options Assessment – Strategic Framework

Based on the broader Greater Christchurch post-earthquake context, and an understanding of current and future trends and issues impacting urban centres, an initial Options Assessment has been to first consider the appropriateness of this current strategic planning framework. The two options considered for this stage were:

To address any potential development capacity shortfalls by:

1. **altering the current urban form directions outlined above, or**
2. **being consistent with these current urban form directions**

The Greater Christchurch Partnership (GCP) endorsed an Urban Development Strategy Update[5] in 2016, reconfirming the UDS vision, principles and strategic goals for Greater Christchurch. This Update has therefore been developed to be consistent with this approach (Option 2). The urban form directions contained in the UDS, CRPS and district plans remain relevant as:

i. the intended outcomes (outlined above) resulting from a more consolidated urban form are still desirable and supported by academic literature on sustainable city strategies
ii. the overwhelming support for a more consolidated urban form, as expressed through feedback and submissions received during the extensive development and engagement phase[6] of the UDS 2007, provides an enduring mandate for such an approach
iii. analysis of public and stakeholder feedback from related consultations since 2011[7], undertaken as part of the UDS Update 2016, confirms continued community support for such an approach
iv. maintaining this approach provides continued planning certainty in a post-recovery environment
v. the strategic directions support existing investments made over the last decade, including the substantial investment by the Crown, public agencies and private sector as part of the rebuild
vi. they align well with the Government's Urban Growth Agenda[8] and Government Policy Statement on Land Transport[9], and support scheduled but not completed public and private investment plans (including the delivery of anchor projects identified in the Christchurch Central Recovery Plan[10])
vii. the outcomes would support achievement of recently adopted national and local carbon neutral goals and wider health, well-being and quality of life objectives

[4] http://www.mfe.govt.nz/publications/towns-and-cities/national-policy-statement-urban-development-capacity-responsive-0
[5] http://www.greaterchristchurch.org.nz/projects/strategy
[6] http://www.greaterchristchurch.org.nz/background/background-2007
[7] http://www.greaterchristchurch.org.nz/background/background-strategy-update-2016
[8] http://www. https://www.hud.govt.nz/urban-development/urban-growth-agenda/
[9] https://www.transport.govt.nz/multi-modal/keystrategiesandplans/gpsonlandtransportfunding/
[10] https://www.ccc.govt.nz/the-council/plans-strategies-policies-and-bylaws/plans/central-city-recovery-plan

viii. some post-earthquake trends and structural changes in the economy are still emerging and so it is too soon to reconsider the current framework at this stage

ix. the pace of technological change, particularly in the transport sector, and the implications for sustainable urban form are uncertain so do not justify reconsideration of the current framework at this stage.

This Update has therefore been developed to be consistent with the current strategic land use framework of the UDS, CRPS and district plans and their integration within the wider transport and infrastructure planning approaches across Greater Christchurch (Option 2).

Establishing an updated evidence base

To inform the preparation of a FDS the NPS-UDC requires that a housing and business development capacity assessment (Capacity Assessment) be carried out. This must estimate the demand for dwellings (types of dwellings, locations and price points) and business land (types and locations) and the supply of development capacity to meet this demand, in order to assess the sufficiency of feasible development capacity in the short, medium and long term.

The Capacity Assessment for the Greater Christchurch area has been prepared and is part of the information provided for this consultation on the draft Update.

Capacity Assessment 2018[11] findings

The Capacity Assessment report estimates the sufficiency of feasible development capacity in Greater Christchurch already provided through the relevant zones in the district plans for Christchurch City, Selwyn District and Waimakariri District. The findings identify potential shortfalls in sufficiency in the medium to long term, as shown in *Tables 1 and 2*.

Two important points relating to these findings are:

- housing shortfalls relate to projected demand[12] unaltered by subsequent setting of housing targets to take into account wider circumstances and proposed policy and market interventions.
- housing shortfalls relate to development capacity, which includes a requirement to add an additional 15-20% margin of capacity to allow for situations when developments are not brought to the market.

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**

Table 1: Summary of housing development capacity sufficiency and identified potential capacity shortfalls

[11] http://www.greaterchristchurch.org.nz/ourspace/

[12] data inputs and detailed methodologies used are documented in Capacity Assessment supporting technical appendices

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**

Table 2: Summary of business development capacity sufficiency and identified potential capacity shortfalls

Future projected demands for dwellings and business land, and the commercial viability of development capacity provided in district plans, will have a high degree of uncertainty over a thirty year period[13]. Ongoing monitoring and review through subsequent capacity assessments is therefore essential.

As shown in *Table 2*, development capacity for additional industrial business activity is already well-provided for in district plans. Under the existing planning framework, additional office and retail floorspace is guided primarily to the central city and key activity centres in the surrounding suburban areas and towns. This Options Assessment therefore did not further consider alternative scenarios for the provision of business land, given the existing industrial development capacity and the strategic decision outlined above to uphold the centres-based approach of the existing strategic land use framework.

Options Assessment – Setting Housing Targets

This section outlines the options, or scenarios, considered when setting the housing targets (outlined in Section 3.2 of the Update) and addressing the subsequent housing development capacity needs across Greater Christchurch through to 2048. These options are all aligned with the strategic directions for a more consolidated urban form as contained within the existing strategic land use framework (Option 2).

Setting Housing Targets

Three Options were investigated to determine the most appropriate approach to address the overall housing demand (and the additional development capacity margins) for Greater Christchurch shown in *Table 1*.

A. Projections-led : providing for housing demand in locations that directly correspond to projected demand based on Statistics New Zealand population and household projections
B. Strategy-led : providing for housing demand anticipating greater levels of redevelopment in the City and that correspond with growth management targets outlined in the UDS
C. Transitional or 'hybrid' approach: providing for housing demand in the medium term (2018 to 2028) using Option A, but over the long term (2028 to 2048) according to Option B.

[13] immigration settings, economic shocks, natural disasters, policy interventions and many other factors will influence future trends and alter future projections.

Each of these Options would enable consolidation of the urban settlements within Greater Christchurch. In essence, the three options differ in the extent of development capacity for new dwellings provided in and around the main Selwyn and Waimakariri towns in Greater Christchurch to that provided within the existing Christchurch City urban area.

Option A – Projections-led Housing Targets

Area	Medium Term (2018-2028)	Long Term (2028-2028)	Total 30 Year Period
Christchurch City	17,400	29,000	46,400
Selwyn	8,600	15,600	24,200
Waimakariri	6,300	9.700	16,000
Greater Christchurch	**32,300**	**54,300**	**86,600**

Option B – Strategy-led Housing Targets

Area	Medium Term (2018-2028)	Long Term (2028-2028)	Total 30 Year Period
Christchurch City	22,930	38,550	61,480
Selwyn	5,170	8,690	13,860
Waimakariri	4,200	7,060	11,260
Greater Christchurch	**32,300**	**54,300**	**86,600**

Option C – Transitional or 'Hybrid' Approach Housing Targets

Area	Medium Term (2018-2028)	Long Term (2028-2028)	Total 30 Year Period
Christchurch City	17,400	38,550	55,950
Selwyn	8,600	8,690	17,290
Waimakariri	6,300	7,060	13,360
Greater Christchurch	**32,300**	**54,300**	**86,600**

Table 3: Alternative housing targets by territorial authority under Options A, B and C

In additional housing development capacity terms, Option B represents an additional 15,000 dwellings being accommodated within Christchurch City when compared to Option A.

Figure 1 shows by territorial authority area the different percentage contributions to future household provision that would result from each option, and compares this to percentage contributions anticipated by the UDS 2007 and the LURP 2013.

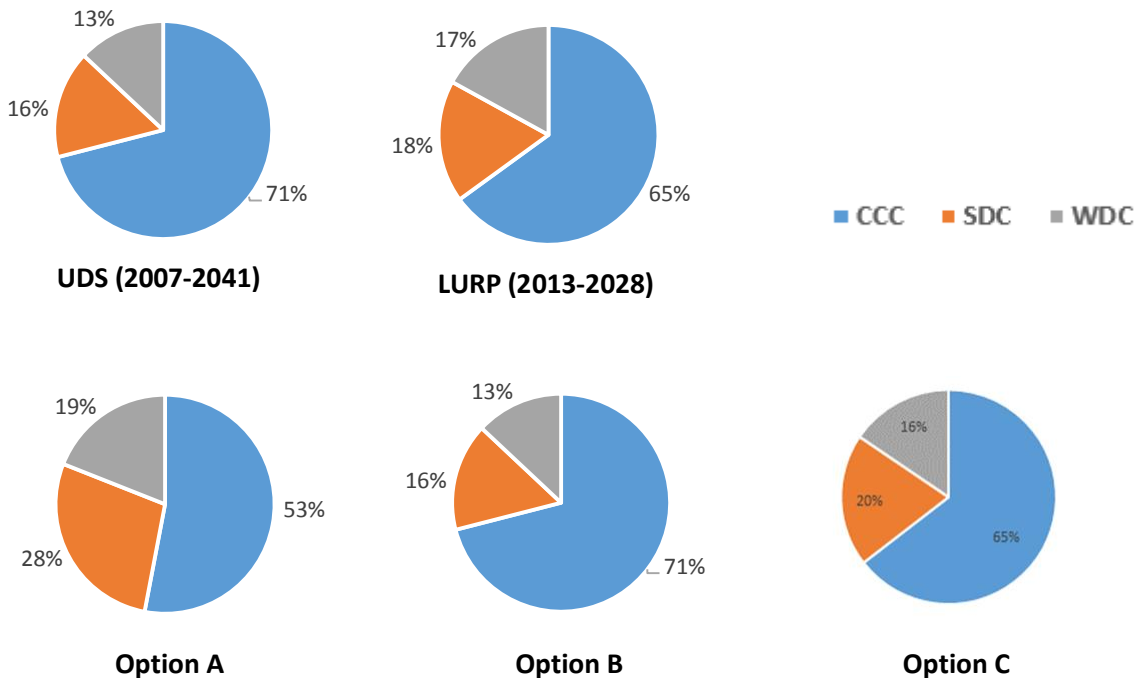

Figure 1: percentage contribution by territorial authority to future household provision in Greater Christchurch

Under all Options, Christchurch City still provides the bulk of the total housing stock in Greater Christchurch, as shown in *Figure 2*.

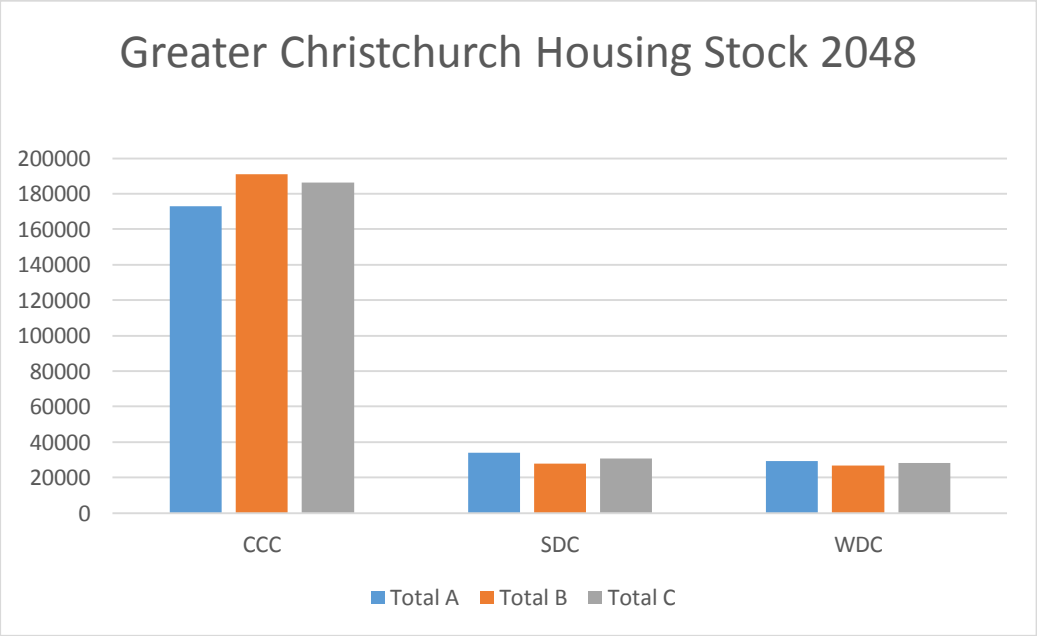

Figure 2: Total housing stock in 2048 by territorial authority according to Housing Target Options A, B and C

As outlined in Section 3.2 of the Update, the transitional or hybrid option (Option C) was considered the most appropriate when setting housing targets for Greater Christchurch. The Partnership believes that targets that simply duplicate the projected demands for each territorial authority would not take account of unique post-earthquake circumstances, and over the long term, may not align with the strategic goals of the UDS to increasingly support growth by redeveloping and intensifying existing urban areas.

Section 5.7 of the Update also summarises two further drivers, which link to the UDS strategic goals, and that support such an approach:

- Reflecting changing housing needs
- Supporting future public transport investment

These drivers and other supporting information is outlined in the housing demand and housing and business interactions sections of the Capacity Assessment and are further investigated in the following section of this options assessment document.

Option C is the preferred approach of the Partnership, however as highlighted throughout the Update there remain significant uncertainties with regard to the likely scale of growth, the underlying demographic trends, and the influence of technology and macro-economic policy on urban form, transport choices, employment opportunities and our overall urban environment.

This reinforces the need for periodic monitoring and review to account for any unanticipated change in the scale, pace or impact of such matters.

Census 2018 information and updated population and household projections, released by Statistics New Zealand during 2019 and 2020, will also be important new information to be considered as part of the next Capacity Assessment prepared by the Partnership.

Sequencing

At a Greater Christchurch level sequencing is important to align with cross-boundary investments, especially those relating to the transport network. Collaborative planning undertaken when developing infrastructure strategies and regional land transport plans will be the mechanism to address and resolve any potential misalignment.

Further collaborative work to identify and understand appropriate sequencing of development will be undertaken and will inform subsequent planning processes.

Key influences on growth assumptions and directions

The Update and the underlying Capacity Assessment has required the Partnership to consider the most appropriate growth assumptions to inform decision-making. These include (but not limited to):

- Population and households projections
- Historic dwelling consents rates and development uptake
- Household size, housing types and housing affordability
- Transport choices and trip generation

Additional information on these matters is included in the Capacity Assessment and associated technical appendices.

Population and Household Projections

The Update has adopted an anticipated housing demand based on Statistics New Zealand household projections. In order for strategic growth planning to be 'ahead of the curve' it has chosen to use a medium projection for Christchurch City, and a medium-high projection for both Selwyn and Waimakariri. The analysis which led to this approach is extensively covered in the Capacity Assessment and highlights how Statistics NZ projections have compared to the scale of development that has actually occurred.

Recently released provisional population estimates for 2018[14] show some softening of the historically high growth rates in Selwyn and Waimakariri, and growth above the medium projection in Christchurch City. However, these provisional estimates may be subject to change.

Growth rates and associated population estimates will always fluctuate over time. Monitoring of trends over a sustained period will confirm whether a reconsideration of adopted population and household projections underpinning this first Capacity Assessment is required in future.

Residential Building Consents in Christchurch City

The different Options for determining the housing targets in the Update considered the likelihood of the housing market responding to a greater proportion of overall development capacity across Greater Christchurch being enabled within Christchurch City.

A comparison of the historic level of new dwellings consented in Christchurch City against an annual average number of dwellings required to achieve housing demand under each Option was undertaken. It is noted that considering historic consenting rates is of limited relevance when considering future trends as many varying factors will influence development uptake (such as the Global Financial Crisis and additional redevelopment opportunities enabled by the new Christchurch District Plan). In Christchurch It is made more complicated still by the unprecedented impacts of the earthquakes. Nevertheless, *Table 4* highlights average new dwellings consented in Christchurch over different time period lengths (and also an average when discounting the period most interrupted by earthquake recovery and rebuilding). The table also distinguishes between dwellings consented in greenfield areas and those resulting from additional housing in existing urban areas (intensification).

[14] https://www.stats.govt.nz/information-releases/national-population-estimates-at-30-june-2018

	Greenfield	Intensification	Total	% Intensification
5 year average	1228	899	2128	42.25
10 year average	901	656	1557	42.13
15 year average	915	764	1679	45.55
15 year average not incl. 2010-13	1021	882	1902	46.37

Table 4: Summary of average annual dwellings consented (excluding replacement dwellings consented)

Table 5, provides a breakdown of the average annual dwellings necessary to meet housing demand in Christchurch City under each Option (housing targets excluding the additional development capacity margins).

	Medium term (2018-2028)	Long term (2028-2048)
Option A – Projections-led	1450	1260
Option B – Strategy-led	1910	1672
Option C – Hybrid approach	1450	1672

Table 5: Summary of average annual housing demand (Targets excluding the NPS-UDC additional capacity margins)

In the year 2017/18 Christchurch experienced the greatest level and percentage of new dwellings from intensification. Some 1167 additional dwellings were consented for existing sites being redeveloped, with a total of 2021 new dwellings from all consents (i.e. 854 dwellings in greenfield areas, an intensification percentage of 57.7%).

A sustained trend similar to that experienced in 2018 might necessitate a reconsideration of the anticipated housing demand that could realistically be expected through redevelopment in Christchurch City.

As outlined in Section 5 of the Update, no further greenfield areas are identified for Christchurch City. Christchurch City Council's 2018-2028 Long Term Plan and associated infrastructure strategy signals that new housing through redevelopment will form an increasing percentage of how the City accommodates future growth, towards a target of 80% of all new housing across the City.

As such, over time the increase in new dwellings resulting from redevelopment will also need to be sufficient to counter the dwindling development capacity in greenfield areas (the capacity assessment identifies capacity for approximately 9000 additional dwellings in remaining greenfield locations).

Greenfield densities in Selwyn and Waimakariri:

Section 5 of the Update identifies additional greenfield areas in Selwyn and Waimakariri, with township growth areas around Rolleston, Kaiapoi and Rangiora. The Update, and specifically Action 9 in Section 6, ensures that the District Plan Reviews underway in Selwyn and Waimakariri consider the appropriate densities for undeveloped greenfield areas and these future development areas in order to maximise the efficient provision on infrastructure and to address changing household size, home ownership and housing affordability trends.

While such decisions are best made as part of the community consultations associated with these District Plan Reviews, any resultant increased densities would minimise the extent of new land necessary to be zoned to meet housing demand in the medium term and for the planning horizon of these plans.

Table 6 provides an assessment of the number of additional dwellings that could be enabled under different zoning densities for the identified future development areas. These estimates have not yet been assessed in relation to commercial feasibility (as required by the NPS-UDC).

Net Density (hh/ha)	**10 hh/ha**	**12hh/ha**	**15 hh/ha**
Rolleston	4,500	5,500	6,500
Kaiapoi and Rangiora	4,500	5,600	6,700

Table 6: Summary of housing yields from different housing densities for future develop areas in Selywn and Waimakariri

Redevelopment potential in Selwyn and Waimakariri townships

Similarly, the Update, and specifically Action 9 in Section 6, also ensures that the District Plan Reviews underway in Selwyn and Waimakariri consider the potential for enabling further localised redevelopment opportunities in existing urban areas of key townships.

Analysis of such potential has not yet been completed and so estimating the additional development capacity through 'upzoning' is uncertain.

Balancing the housing stock with a projected decline in household size

Section 3.2 of the Update, as well as the Livingston Associates housing needs assessment (included as part of the Capacity Assessment technical reports) highlight the social and demographic trends that are likely to continue to influence the type and affordability demands of a growing population.

A key finding is the continued anticipated decline in average household size. The number of single person households is projected to increase by 50% by 2048, partly driven by a range of factors including an aging population.

While people may choose to 'age in place' and retain a larger house irrespective of household size, Figure 4 highlights the current disparity between the existing number of smaller and larger households with the current split of smaller and larger houses across Greater Christchurch.

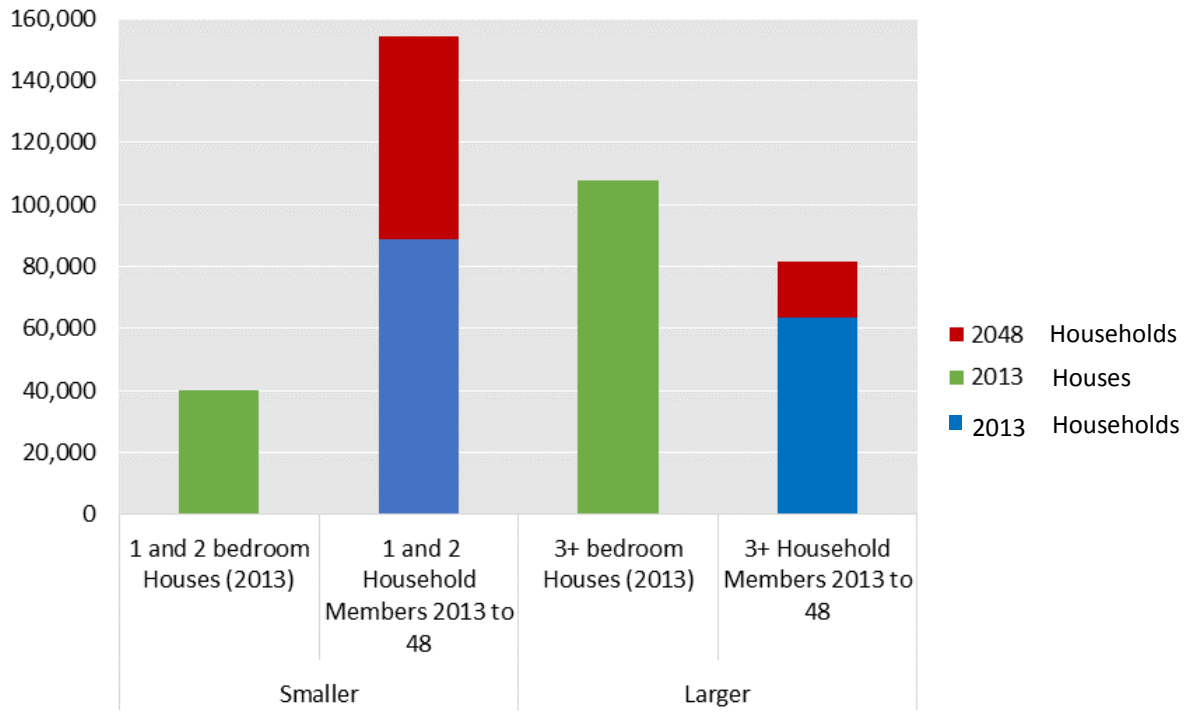

Figure 4: Household size (existing in blue and projected in red) compared to composition of existing housing stock (green)

Related factors identified in the housing needs assessment include a projected decline in the percentage of home ownership and decreasing housing affordability.

The preponderance of larger houses characterising new greenfield subdivisions is exacerbating the divergence of the housing stock from projected household size. Covenants set down by land developers can often require a minimum house size as a condition of sale. While it is not expected all new households will purchase new houses, and that instead there will be a more general flow of housing sales right across the growing housing stock, the deficit of smaller houses will not reduce housing affordability pressures as a more balanced housing market might be expected to.

Planning zones and rules to encourage smaller lot sizes and/or multi-unit dwellings, including in appropriate greenfield locations, can support the provision of housing choice and encourage new housing that is more reflective of projected demand. Additional measures to ensure sufficient opportunities and provision for private rental and social and affordable housing is also important.

Transport implications of Options

An important sub-regional issue to inform decision-making on a preferred Option is the likely impact of each Option on the strategic and local transport network.

The broad growth locations under each Option were incorporated within the Christchurch Transport Model (CTM) to enable the potential impacts to be evaluated. This modelling work did not review and recalibrate all the model inputs required for a full modelling analysis but was sufficient to provide some high level findings to differentiate each Option.

In addition to modelling Options A, B and C, this work also considered the implications of a shift in the current transport mode shares. Taking Option C as a base scenario, sensitivity testing assuming 5%, 10% and 15% PT mode-share was undertaken.

The following three conclusions can be gained from this work:

- With the additional projected population, including the additional 20% buffer, there will be an impact on the network which will result in reduced levels of service on different parts of the network, depending on capacity provision enable by each option.
- A mode shift away from single occupancy vehicles reduces this impact, with a 15% shift largely mitigating that impact to levels similar to today's levels of service.
- The reported impacts on the transport network from any of the three options, taking into consideration the intended purpose of the modelling, are not sufficient justification for preferring one settlement pattern option over another.

Improvements to the modelling methodology and input assumptions have been identified that will be considered as part of model refinements during 2018 and 2019, however this work would be unlikely impact the high-level conclusions above.