

# UDS: Settlement Pattern Review – Outcomes and Challenges

A Briefing Paper prepared by the SPR Review Group  
for the  
Greater Christchurch Partnership, August 2017

## CONTENTS

<b>Purpose and Scope of this Paper</b>	1
<b>Part A: Recent Settlement Trends and Projected Growth</b>	2
A1. The Urban Development Strategy, 2007	2
A2. The Canterbury Regional Policy Statement and the Earthquakes	6
A3. The Current Growth Outlook	7
A4. The Long Term View	11
<b>Part B: Strategic Challenges for the Settlement Pattern Review</b>	14
B1: Key ‘Shaping’ Factors	
a. Just how big a deal is urban form?	15
b. What is the future of intensification?	16
c. East/West development patterns	17
d. Greater Christchurch growth prospects	
e. Land Use integration	18
f. Future of public transport, cycling and transport technologies/services	19
g. Managing the rural edge	19
B2: Key Considerations	
h. Strategic importance of the airport	20
i. Housing the most vulnerable	20
j. Urban water quality and the impact of Intensification	20
k. Resilience	20
l. Quality of place and place-making	21
m. Funding implications and alignment	21
<b>Appendix A: Data Tables</b>	22
<b>Appendix B: UDS Strategic Goals</b>	25

## PURPOSE AND SCOPE OF THIS PAPER

The purpose of this paper is to aid consideration by the Partnership (GCP) of the key strategic issues to be addressed through the Settlement Pattern Review (SPR) project. Much detailed work is underway on that part of the project involving giving effect to the National Policy Statement on Urban Development Capacity (NPS-UDC). There are some tight timeframe set by the NPS for that work. It is timely to consider the wider strategic context for the SPR. This paper is in two parts towards that aim.

**Part A** sketches the ‘backstory’ of the Urban Development Strategy (UDS) since adoption in 2007 in the light of changes to the Canterbury Regional Policy Statement (CRPS); what is happening ‘on the ground’ to settlement; and, projected growth to 2048. A more substantial analysis of the changes and drivers for them will be required as part of the SPR before conclusions can be reached about a preferred settlement pattern. Tables in **Appendix A** support the discussion but you only need to look at them if you’re interested in the detail.

**Part B** outlines in tabular form a number of likely challenges affecting settlement pattern and the realisation of the strategic goals of the Greater Christchurch Urban Development Strategy 2016 Update. Those goals are attached as **Appendix B**.

Among the functions of the SPR Review Group is to promote discussion towards aligned and agreed policy outcomes for the SPR. A presentation based on the key points of this paper was made to a GCP Committee workshop on 04.08.17 and this paper reflects feedback from that discussion.

## **PART A: RECENT SETTLEMENT TRENDS AND PROJECTED GROWTH**

### **A1. The Urban Development Strategy, 2007**

This partnership policy document set out a preferred settlement pattern for the distribution of development to accommodate growth over a 35 year period to 2041. This referenced those parts of the Waimakariri and Selwyn Districts and Christchurch City within the ‘UDS area’. At that time this was respectively some 80%, 67% and 97% of those Council’s areas by population.

The adoption of the UDS in 2007 heralded a suite of supporting planning documents, of which the key settlement pattern related ones are highlighted in Figure 1 and referenced in the discussion below. The NPS-UDC has been added to this figure as the most recent planning/policy document albeit a national one that has high significance for the SPR.

The anticipated distribution of provision for growth in households and population, 2006-41 among the three Councils within the UDS area is shown graphically in Figure 2. It is detailed by numbers in Appendix A, Table 1. Anticipated growth over this period was up to 75,000 households (+47%) comprising an extra 135,000 residents (+33%). The proportional increase in households is greater than population because of the underlying trend for long term decline in average household size.

The indicative settlement pattern shown in Figure 2 below from the 2007 UDS was derived from analysis and consultation on four differing settlement pattern options as shown in Figure 3. An “Option A/B Combination” was then preferred. Key elements of this approach were to, over time, redevelop and intensify the core; establish a ‘key centres’ focus for commercial development; and, planned expansion of new residential development integrated with existing city edge and district towns.

The UDS growth outlook reflected an overall ‘medium-high’ policy provision for development capacity, as the midpoint between the two projections by Statistics New Zealand (SNZ). This was above the most likely ‘medium’ variant household/population growth projection and made some allowance for additional development capacity, as Councils are now obliged to do so under the NPS-UDC.

However the distribution between the three council areas was not as SNZ had set out through its projections but was ‘policy driven’. This anticipated that progressively over the 35-year period a greater (than might otherwise have been the case) share of growth would be accommodated within the City through ‘intensification’, as indicated in Figure 4. below.



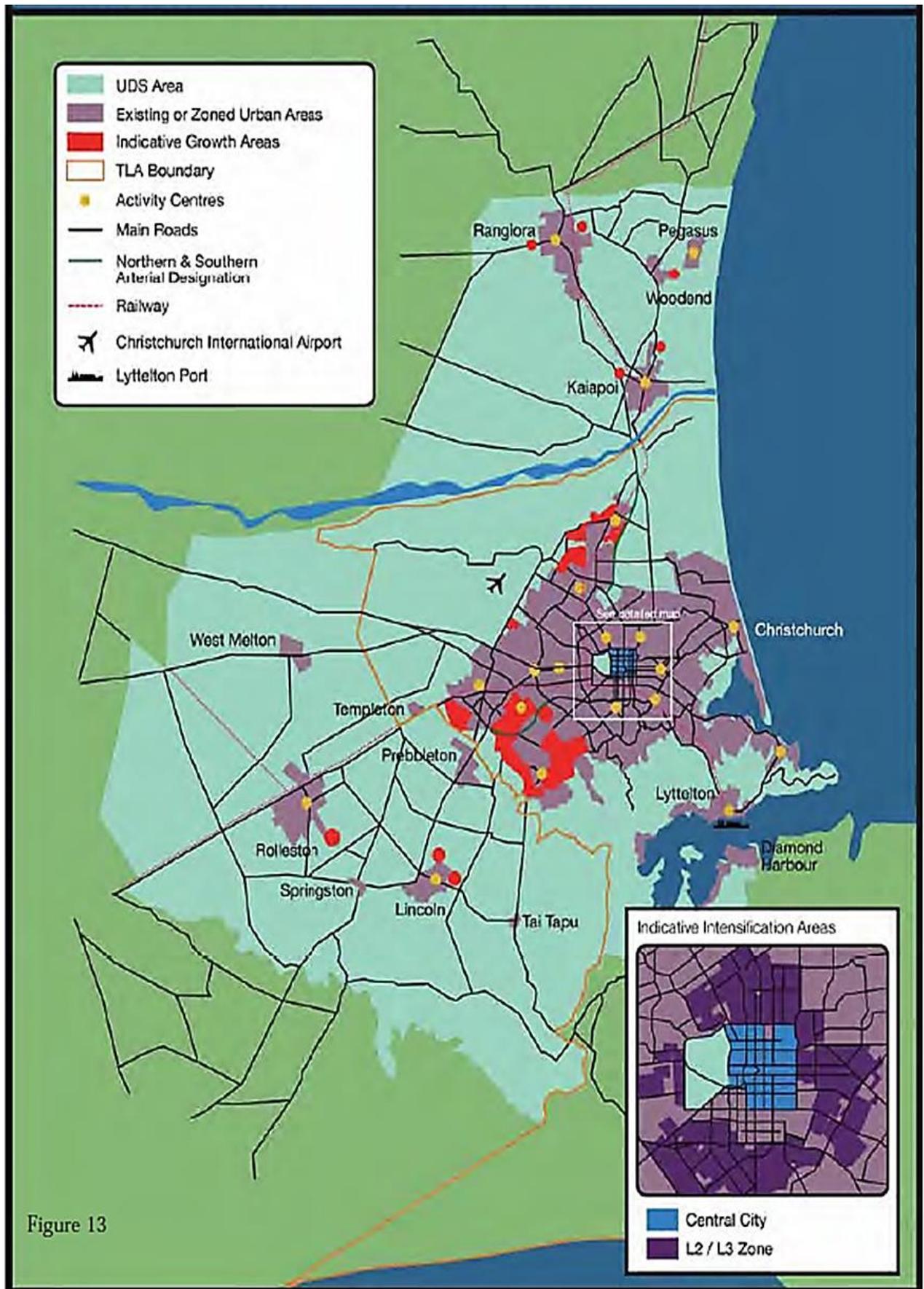


Figure 13

Figure 2: Indicative Settlement Pattern in the Urban Development Strategy, 2007

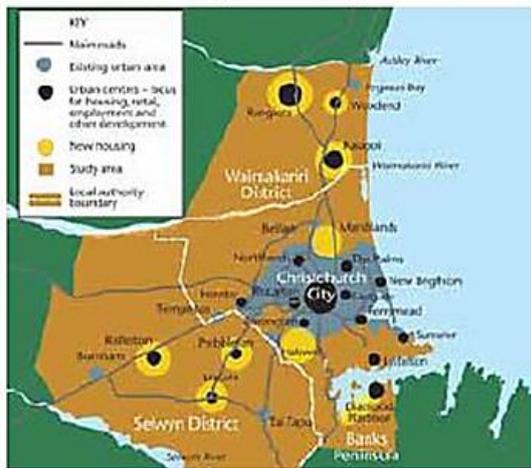
**Figure 7: Business as Usual**

This settlement pattern would continue with the current trends of development spreading out around the Greater Christchurch area in new subdivisions, with some housing in urban renewal developments. Councils would continue to pursue independent growth strategies.



**Figure 9: Option B**

This balances future urban development between existing built areas with some expansion into adjacent areas.



**Figure 8: Option A**

This concentrates development within Christchurch City and the larger towns in the surrounding districts.



**Figure 10: Option C**

This disperses development out around the Greater Christchurch area away from established urban areas.



**Figure 3: Options for Original UDS Settlement Pattern Analysis and Consultation**

Intensification was defined as increasing the household capacity through infill and redevelopment at higher densities of the (2007) footprint of the existing urban areas including the city and district towns. This was prioritised over new development in ‘greenfield’ or rural locations because they are on the edge of the City, district towns or elsewhere in the UDS area. No significant contribution to intensification through growth within the footprint of the district towns was anticipated based on the recent nature of much of the existing development there.

This UDS policy direction reflected the anticipated change over time in household structure towards proportionately more smaller, older households - consistent with an aging population - that would be seeking to live ‘closer in’ than ‘Greenfield’ areas on the edge of the city and towns in larger homes. It also reflected the aspiration for (re)population of the central and inner city towards aiding CBD vitality and minimising commuting.

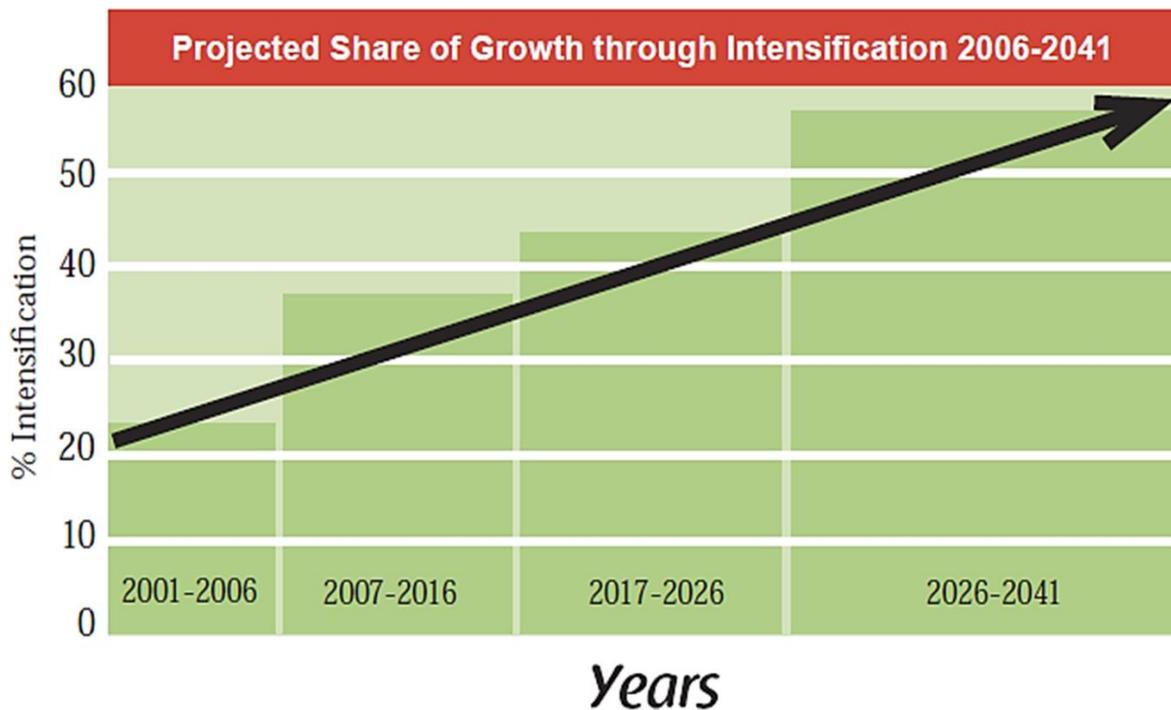


Figure 4: UDS Area Intensification Targets

By (re)focusing (re)development/intensification around Key Activity Centres (KACs) to support the significant community investment in such locations it aimed for an overall more consolidated, transport efficient urban form. The direction that was set in 2007 anticipated a range of other supporting policies and investment initiatives to steadily increase intensification.

Intensification was anticipated to steadily rise from around 25% in the early 2000s to reach 60% by 2041, much of it within the central city and inner suburbs (Figure 4). Overall during that period 45% of housing development was sought to be through intensification. Ultimately though this was seen as a modest consolidation strategy requiring intensification to rise from around 650 units per annum in the early 2000s to average 1,000 per annum until 2041.

Waimakariri and Selwyn Districts were anticipated to continue to grow at proportionately higher rates, albeit off relatively low bases. They together accounted for only 14% of the UDS area population in 2006 and were expected to comprise 18% by 2041. While the City's population at the beginning of the planning period was 86%, by the end it was projected to fall only modestly to 82% (Appendix A, Table 1).

The overall 'growth outlook' upon which the level of change anticipated in population and households to be provided for was essentially based on the 2001 Census results, updated in 2005/06 to inform the UDS in 2007. This was strongly influenced by population change in the 1990s when New Zealand's and Christchurch's population grew quite slowly.

## A2. The CRPS and the Earthquakes

This policy based approach to settlement distribution was in the process of being 'anchored' in the Regional Policy Statement in 2009/10 when the first earthquake struck. It was encapsulated in Plan Change No. 1 (PC1) to the operative CRPS which had drawn significant appellant opposition in Environment Court proceedings. While these proceedings were suspended in light of the uncertainty

posed by the earthquakes, the intent of PC1 was pursued under recovery enabling legislation as per below.

The Proposed Change to the RPS included a suite of complementary policies including setting minimum densities for greenfield development as another contribution towards a more consolidated urban form, greater definition to urban structure through identifying KACs and a planned approach to integrating new with existing development.

The disruption wrought by the earthquake sequence is well documented. Loss of population from the City and Canterbury coupled with significant (temporary) population dispersal and accelerated peripheral and district growth are key aspects. Annual population estimates over several years indicated the City lost about 20,000 residents, the districts gained about 10,000 more than otherwise and the other half were lost to elsewhere. This was acknowledged in the Land Use Recovery Plan (LURP) in the face of strong demand for new housing and significant issues with repair of existing housing stock by the level of provision made for new peripheral development.

The LURP was a statutory recovery plan gazetted in 2014. It effectively superseded PC1 and responded to the situation facing Greater Christchurch by directing changes to the CRPS. Those changes mandated almost all of the 35 years of Greenfield growth anticipated by the UDS – some 39,500 lots (around 99,000 population capacity) – in defined Greenfield Priority Areas capable of being developed within the 15 year period to 2028 (Figure 5). Some further land was identified for urban use within a larger again ‘Infrastructure Boundary’.

The CRPS including some ambitious intensification targets towards inner and central city stimulus in the face of large scale damage to housing and population loss. The targets brought forward intensification so that the sought after rate during much of the 2020s - 55% - equated with that previously reserved under the UDS for the late 2030s.

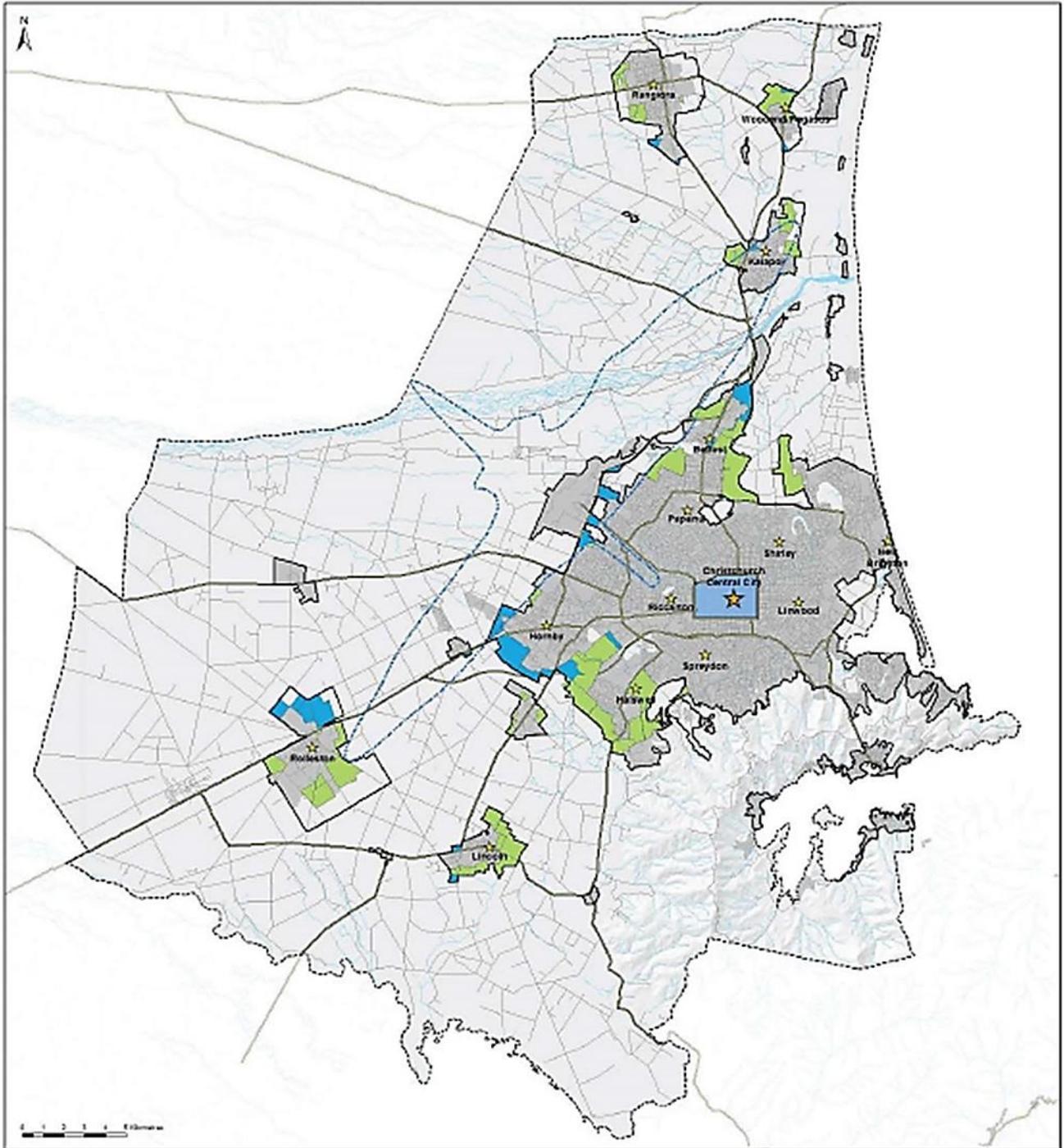
### **A3. Current Growth Outlook**

Table 2 in Appendix A details refreshes projections for household and population growth within the three Councils UDS areas based on the 2013 Census, prepared in 2015. They are medium-high projection midpoints similar to those which underpinned the UDS so that we are comparing ‘like with like’. That said they are framed for a later 35-year period, 2013-48; and, they are derived directly from the SNZ numbers and do not reflect any particular policy position.

A ‘like for like’ comparison of population and household numbers for the three Councils UDS areas for 2006 (base); 2041 (UDS) and 2048 (based on Statistics NZ projections) are shown schematically in Figure 6.

Such projections are not predictions nor forecasts and do not reflect a ‘preferred’ future. They are based on assumptions of the underlying demographic realities of fertility and mortality and they rely significantly on migration assumptions. Overall a broad range of social and economic drivers and changes are subsumed in them.

A key change from the projections set which ‘calibrated’ the initial UDS is a significantly higher national and local migration gain experience and outlook. This reflects the fact that NZ is in unfamiliar territory given the level of international migration gain of recent times. This ‘growth impulse’ while not projected to continue at anywhere near current rates long term does however mean the more modest view of growth prospects under the UDS needs to be reconsidered to reflect a significantly higher national/regional growth trajectory in the short to medium term.



**Figure 5: UDS Area Greenfield Priority Areas and the infrastructure Boundary in the CRPS, 2013**

Whereas the UDS anticipated provision (inclusive of a ‘capacity buffer’), over its 2006-41, 35-year planning period was for an additional 75,000 households (+47%); the rebased 2013 projections also with a capacity buffer suggest provision needs to be made to accommodate 97,900 households – a 60% increase over the 35 years 2013-48. This is 31% more than the UDS. While the UDS anticipated capacity for a UDS area population of 548,500 in 2041, this revised set on a comparable basis suggests capacity provision for a population 100,000 higher seven years later in 2048.

# UDS Area Population and Households – Projected Totals, 2006-2048\*

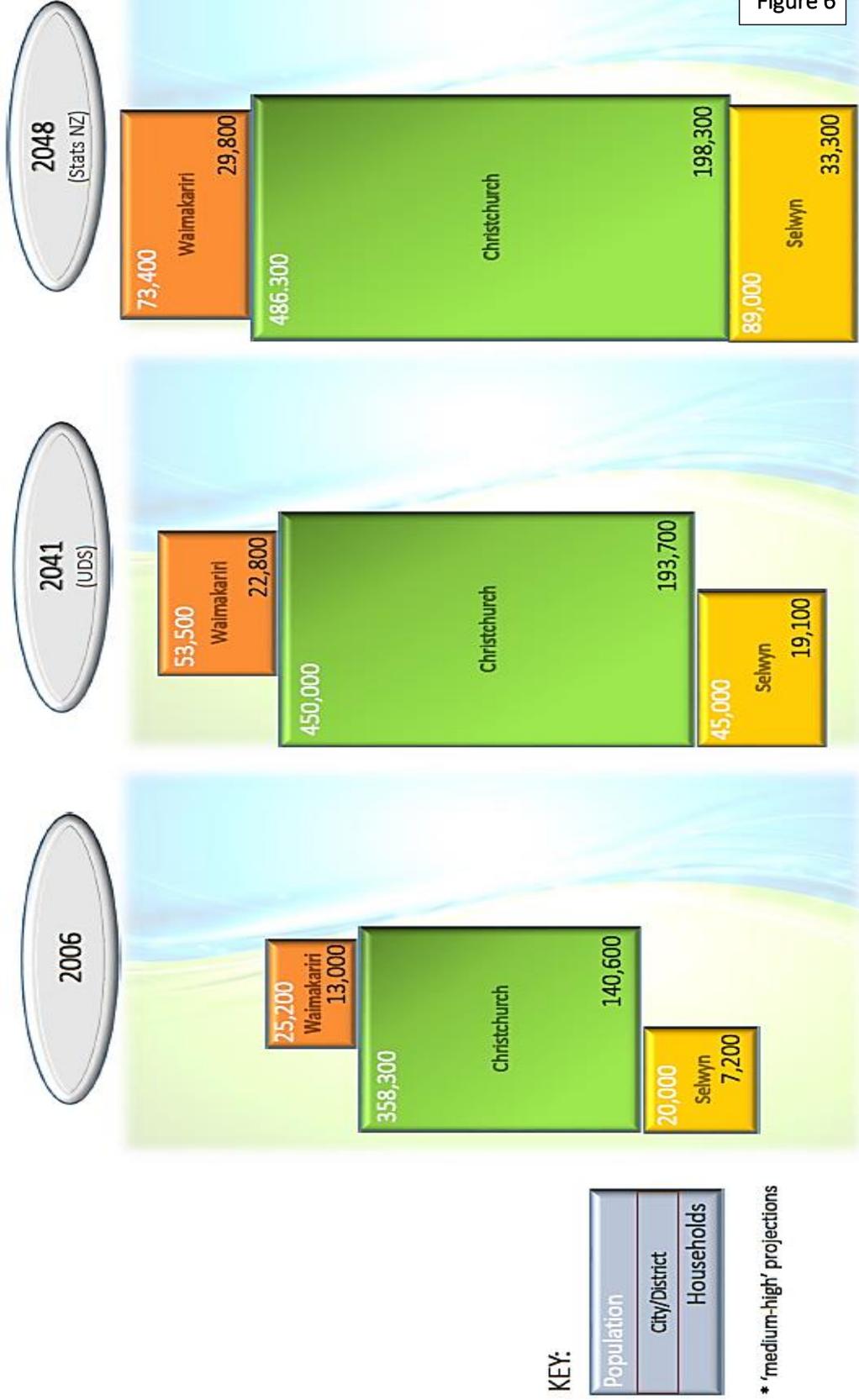


Figure 6

Differences in projected growth rates in the outer districts as compared with the City (Figure 7) are more marked than under the UDS growth model. This reflects recent experience; the accelerated capacity provision made through the LURP; and at this point are not reflective of any particular policy directives.

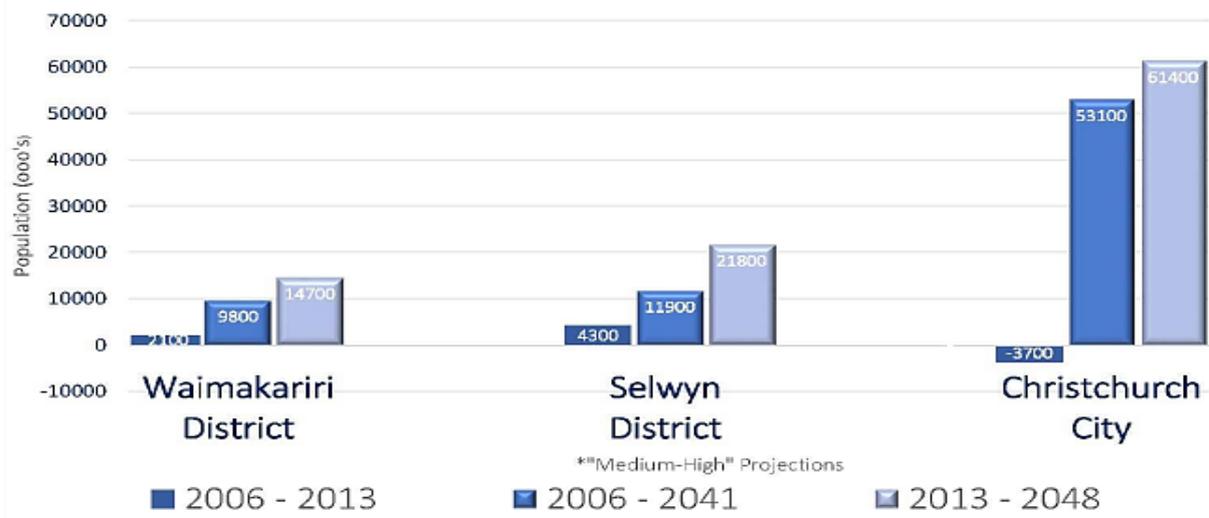


**Figure 7: UDS Area Households - % Change and % Share, 2006 – 2048\***

This difference in scale and distribution of projected growth is most marked in the case of Selwyn District. The projected gain in household capacity provision over the 35 years to 2048 at +21,800 is twice the number previously provided for under the more constrained viewpoint and outlook of the UDS for the 35 years to 2041 at +11,500 (Figure 8).

Two things are notable however which suggest this could be greater again for all Council areas. Firstly, under the NPS – UDC the capacity buffer above the medium projection is required to be 20% over the first 10 years from 2018-28 and 15% for the 20 years thereafter to 2048. The household capacity buffers for each Council area reflected in Table 2 range between 4-8% for the first 15 year period and 10-15% above medium for the balance of the 50 year period. As such they would be insufficient to give effect to that NPS-UDC requirements.

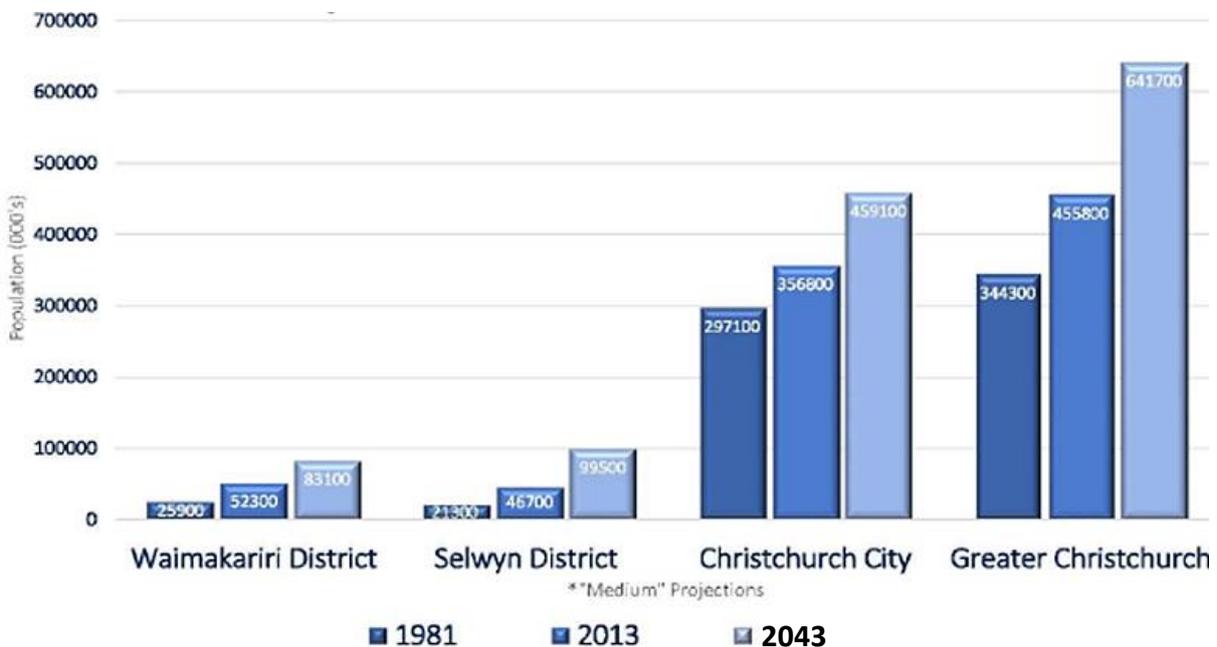
Secondly, these projections released in 2015 while based on the 2013 Census have been further revised in 2017 reflecting the first three years of experience since 2013 to mid-2016. As discussed below in relation to Appendix A Table 3, in population terms the 2017 projections have been further revised upwards acknowledging the unprecedented migration experience of recent years.



**Figure 8: UDS Area Households – Projected Change 2006-48\***

**A4. The Long Term View**

Table 3 in Appendix A takes a long term view looking back and forward 30+ years. It compares population change since 1981 forward 32 years to the 2013 Census with two successive 30 year forward projections from that point to 2043. The first prepared in 2015 fully reflecting the 2013 Census results; while the second was then updated in early 2017 to reflect subsequent patterns of post-quake population change among the three Council areas. This is summarised in Figure 9.



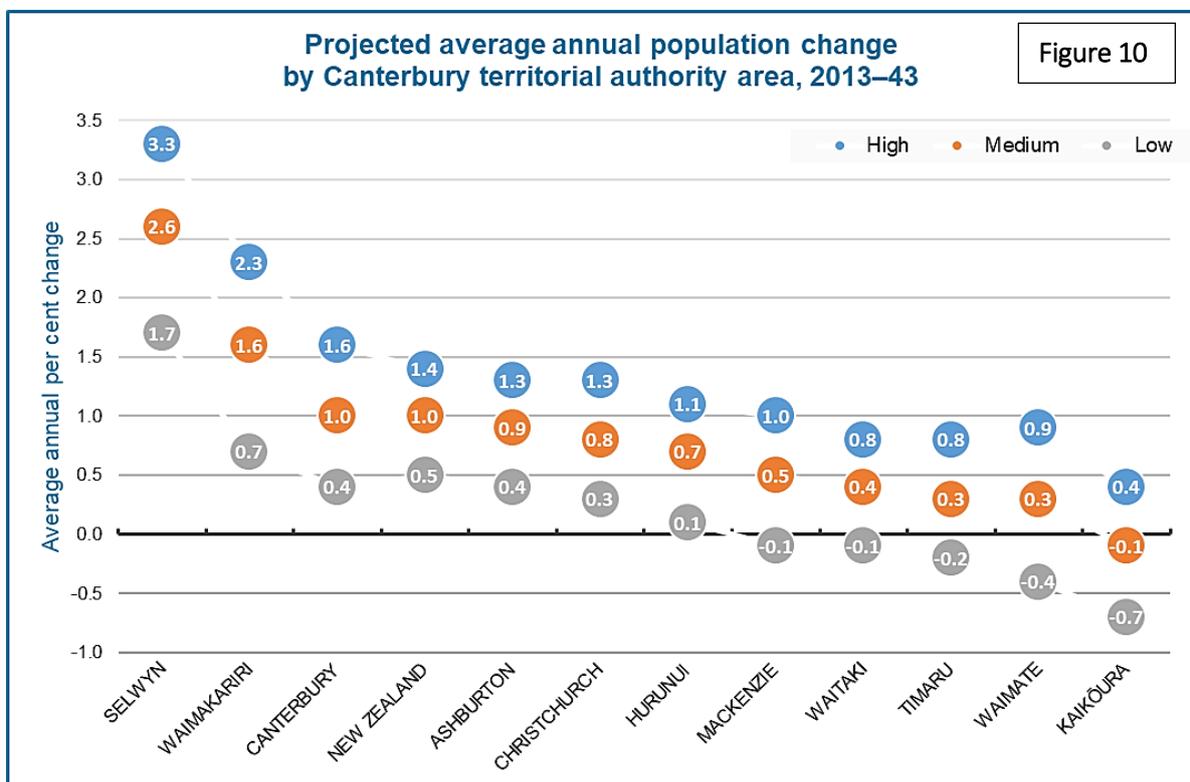
**Figure 9: Greater Christchurch Population – Actual and Projected Totals, 1981-2043\***

Appendix A Table 3 projections are, with one exception for the 2015 set for the whole of the respective three Council's areas making up Greater Christchurch not their UDS constituent parts. The 2015 comparison is included to show that 93% of projected Greater Christchurch growth over the 30 years to 2043 is anticipated within the UDS area.

The 2017 medium projection series is for population only (Figure 9). It has yet to be reflected in updated household growth projections and disaggregated to show the UDS area component for each Council area. These are projections for growth influenced by the wider growth dynamic for New Zealand as a whole; are not impacted by any distributional policy directives; and, reflect the consequences of earthquake generated dispersal. For Waimakariri and Christchurch they are 3-4 % above those released in 2015; for Selwyn in the short term to 2028 +12% and by 2043, +5% above those released but two years earlier.

It can be seen from historic population data in Figure 9/Appendix A Table 3 that the outer districts have been growing at much faster rates than the City for three decades to 2013 but only recently have the absolute population numbers become more significant at around 50,000 population for each District in 2013. Indeed the growth rate differentials over the six 'quake years', 2010-16 have become marked – Waimakariri at +3.6% per annum (remembering it lost and recovered during this period around 5% of its housing stock as well as substantial growth); Selwyn District at +6.25% per annum; while by 2016 the City had just recovered its 2010 population such was the impact of the earthquakes including the net loss of over 7,000 red zoned dwellings in the City.

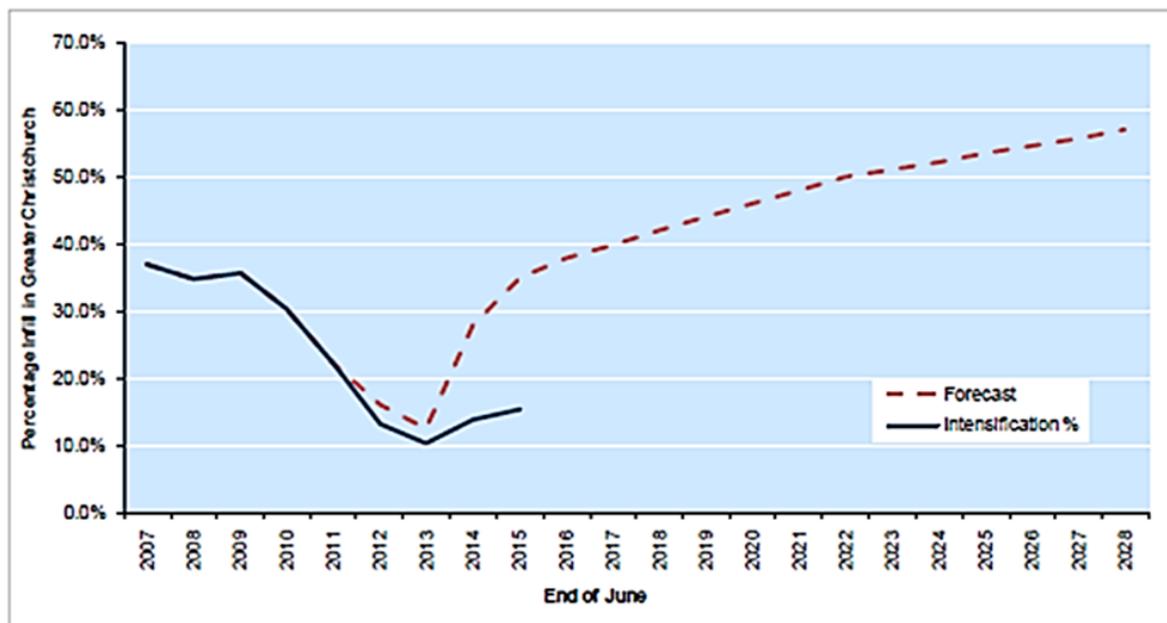
Figure 11 helps put these higher growth rates in regional context and with reference to the 'High-Medium-Low' range of Statistics New Zealand's forward long term projections. It shows the continued anticipation of overall higher average growth rates in the outer districts of Greater Christchurch. There are however wider regional development implications of continued concentration of population in Greater Christchurch that are beyond the scope of this paper.



*In summary* and reflecting a national/Greater Christchurch growth outlook being much higher than that which framed the UDS, a dispersed pattern of growth is projected to continue, ‘all other things being equal’. Differential growth rates among the three Council areas are marked for the full projection period, albeit slowing in the latter part of the 30 years to 2043 in all areas. Elevated growth is most marked in Selwyn such that based on recent estimates this District is currently trending on a high growth path, Waimakariri at medium-high and Christchurch City at medium.

We stress again these are projections not predictions and not preferred positions. A key difference to previously however, is that the NPS-UDC is requiring capacity provision targets in relation to SNZ projected growth.

In planning terms whether it is at the edge of the city or in the districts, the LURP Greenfield priority area enabled capacity is facilitating significant peripheral growth. At the same time comparatively low intensification is occurring. Based on LURP monitoring this is trending post quakes between 10-25% as compared with historic/projected 30-40% (Figure 11).



Source: LURP Monitoring Report, 2015

**Figure 11: Greater Christchurch Intensification, 2007-28**

Taken together this means a much more decentralised pattern of ‘polynucleated’ (multiple, distinct self-contained communities) growth appears to be occurring than that anticipated by the UDS in 2007.

This is given added point by the NPS-UDC which required ‘buffer’ capacity provision of 15-20% over and above medium projected growth. This has to be resolved ‘bottom up’ by development type/housing price point and location and tested for market feasibility; whether it be for Greenfield development or intensification. This is a narrower definition of feasibility than the range of factors affecting the desirability of development type/urban form that accounts for all ‘spillover effects’ that Councils need to take into account.

It is also a more technically detailed approach that is now required in contrast to the ‘policy driven’ allocation mechanism among total households which underpinned the UDS, (albeit there was some technical analysis to support that at the time). Elements of both approaches remain important, but

the detailed requirements of the NPS-UDC will be challenging. In light of these trends and changes there are a number of significant policy implications that are discussed below in Part B of this paper.

## **PART B: STRATEGIC CHALLENGES FOR THE SETTLEMENT PATTERN REVIEW**

A key strategic outcome of the SPR is to give effect to the NPS-UDC while also seeking alignment with the strategic goals of the UDS. In particular these include: that clear boundaries for urban development are defined and maintained; that new urban development is well integrated with the existing urban areas; and that practical opportunities are realised within existing urban areas for consolidated growth through redevelopment and intensification.

An important task will be to undertake a gap assessment between the Strategic Goals of the UDS that bear on settlement pattern (Appendix B); what the implications of giving effect to the NPS-UDC requires; and, what is actually happening and is reasonably foreseeable 'on the ground'.

Part A of this paper showed that the recent and prospective pattern of development across Greater Christchurch is significantly different to that anticipated by the UDS. We need to consider the appropriate approach to now take in light of this and the requirements of the NPS-UDC. The latter requires a level of disaggregate analysis and evidence which differs significantly from the 'policy driven' development model that underpinned the UDS.

In ensuring we are addressing the right strategic issues the interplay between the NPS-UDC capacity assessment and preparation of the Future Development Strategy (FDS) also required by that NPS (by December 2018) is a dynamic one. Iterations are likely to be required before a preferred FDS is fully resolved. The FDS will be central to the SPR project.

This makes a GCP policy framework all the more important to guide this work long before the latter part of 2018 and especially so given the timeframes of current District Plan Reviews. There are some specific challenges that the SPR / NPS-UDC work will need to address in order to close current gaps and resolve that framework in order to realise a well-crafted FDS.

The purpose of Part B of this paper therefore is to stimulate discussion of challenges in parallel with the technical analysis so that the latter can be appropriately directed as it itself will not 'solve' matters.

The notes below form 'discussion starters' designed to assist partner and wider stakeholder engagement.

## KEY 'SHAPING' FACTORS

### Challenge / Potential Gap

#### a. Just How Big a Deal is Urban Form?

**If left to continue, where are current trends in settlement leading us?; how 'sub-optimal' are they in relation to the strategic goals of the UDS and the 'four wellbeings' perspective that underlies them; and, how feasible is it to significantly alter them in any case given the momentum built up under the LURP and the requirements of the NPS-UDC?**

### What is this about?

It is important to note that the NPS-UDC does not prescribe a particular urban form. Rather it requires whatever that is to be, that it provides sufficient capacity to accommodate 'reasonably foreseeable' residential and business growth. This must be based on a 'bottom up' assessment of market feasibility by development type and location. This is fundamental difference to the analysis and approach that underpinned the UDS.

Further the NPS-UDC is not 'just about the numbers': through higher level objectives and policies it requires both regional and territorial councils to holistically consider the urban environment that enables people and communities to meet their wellbeing needs.

Reaching agreement on the challenges across the UDS partnership on the preferred urban form and in particular the achievable balance between consolidation and new urban development while providing sufficient capacity will be challenging. Post quakes differences in growth among the Councils are marked and peripheral development capacities large. The overall growth outlook across Greater Christchurch is markedly different to that which informed the UDS in 2007.

In part this is due to the post quakes decentralisation of urban activity that has occurred due to quake effects (including Red Zoning) and leveraging off the very substantial greenfield capacity that has been mandated by the CRPS based on the LURP. LURP monitoring suggests actual intensification is broadly running at around half that targeted. Rapid new urban development across all three Council areas is being serviced by very substantial upgrade to the capacities of the northern, western and southern corridors.

Views are likely to differ on the desirability of the current pattern of growth and the extent to which adverse effects are/will arise that are not already being addressed/mitigated. Discussion needs also to consider the 'on the ground' ability to 'turn the curve'/achieve a substantially different development pattern than the "polynucleated" (multiple, distinct self-contained communities) one that currently appears to be arising - should that be preferred.

It is vital these issues be explicitly canvassed rather than left to play out through the large and complex process of giving effect to the NPS-UDC.

**b. What is the Future of Intensification?**

**The apparent gap between intensification aspirations for Christchurch City, what's happening on the ground and how to resolve this**

There is a need to further assess what is happening, what are the real prospects for intensification beyond 'aspirational' targets and as a consequence whether or not a wide enough toolkit is being used to encourage intensification. This analysis will also need to investigate the relationship between provision of greenfield land vs intensification objectives. Does the continued re-zoning of greenfield land at the city edge/close to the city affect the feasibility or relative attractiveness of developing within the existing urban area?

Intensification at whatever level is feasible will need to focus on areas that offer greater potential for land use change e.g. the central city and medium density areas about Key Activity Centres may be more likely than 'Brownfield' industrial areas.

When the UDS was first framed it sought that by the latter part of the 35 year planning period to 2041 for the balance to be running 60:40 relative to the whole urban area's growth in favour of intensification. The LURP 'brought forward' that target to be achieving 55% between 2022 and 2028.

At present actual (re)development is a considerable way off this. While the Christchurch Replacement Plan has 'up-zoned' areas in support of that and a number of initial intensification exemplar projects are underway the achievability of 'aspirational' intensification targets beyond zoning provisions to support them requires consideration.

In part this is because such intensification targets have been set in many comparable jurisdictions only to fall short; in part because there is not a lot of apparent market confidence that large scale intensification including Brownfields redevelopment is viable; and, in part also because the NPS-UDC feasibility test has not been done to indicate that this is in fact feasible/under what circumstances might it be feasible.

Efforts to constrain greenfield growth in favour of intensification through the UDS/PC1 process founded in part because of the earthquakes but also because this top down and relatively blunt policy approach was at odds with the fact that the market appeal and developer confidence/capability/capacity to undertake the more complex and challenging job of (re)development was far from clear and it significantly remains so.

If there is limited confidence these targets mean anything by being backed up with a detailed strategy be it among strategic partners or in the market place then the realism of the approach is called into question.

<p><b>c. East/West Development Patterns</b></p> <p><b>How to reign in "development on the gravels" enabled by the LURP in a post-earthquake environment and address the "future of the East"</b></p>	<p>The 'drift West' in post quakes development is palpable and the development future in and of East Christchurch is unclear when recent development investment patterns are considered. Concern about the east is most evident in the Resilient Greater Christchurch Plan. Attention is warranted to how this Plan and implementation 'on the ground' of a refreshed UDS/SPR can work together to achieve the sought after outcomes.</p> <p>Use of the NPS-UDC Capacity Assessment process to base CRPS and District Plan targets that have a focus on both intensification and greenfield development needs to be constructed bottom up based on feasibility assessments. These need to be house type/price point/location specific and bear in mind reasonably foreseeable demand for that / those development types. They also need to recognize that the future hazards development feasibility assessments for parts of eastern Christchurch will affect capacities and urban structure in that area with implications for elsewhere.</p> <p>This is a fundamentally different approach to that undertaken as part of preparation of the UDS which was relatively simplistic and 'top down'. While an easy step may be to get the targets into the statutory documents, more challenging is that they will have to be accompanied by objectives, policies, methods / rules.</p> <p>It is important to emphasise that increasing land supply is just one potential response in the toolkit to respond to any capacity issues. Targeting financial barriers to redevelopment as well as reflecting the full costs of development including 'spillover effects' at the UDS level and not limited by the current administrative boundaries are also important.</p>
<p><b>d. Greater Christchurch Growth Prospects</b></p> <p><b>Recognising and providing for the critical role of Christchurch in the wider South Island economy</b></p>	<p>Confidence in the underlying economy - apart from the stimulus of the rebuild which will last into the 2020s - is currently quite high. However there are a number of key risks and uncertainties for 'Greater Christchurch' in the context of the role it plays in the Canterbury and wider South island economy. Recently updated/confirmed economic development strategies acknowledge this.</p> <p>Previous consideration of population projections and which set of assumptions to utilise for planning purposes has been relatively independent of such considerations. But the critical role of migration contingent on and as a driver for economic development means much greater consideration of Greater Christchurch's economic future in context is warranted so as to inform the SPR and the NPS-UDC work.</p>

The previous UDS was relatively silent on its wider context, the implications this might have for growth prospects and hence which growth projections are more or less relevant.

How Greater Christchurch economic growth prospects by sector affects the relationship between the successful functioning of Key Activity Centres and employment nodes and the distribution of household is also important. How realistic is encouragement of people living and working in close proximity? What evidence is there to support this ongoing direction, including internationally?

In the growth management work being undertaken in the top part of the North Island they are paying close attention to the less obvious but critical factors such as migration, economic development cycles, areas such as international transport, freight logistics, major events, and concepts like agglomeration economies which provides the umbrella for growth in professional services.

**e. Land Use-Transport Integration**

**What may be the consequences of RoNS investment in the Northern, Western and Southern Corridors for the distribution of development and vice versa?**

Major Corridor capacity upgrades in a north-west-south arc around the city are both servicing and enabling decentralised and dispersed growth pattern through growth to the west. The enhanced accessibility they bring relates not only to enabling long range and dispersed commuting patterns but also dispersal of business/job locations. There are opportunity costs of this form of growth.

There were cost/benefit justifications required for these investments to improve economic performance and address long term accessibility issues. But there is a need to for strategic partners through the SPR / NPS-UDC process to consider the impact of these alongside other transport initiatives that might support a compact urban form to overall enhance transport system performance. Travel demand management (TDM) and emerging technologies have a role to play here.

It may be that the current overarching transport model which guides such considerations which was 'calibrated' in 2013 will require updating given the recently projected increases in the quantum and possible distribution of recently projected growth.

Local authority partners need to note that the strategic integration of land use and transport is a core RMA requirement of both regional and territorial councils.

**f. The Future Role of Public Transport, Cycling and New Transport Technologies & Services**

**Closely related to the issue of transport system performance above is the concerning incidence of absolute and relative decline in public transport post-quakes and what implications this has for settlement pattern planning**

**At the same time there is heightened uncertainty about the rate and nature of uptake of 'new transport' but a real need to get on top of this**

Despite some recovery post quakes trips by bus are still 22% below pre quake levels. The future strategic role of public transport in Greater Christchurch seems in a state of flux/high uncertainty and the consequential implications for intensified development similarly. Public transport recovery is one thing but this may not be just the lingering consequence of earthquake effects/recovery. How public transport effectively serves a more dispersed population with complex cross commuting patterns is another.

In short the challenge appears to be how do we accelerate material improvements in public transport including the case for strategic investment in this mode comparable to that which has occurred in Auckland and Wellington? Funding to achieve strategic investment is highly unlikely to be achievable through farebox revenue recovery/growth and compelling business cases for Crown investment will be required.

This requires good alignment across the GCP. There are a number of governance groups and processes involved. The collected contribution of these governance groups is needed to strengthen land use policy and align land use patterns and transport responses.

These challenges arise at a time of heightened uncertainty about the nature and extent of influence of disruptive change in transport technologies and services. These include autonomous vehicles, demand responsive services and the like. Maintaining/enhancing accessibility has an increasing range of options.

The impact disruptive change might have on future fleet size, the demand for fixed route PT services and the implications of this for settlement patterns warrants careful consideration. It does not appear there is significant work occurring in this space inside the Partnership to feed into the SPR at present.

**g. Managing the Rural Edge**

**Preferences for rural living remain strong but concerns about the implications of this for servicing, reverse sensitivity among land uses in rural areas, the take up of versatile soils and transport impacts are all live issues**

The phenomenon of 'lifestyle living' at the rural edge of greater Christchurch urban areas is well established. The appropriate level of provision for and distribution of 'rural residential' development is subject to policy directives through the CRPS.

Views differ on appropriate subdivision size, on the significance of the loss of higher quality farming land to low density residential use and the future desirability and sustainability of this form of development generally. It is an aspect of settlement policy that will require consideration as part of the SPR.

KEY CONSIDERATIONS	
<p><b>h. Strategic Importance of the Airport</b></p>	<p>The level of operability enjoyed by the international airport and its growing significance for Christchurch and the South Island can be at risk of being ‘taken for granted’.</p> <p>Land use policies to limit noise sensitive activities in proximity from disrupting this ‘level of service’ remain important. This is not understood to be at risk at present but it will be important for settlement patterns to be managed to continue to achieve that. Christchurch International Airport have advised they have begun to review noise contours currently reflected in the CRPS.</p>
<p><b>i. Housing the Most Vulnerable</b></p> <p><b>The potential for housing vulnerable groups within the context of SPR and meeting NPS-UDC requirements.</b></p>	<p>The ‘overall’ housing supply/demand balance is markedly improved in the last couple of years. But the reality is that vulnerable groups in the community – such as ex-psych. patients, solo parents, young people, poor elderly among others continue to experience housing distress exacerbated by changes to the housing market the quakes have wrought. ‘Assisted housing’ is an ongoing issue. Homelessness can also impact on the attractiveness, enjoyment and recovery of commercial centres.</p> <p>Addressing this issue in the context of the SPR will be important to ensuring wider strategic partner engagement in and commitment to the SPR generally.</p>
<p><b>j. Urban Water Quality and the Impact of Intensification</b></p> <p><b>Improving urban waterways – while resolving potential conflicts between the NPS’s for fresh water and urban development capacity</b></p>	<p>Water quality enhancement and ecosystem restoration of urban waterways esp. those adversely affected by the earthquakes is a challenge of heightened importance.</p> <p>At the same time significant legacy water quality issues exist for key urban waterways requiring substantial investment let alone drivers for quality improvement such as public opinion and through the NPS for Freshwater Management. What are the implications of this for the feasibility of intensified development and vice versa?</p> <p>Given the extended timeframe of the SPR though to mid-century the overlay of climate change induced changes on urban rainfall intensity and frequency and hence storm water system performance is also a relevant consideration.</p> <p>These interrelationships present issues that could well impact cost structures/feasibility assessments for intensification.</p>
<p><b>k. Resilience</b></p>	<p>This draws on the Resilient Greater Christchurch Plan and the work of Regenerate Christchurch. Key discussion needs to be had around our response to climate change generally and especially sea level rise in terms of implications for settlement patterns and infrastructure provision.</p>

<p><b>Building long term community resilience by identifying and acting on those areas which are still struggling post the earthquakes e.g. East Christchurch, The CBD, others??</b></p>	<p>The possibility exists to look at identifying some priority areas in the SPR, e.g. consider introducing some specific initiatives comparable with the like of the Southern Initiative in Auckland in order to drive development and investment in areas that are struggling.</p> <p>Again this may be an issue important for engendering wider partner support for and alignment with the SPR.</p>
<p><b>I. Quality of Place and Place-Making</b></p> <p><b>Weaving good place-making into the SPR and NPS-UDC work</b></p>	<p>Needs to be addressed as part of the SPR with parallel investment in ‘place-making’.</p> <p>The SPR in addressing UDS strategic goals is not just about the quantum of new growth and its distribution. It’s about the long term amenity of existing urban areas supporting UDS strategic goals; especially those related to healthy communities which are based on the determinants of health and wellbeing.</p> <p>This will similarly be important for engendering wider partner support for and alignment with the SPR.</p>
<p><b>m. Funding Implications and Alignment</b></p> <p><b>The strategic alignment of planning infrastructure and funding</b></p>	<p>The NPS-UDC anticipating a bottom up approach to capacity/feasibility assessment. But it also anticipates a strong relationship with direction-setting for infrastructure investment – over 3, 10 and 30 year timeframes and therefore being aligned with LTP/Infrastructure Strategy development processes.</p> <p>There should be strong interrelationships between what development is being planned for where, how it is to be serviced by infrastructure at what cost and how that is it to be funded by whom. Evidence abounds from urban development in the northern part of the North Island about misalignment in these respects and the need for focused attention on these matters.</p> <p>It would be desirable to establish a high level framework for inventory and analysis of the total costs of growth/investment by the public sector to support options for different settlement pattern(s) so as to help determine preferred settlement directions, their funding requirements and potential shortfalls. Equity of funding contributions across Greater Christchurch is also a relevant consideration.</p> <p>Again from high growth northern North Island council experiences, a number of Councils are hitting debt limits and requiring supplementary funding such as through the recently announced Housing Infrastructure Fund.</p> <p>It may be that the very large investment made in earthquake recovery in recent years is masking the significance of this issue for Greater Christchurch going out three decades.</p>

APPENDIX A: DATA TABLES

Table 1: Urban Development Strategy, 2007 – Settlement Pattern Development Model for UDS Area by District, 2006-41 (35 year period)

	Waimakariri District	Christchurch City		Selwyn District	UDS Area within Greater Christchurch	
Households*	Greenfield and Rural**	Intensification	Greenfield	Greenfield and Rural**	Intensification	Greenfield
<b>2006</b>	13,000	140,600		7,200	160,800	
<b>2006-16 (first 10 years)</b>	+4,850	+8,500	+6,510	+4,000	+8,500	+15,360
<b>2006-41 (35 year period)</b>	+9,800	+33,490	+19,630	+11,890	+33,490	+41,370
<b>% Change in Households</b>						
<b>2006-16 (first 10 years)</b>	+37%	+11%		+56%	+17%	
<b>2006-41 (35 year period)</b>	+75%	+38%		+165%	+47%	
<b>2006-41 % Share (Change)</b>	13% (+9,800)	71% (+53,120)		16% (+11,890)	100% (+74,860)	
<b>Population*</b>						
<b>2006 (% Share)</b>	35,200 (9%)	358,300 (86%)		20,000 (5%)	413,500 (100%)	
<b>2016 (% Share)</b>	45,900 (10%)	384,400 (84%)		29,000 (6%)	459,300 (100%)	
<b>2041 (% Share)</b>	53,500 (10%)	450,000 (82%)		45,000 (8%)	548,500 (100%)	
<b>Change in Population</b>						
<b>2006-16 (first 10 years)</b>						
- number	+10,700	+26,100		+9,000	+45,100	
- % change	+30%	+7%		+45%	+11%	
<b>2006-41 (35 year period)</b>						
- Number	+18,300	+91,700		+25,000	+135,000	
- % Change	+52%	+26%		+125%	+33%	
- % Share	14%	67%		19%	100%	

\* 2001 Base projection (2005 Update) medium-high projections midpoint; distribution modified towards progressive increase in intensification in Christchurch City towards 40 : 60, greenfield : intensification by 2041; rising from 36% 2006-16 (NB: recorded 23% intensification, 2001-06) and overall 55 : 45, greenfield : intensification over 35 year period.

\*\* Includes Rural and Rural-Residential within the UDS Area.

**Table 2: Medium-High\* Projections for UDS Area within Greater Christchurch by District, 2013-48 (35 year period)**

	Waimakariri District	Christchurch City	Selwyn District	UDS Area within Greater Christchurch
<b>Households*</b>				
<b>2013</b>	15,100	136,900	11,500	163,500
<b>2013-28 (first 15 years)</b>	+8,000	+30,300	+10,000	+48,300
<b>2013-48 (35 year period)</b>	+14,700	+61,400	+21,800	+97,900
<b>% Change in Households</b>				
<b>2013-28 (first 15 years)</b>	+53%	+22%	+87%	+30%
<b>2013-48 (35 year period)</b>	+97%	+45%	+190%	+60%
<b>2013-43 % Share</b>	15%	63%	22%	100%
<b>Population*</b>				
<b>2013 (% Share)</b>	40,100	353,600	34,400	428,100
<b>2028 (% Share)</b>	57,700	420,400	60,600	538,700
<b>2048 (% Share)</b>	73,400	486,300	89,000	648,700
<b>Change in Population</b>				
<b>2013-28 (first 15 years)</b>				
- number	+17,600	+66,800	+26,400	+110,600
- % change	+44%	+19%	+76%	+26%
<b>2013-48 (35 year period)</b>				
- Number	+33,300	+132,700	+54,600	+220,600
- % Change	+83%	+38%	+159%	+52%
- % Share	15%	60%	25%	100%

\* 2013 Base projections released in 2015.

**Table 3: Historic and Projected Population Change by District within Greater Christchurch, 1981-2043**

	Waimakariri District	Christchurch City	Selwyn District	Greater Christchurch
<b>Historic Population</b>				
1981 (% Share)	25,900 (8%)	297,100 (86%)	21,300 (6%)	344,300 (100%)
1996 (% Share)	33,000 (9%)	325,700 (84%)	25,500 (7%)	384,200 (100%)
2013 (% Share)	52,300 (11%)	356,800 (79%)	46,700 (10%)	455,800 (100%)
1996-2013 (17 years)	+19,300 (+58%; +3.4% p.a.)	+31,100 (+10%; +0.6% p.a.)	+21,200 (+83%; +4.9%p.a.)	+71,600 (+19%); +1.2% p.a.)
1981-2013 (32 years)	+26,400 (+102%; +3.2%p.a.)	+59,700 (+20%; +0.6% p.a.)	+25,400 (+119%; +3.7%p.a.)	+111,300 (+32%; +1.0%p.a.)
<b>% Share of Growth</b>				
1996-2013 (17 years)	27%	43%	30%	100%
1981-2013 (32 years)	24%	53%	23%	100%
<b>Projected Population</b>				
<b>2013-43 (30 years)*</b>				
Whole of District	+25,700 (+49%; +1.6%p.a.)	+80,100 (+22%; +0.7%p.a.)	+42,700 (+91%; +3.0%p.a.)	+148,500
UDS Area	+20,700	+79,700	+38,400	+138,800
UDS Area as % of District	80%	99%	82%	93%
<b>Whole of District**</b>				
2013 (% Share)	52,300 (11%)	356,800 (79%)	46,700 (10%)	455,800 (100%)
2028 (% Share)	71,500 (12%)	423,800 (74%)	79,200 (14%)	574,500
2043 (% Share)	83,100 (13%)	459,100 (71%)	99,500 (16%)	641,700
2013-28 (15 years)	+19,200 (+37%; +2.4%p.a.)	+67,000 (+19%; +1.3%p.a.)	+32,500 (+70%; +4.6%p.a.)	+118,700 (+26%; +1.7%p.a.)
2013-43 (30 years)	+30,800 (+58%; 2.0%p.a.)	+102,400 (+29%; +1.0%p.a.)	+52,800 (+113%; +3.8%p.a.)	+185,900 (+41%; +1.4%p.a.)
<b>% Share of Growth</b>				
2013-28 (15 years)	17%	56%	27%	100%
2013-43 (30 years)	17%	55%	28%	100%

\* 2013 Base projection; released 2015; medium variant.

\*\* 2013 Base projection; released 2017; medium variant unless stated otherwise.

## Strategic goals

### Healthy communities

- The distinct identities and sense of place of the towns, suburbs and city areas are recognised and enhanced.
- Ngāi Tahu is able to reinforce and re-establish connections with ancestral land, waterways and other taonga, and enhance the Ngāi Tahu sense of identity and belonging in the region.
- People and communities have equitable access to a range of integrated community infrastructure, facilities and services, including education, health, sport, recreation and core council services.
- Individuals, whānau and communities are empowered to participate and engage with strategy partners.
- The increasing diversity of the population and communities is recognised, and reflected in strategies, plans, programmes and projects.
- With good urban design, neighbourhoods and their centres include communal spaces, are liveable, walkable, safe and attractive, and have good connectivity and accessibility.
- Buildings and homes incorporate sustainable building principles and innovative design so that they are warm, safe and accessible.
- Housing offers a more diverse range of types and sizes. Affordable housing provides for the needs of different people and groups.
- Ngāi Tahu whānau are able to develop papakāinga/kāinga nohoanga, and use Māori reserve land to provide for their economic, social and cultural wellbeing.

### Enhanced natural environments

- Groundwater quality and quantity are maintained or improved.
- Indigenous biodiversity, ecosystems and mahinga kai values are protected and enhanced.
- The many values of the coastline, estuaries, wetlands and waterways are recognised and restored, and their ecosystem services are recognised.
- Resource efficiency is supported by energy and water conservation, waste minimisation and local food production.
- Air quality is improved and maintained.

### Prosperous economies

- Land, water and other valued resources are able to be used sustainably and within agreed limits.
- Adequate land for commercial and industrial uses is available in appropriate locations. The rebuilding and regeneration needs of businesses are well addressed.
- Economic development embraces innovation and technology, and is supported by effective and efficient transport and infrastructure.
- A collaborative and connected business environment supports workforce education and retention.

### Integrated and managed urban development

- Clear boundaries for urban development are defined and maintained. The urban area is consolidated by redeveloping and intensifying existing urban areas.
- New urban development is well integrated with existing urban areas. Sufficient land is available to meet needs for regeneration and future land use.
- We understand and plan for risk from natural and other hazards, including flooding, seismic activity, sea level rise and climate change.
- A network of vibrant and diverse key activity and neighbourhood centres supports the Christchurch central city, incorporates mixed-use and transport-orientated development, supports increased density and diversity of housing, and provides access to community facilities.
- An efficient, reliable, safe and resilient transport system for people and businesses reduces dependency on private motor vehicles, promotes active and public transport, and improves accessibility for all people.
- Key public transport corridors and routes are identified and protected. The transport network can readily adapt to new technology and modes.
- Infrastructure, including transport, is resilient, timely and affordable, and comprehensively integrated with land use planning.
- Strategic regional and sub-regional infrastructure, including Lyttelton Port and Christchurch International Airport, service and utility hubs, and existing and future corridors, is protected.