



Greater Christchurch Urban Development Strategy Update

He Rautaki Whakawhanake-ā-tāone mō Waitaha

Greater Christchurch **Urban
Development
Strategy**

AUGUST 2016

Purpose of this document

Te aronga o te rautaki

This document updates the 2007 Greater Christchurch Urban Development Strategy (the Strategy) to respond to the significant events and changes that have occurred since its release. It does not replace the 2007 Strategy, but rather complements it.

The 2007 Strategy was developed to ensure coordinated planning across Greater Christchurch. This Update builds on the work and the consultation undertaken for the 2007 Strategy. It brings the Strategy up to date, incorporating relevant material from the many consultation and planning processes of the last five years.

The 2007 vision is retained, and the principles and strategic goals have been revised. The Update identifies priority actions for partnership collaboration which address today's major challenges and opportunities. It also sets out an intention for community engagement leading to a full strategy review from 2018.

Resilience has been one of the guiding principles of the Strategy that has become a critical consideration since its development. The Resilient Greater Christchurch Plan and this Strategy Update were developed concurrently, and their integration has been considered throughout the process. They support and reinforce each other.

This Strategy Update was adopted by the strategy partners in August 2016.

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Canterbury Regional Council, Christchurch, New Zealand for the Greater Christchurch Urban Development Strategy partners.

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Why this Strategy is important

Te hiringa o te rautaki

Message from the strategy partners

The Greater Christchurch Urban Development Strategy is a forward-looking document preparing our region for the future. The 2007 Strategy put in place a vision and guiding principles. It cemented the partnership and collaborative approach for addressing issues that spanned council and political boundaries. A strength of the Strategy is the voluntary commitment it represents.

Due to the foresight of visionary local government leaders, the Greater Christchurch area was better prepared for the earthquakes than we would otherwise have been. The 2007 Strategy provided a sound basis for recovery planning following the earthquakes, including for land use planning. Having an agreed plan for the future meant we could move quickly and with confidence to respond to many of the challenges posed by the earthquakes. The Strategy has been a key tool for increasing resilience in Greater Christchurch, and this will continue and be strengthened through the Resilient Greater Christchurch Plan.

The Strategy Update now provides a roadmap for the future as we move from recovery to regeneration, recognising that we have many environmental, social, cultural and economic challenges and opportunities that reflect the events of the past five years. It recognises the leadership role of and strengthening partnerships among local government, Te Rūnanga o Ngāi Tahu, New Zealand Transport Agency, Canterbury District Health Board and central government agencies.

This Strategy Update allows the significant and extensive earthquake recovery work over the last five years to be integrated into the Strategy so that it continues to guide and strengthen us. It provides a basis for our ongoing collaboration and leadership, and a platform for further conversations. This allows the activities and services of our organisations to be aligned to provide greater benefits to communities. Some of these benefits have been realised already, with significant investments in Greater Christchurch made with confidence, because of the direction provided by the Strategy.

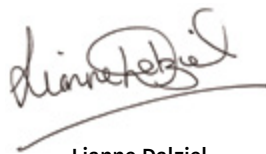
Eight years on from the Strategy's release, and over five years after the major earthquakes, Greater Christchurch remains in a period of uncertainty and change. We have taken stock of the current situation, readjusted priorities, and set a programme of work to ensure the Strategy stays current and is implemented when and where it is needed most.

The Update is not a full review of the Strategy – it is not the right time for that yet. Instead we have reflected on what the community has said in the many consultation processes over the past few years, and have incorporated this into the Update. The Update signals plans to engage the community on a new vision for Greater Christchurch and sets out a programme for a future review of the Strategy.

The strategy partners are committed to the Greater Christchurch Urban Development Strategy's vision and the priority actions of this Update. We encourage you all to contribute to its implementation.



Dame Margaret Bazley
Chair of Commissioners,
Environment Canterbury



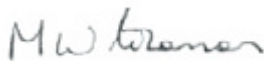
Lianne Dalziel
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Director, Greater
Christchurch Group of DPMC

He mihi nā Tā Mark Solomon

E topa atu rā taku manu taki i te tihi o Aoraki Matatū, ko tōna reo mihi ka tuku atu i te hau ki ngā mānia o Waitaha nei.

Tēnā tātou i runga i tēnei kaupapa whakahirahira, e kia nei, He Rautaki Whakawhanake-ā-tāone mō Waitaha. Mā te whirika o te taura takata, mā te taukaea o te aroha anō hoki, ka moanaruatia te whāriki o Ōtautahi. Nā, i runga i tērā kai te mihi, kai te mihi, tēnā rā koutou katoa.

The update of the Urban Development Strategy is a significant milestone for Greater Christchurch. This document reflects the work that has been collectively achieved since the Strategy was first published in 2007, and in particular in the period following the 2010 and 2011 earthquakes. It also demonstrates the importance of working together in partnership to address community needs and expectations for future urban growth and development. The Update not only celebrates what has been achieved to date, but also continues to show the way forward for our combined organisations.

Ngāi Tahu's role, with the support of our partners, is to ensure that future development is consistent with creating spaces and places in which residents want to live. This includes supporting the ability of whānau and their communities to maintain their relationship with their ancestral lands, and enhancing the Ngāi Tahu sense of identity and belonging in the region. Mō tātou, ā, mō kā uri ā muri ake nei – for us and our children after us.

He muka harakeke, he whītau tangata.

*The harakeke is woven with the human strand
– binding people and places together.*



1. What we want to achieve

Ngā whāinga roa

Vision

By the year 2041, Greater Christchurch has a vibrant inner city and suburban centres surrounded by thriving rural communities and towns, connected by efficient and sustainable infrastructure.

There is a wealth of public spaces ranging from bustling inner city streets to expansive open spaces and parks, which embrace natural systems, landscapes and heritage.

Innovative businesses are welcome and can thrive, supported by a wide range of attractive facilities and opportunities.

Prosperous communities can enjoy a variety of lifestyles in good health and safety, enriched by the diversity of cultures and the beautiful environment of Greater Christchurch.

Principles

Ensuring Greater Christchurch is a liveable, safe, sustainable and healthy place through:

Leadership – Hautūtanga

Providing visible leadership, being ambitious in our aspirations, making decisions, taking action, inspiring people to participate, accepting responsibility, and ensuring the impacts and outcomes are monitored, reviewed, communicated and managed effectively.

Partnership – Kotahitanga

Working in collaborative relationships to achieve mutually agreed goals with continued commitment to clear and effective communication, engagement, information sharing and equal participation in decision making.

Resilience – Māiatanga

Increasing the capacity of individuals, whānau, communities, institutions, businesses and systems to survive, adapt and thrive no matter what kinds of chronic stressors and acute shocks they experience.

Innovation – Auahatanga

Using creative, adaptable, culturally appropriate and resourceful approaches and solutions to address issues.

Integration – Kōtuitanga

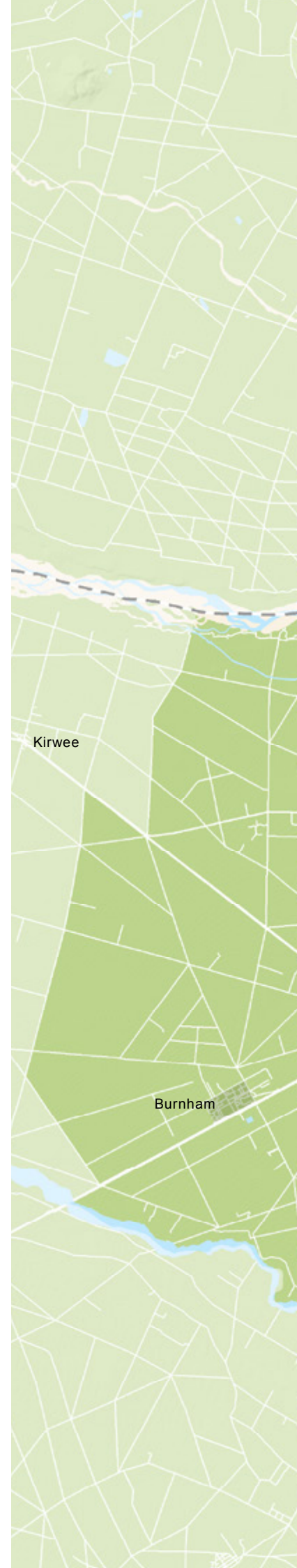
Integrating environmental, land use, infrastructure, social, cultural, economic and governance goals, working with the environment, and using the best available information and evidence in decision making, policies, plans and activities.

Regeneration – Haumanutanga

Recognising the effects of the Canterbury earthquakes across Greater Christchurch and supporting rebuilding, urban renewal, and the restoration and enhancement of the environmental, economic, social, sport, recreational, health and cultural wellbeing of people and communities.

Equity – Tōkeketanga

Treating people fairly and with respect, and recognising the different needs and aspirations of people, groups and communities, *mō tātou, ā, mō kā uri ā muri ake nei* – for us and our children after us.



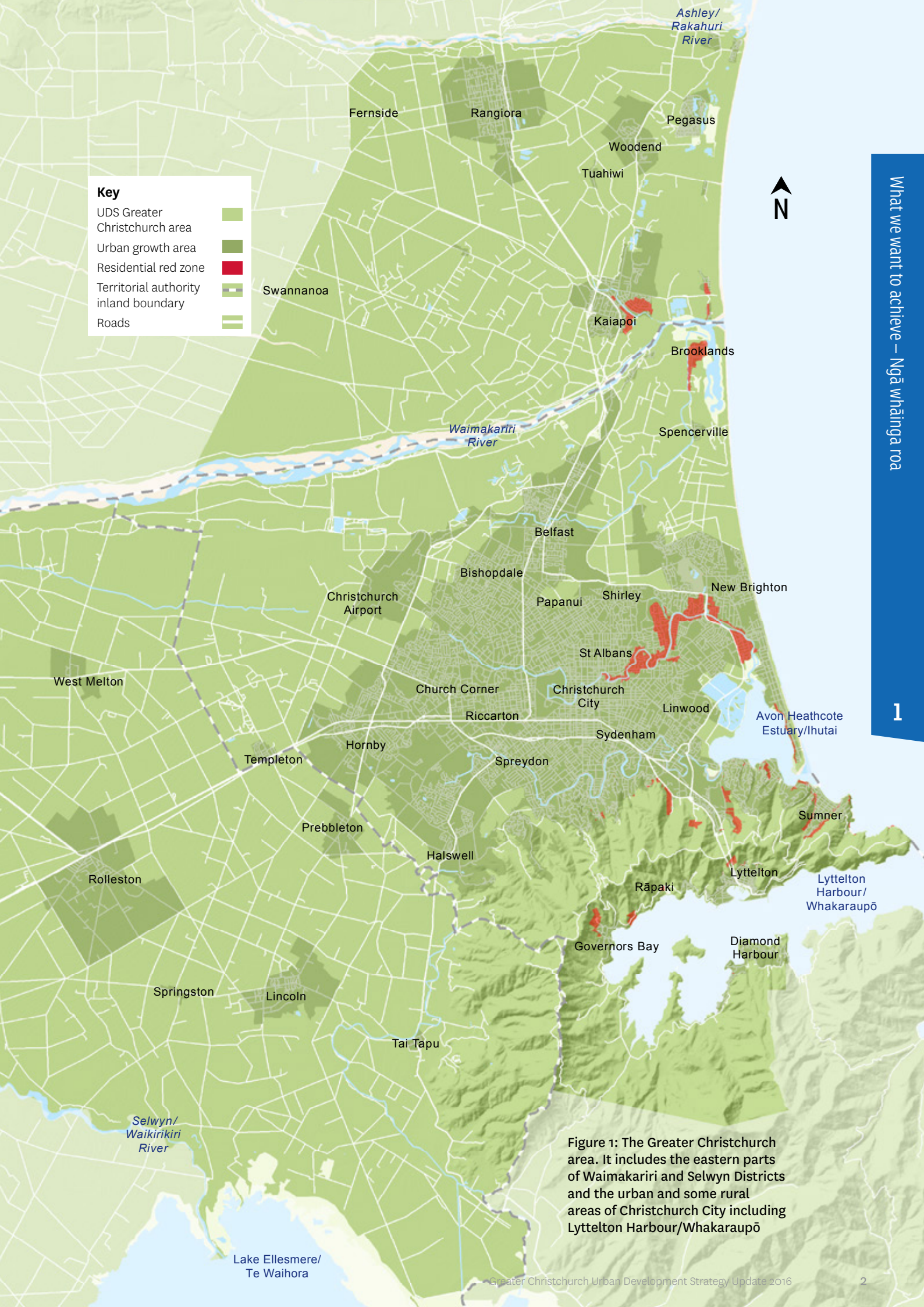


Figure 1: The Greater Christchurch area. It includes the eastern parts of Waimakariri and Selwyn Districts and the urban and some rural areas of Christchurch City including Lyttelton Harbour/Whakaraupō

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.



The determinants of health and wellbeing have influenced the strategic goals of the Strategy

Determinants of health and wellbeing are factors that contribute to the state of health of people and communities. These factors may be biological, socioeconomic, psychosocial, behavioural, environmental or social in nature. How we plan and develop our neighbourhoods, towns and cities impacts on these determinants of health and wellbeing. It also contributes to the conditions in which people live and work, their access to facilities and services, their lifestyles and their ability to develop strong social networks.

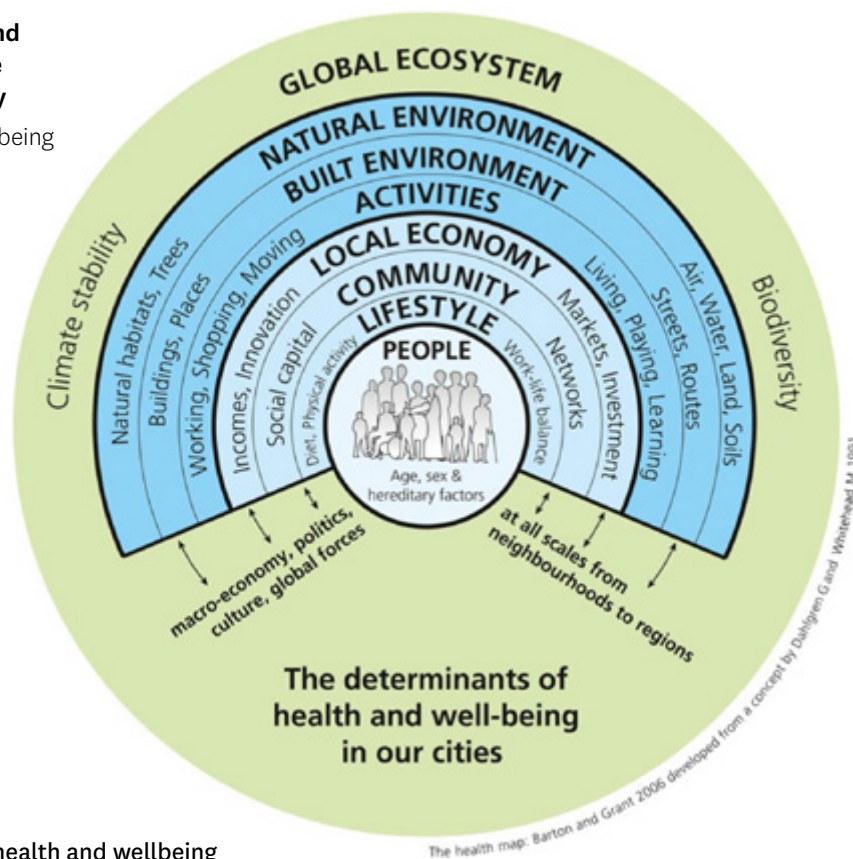


Figure 2: The determinants of health and wellbeing

2. How we got here

He kupu whakataki

The planning, design and management of our urban areas have long-term impacts on the people and the communities who live there. Our quality of life, social amenity, health and wellbeing are strongly influenced by the quality of the environments where we live, work, learn and play.

The Greater Christchurch Urban Development Strategy was developed to ensure that Greater Christchurch remains a great place to live in the future.

This document updates the 2007 Strategy to respond to the significant events and changes that have occurred since its release. It does not replace the 2007 Strategy, but rather complements it. This Strategy Update was adopted by the strategy partners in August 2016.

2.1 The strategy partners

The strategy partners have agreed to work collaboratively to achieve the Strategy's vision and shared goals with and on behalf of the wider community. They have a statutory responsibility for, or significant interest in, the future development of Greater Christchurch. The partners are:

- Christchurch City Council (CCC);
- Waimakariri District Council (WDC);
- Selwyn District Council (SDC);
- Environment Canterbury;
- Te Rūnanga o Ngāi Tahu;
- New Zealand Transport Agency (NZTA);
- Canterbury District Health Board (CDHB); and
- Greater Christchurch Group within the Department of the Prime Minister and Cabinet (DPMC).

The Urban Development Strategy Implementation Committee (UDSIC), a joint committee established under the Local Government Act 2002, governs and leads the partnership. It is supported by regular meetings at chief executive and senior management level.

Canterbury District Health Board

The Canterbury District Health Board is a partner. Its involvement acknowledges the legislative requirements of district health boards to promote and protect the health of people and communities, promote the inclusion and participation in society and independence of people with disabilities, and reduce health outcome disparities between various population groups.

Te Rūnanga o Ngāi Tahu

The Treaty of Waitangi is the foundation of an intergenerational relationship between Ngāi Tahu and the Crown, and the Ngāi Tahu Settlement was an important transition point to a new era of cooperation. Te Rūnanga o Ngāi Tahu represents Ngāi Tahu Whānui in the Treaty relationship with the Crown.

The Canterbury Earthquake Recovery Act 2011 (CER Act) recognised the Ngāi Tahu Claims Settlement Act 1998 and, in this way, the Crown–Ngāi Tahu relationship. The Recovery Strategy for Greater Christchurch: Mahere Haumanutanga o Waitaha, developed under the CER Act, gave effect to this relationship by recognising Te Rūnanga o Ngāi Tahu as a strategic partner, and since 2011 Ngāi Tahu have sat at the UDSIC table alongside local government. The Greater Christchurch Regeneration Act 2016 also includes Te Rūnanga o Ngāi Tahu as a strategic partner.

Ngāi Tahu Whānui interests in Greater Christchurch are represented by Te Rūnanga o Ngāi Tahu, who have responsibility for protecting and advancing tribal interests, and by Ngā Papatipu Rūnanga, who represent mana whenua interests. In this Update, the term 'Ngāi Tahu' includes the six Papatipu Rūnanga and associated whānau and rōpū of greater Christchurch. Each have specific interests in particular areas. The six Papatipu Rūnanga are Te Ngāi Tūāhuriri Rūnanga, Te Hapū o Ngāti Wheke (Rāpaki), Te Rūnanga o Koukourārata, Te Taumutu Rūnanga, Wairewa Rūnanga and Ōnuku Rūnanga.



Central government

The Canterbury Earthquake Recovery Authority (CERA) was a partner from 2011 to 2016. Following the disestablishment of CERA, its partnership role with the UDSIC has been filled by the Greater Christchurch Group within the Department of the Prime Minister and Cabinet.

New Zealand Transport Agency

The New Zealand Transport Agency was involved in developing and adopting the 2007 Strategy and has remained an important part of the partnership.

NZTA's purpose is to deliver a transport system and sector that are effective, efficient, safe, responsible and resilient.

2.2 Greater Christchurch Urban Development Strategy 2007

Greater Christchurch has few physical barriers to urban growth, particularly to the north, west and southwest. The communities, economies and environments of Selwyn and Waimakariri Districts and Christchurch City are strongly linked, with large numbers of people commuting to work in Christchurch; reliance on services and infrastructure provided in one district but servicing the wider area; and rivers, groundwater, the coast and other natural features crossing political boundaries.

In the 1990s the populations of Selwyn and Waimakariri Districts were growing fast, and the three districts were seeing significant suburban greenfield growth. This development was not coordinated at the sub-regional level, raising concerns about its effects on the transport system and other infrastructure, on the natural environment, and on economic, social and cultural outcomes.

In 2003, a voluntary agreement was initiated between CCC, WDC, SDC, Banks Peninsula District Council^[1], Environment Canterbury and Transit New Zealand (now NZTA) to work collaboratively on a long-term growth strategy for a defined sub-regional area called Greater Christchurch.

The 2007 Strategy was developed with significant community consultation on options for where and how to undertake urban development in Greater Christchurch. The community's preference was to consolidate development around well-defined urban and rural town centres rather than to allow unconstrained greenfield development. This preference was reflected in the Greater Christchurch Urban Development Strategy adopted by the partner Councils as policy in 2007 under the Local Government Act 2002.



1. Banks Peninsula District Council amalgamated with Christchurch City Council in 2006

The 2007 Strategy sets out an approach to managing growth and providing for community wellbeing in Greater Christchurch to 2041 that includes:

- providing for 70 percent of the anticipated growth in Christchurch City, and the remaining 30 percent in Selwyn and Waimakariri Districts;
- increasing the proportion of housing growth provided through good-quality urban intensification, rather than greenfield development, from 23 percent in 2006 to 60 percent by 2041;
- signalling the phasing of development to enable infrastructure to be provided in a timely and efficient way;
- providing a living environment that supports healthy communities;
- giving residents easy access to employment, education, and leisure, health and community facilities and services;
- developing business centres and employment opportunities in new growth areas;
- revitalising Christchurch's central city;
- ensuring new growth areas are well connected to wider road and rail networks; and
- providing a range of transport choices, including public transport, cycling and walking.

The 2007 document included an Action Plan, which was updated in August 2010.

2.3 Implementing the Strategy

After the Strategy was released in 2007, the strategy partners set out to implement it, including by establishing the Urban Development Strategy Implementation Committee and the supporting governance groups.

Significant work went into anchoring the growth management objectives of the Strategy into Resource Management Act 1991 (RMA) documents, including a proposed new chapter within the Canterbury Regional Policy Statement (CRPS). This was progressed under Proposed Change 1 (PC1), which was publicly notified in July 2007. The intention of PC1 was to establish the land use distribution, housing densities and new growth areas across Greater Christchurch. In 2010, at the time of the first Canterbury earthquake, appeals against the proposed change were being progressed in the Environment Court.

Work to implement the actions in the Action Plan relating to wider environmental, social, cultural and economic wellbeing was ongoing.

2.4 Canterbury earthquake sequence

Three years after the release of the 2007 Strategy, and very shortly after the update of the Action Plan, a series of earthquakes struck Greater Christchurch in 2010 and 2011. These resulted in death and injury, and substantial damage to land, buildings and infrastructure. Flow-on effects were felt in transport, housing availability and community amenities, and continue to influence people's lives.

The value of the Strategy partnership was demonstrated through the recovery period. Structures originally established to drive implementation of the Strategy were expanded to inform decision making and monitoring of recovery work. The Strategy itself informed many of the recovery plans and programmes, especially the Land Use Recovery Plan (LURP). A Recovery Strategy Advisory Committee was established that had the same members as the UDSIC.

2.5 Updating the Urban Development Strategy

The 2007 Strategy recognised that many growth issues cross council and political boundaries – a primary reason for working closely together to achieve the Strategy. Maintaining and strengthening the partnership, and providing visible and collaborative leadership, are critical for ensuring regeneration over the next few years and beyond.

The Recovery Strategy for Greater Christchurch: Mahere Haumanutanga o Waitaha (Recovery Strategy) provided guidance for the recovery from 2012 to April 2016.

In 2015 the strategy partners agreed to update the 2007 Strategy to reflect the changes in Greater Christchurch and the range of planning activity and community consultation undertaken by the Recovery Strategy's partners since 2007. They also wanted to ensure the goals and integrated responses to the earthquakes were carried forward.

The partners remain committed to the vision of the 2007 Strategy. The principles and goals have been updated to reflect the significant changes in Greater Christchurch since 2007.

This document brings the Strategy up to date, incorporating relevant material from recent consultation and planning processes. It also identifies priorities for partnership collaboration in the short to medium term (Section 5).

2.6 Values and expectations of the community

In consultation on the 2007 Strategy, the community asked for a focus on:

- more concentrated urban development with a defined boundary, with particular attention to well-defined existing urban centres;
- protecting aquifer water quality, ecosystems, landscapes and productive land;
- affordable travel choices;
- public passenger transport integrated with commercial and residential development;
- transport, infrastructure and community facilities are integrated with land use;
- enhanced community character, sense of place, cultural identity, heritage and diversity; and
- quality urban design.

Since 2007, the partners have consulted the community as part of many planning processes, including:

- the Christchurch City Health and Wellbeing Profile;
- Share-an-Idea consultation in 2011 in preparation for the CCC's development of the draft Central City Plan;
- development of a range of recovery plans and programmes;
- Councils' 2015–2025 Long Term Plans and 30-year infrastructure strategies; and
- 100 Resilient Cities project and its Greater Christchurch Preliminary Resilience Assessment (2015) and Resilient Greater Christchurch Plan (2016).

Te Rūnanga o Ngāi Tahu and Papatipu Rūnanga have produced a number of plans and strategies that provide guidance on the management of natural, physical, cultural and historic resources within the region. These documents also state Ngāi Tahu aspirations for earthquake recovery and rebuild.

Plans and strategies include:

- Ngāi Tahu 2025 – the tribal vision for the future and prime strategic document of Te Rūnanga o Ngāi Tahu;
- Whakaoratia Ōtautahi: Ngāi Tahu Aspirations for Christchurch Recovery and Rebuild (2011);
- The Mahaanui Iwi Management Plan (2013) – an iwi planning document identifying Ngāi Tahu issues and objectives on key matters in the region, including urban development, which must be taken into account through RMA processes; and
- Te Kōwatawata: The Dawn of a New City (2015) – a summary of Ngāi Tahu and Ngā Mātā Waka earthquake recovery efforts, and the collective visions, aspirations and goals that these efforts were based on.



In consultation processes since 2007, people have asked for:

- stronger leadership;
- better communication and collaboration within and between local government and with communities in decision making and participatory processes;
- a long-term perspective in working to achieve sustainability and resilience;
- more engaged and empowered individuals and communities;
- more equitable outcomes in council decisions;
- an active approach to celebrating, protecting and enhancing values significant to Ngāi Tahu, both historic and contemporary;
- actions to realise opportunities to reflect a more representative, shared history in the urban environment;
- neighbourhood centres and hubs that provide facilities and services at a local level;
- a people-friendly city;
- affordable and diverse housing;
- recognition of the needs of the non-profit sector;
- designing with nature, not against it;
- a green city, respecting environmental limits and protecting ecosystems and their services;
- protected and rejuvenated waterways that reflect mahinga kai values, are ecologically healthy and are suitable for recreation;
- local food production and food security;
- reduced risk from natural hazards and from the impacts of climate change such as sea level rise and more intense storms;
- consideration of the needs of businesses and the economy;
- safer and more accessible transport and urban environments; and
- a network of resilient and high-quality urban centres, linked by rapid transit.

2.7 What happens now?

This Strategy Update is a basis for the partners to continue to collaborate across Greater Christchurch and continue to advance recovery and regeneration initiatives.

The Strategy will continue to be implemented through other programmes and documents such as the CRPS and district plans, the Regional Land Transport Plan, the Greater Christchurch Transport Statement, and Councils' Long Term Plans. Figure 3 shows how it relates to such plans and strategies as well as to relevant legislation. Implementation will also involve agreements between the strategy partners, central government, other agencies, communities and community organisations.

This Strategy Update identifies priority actions that will be the focus for the partnership over the next two to three years (Section 5). The 2010 Action Plan has not yet been updated. It is intended that in 2016–17 the actions that are still relevant and are a priority for implementing the Strategy will be advanced.

As required by the Local Government Act 2002, the Councils developed their 30-year Infrastructure Strategies for 2015–2045. These took account of the LURP and wider recovery land use processes and decisions. The first priority action in this Strategy Update is to 'identify, research and collate information on housing and business provision and development capacity'. This will inform the Councils when they develop infrastructure strategies in 2018 for the next 30 years.

2.8 Future community engagement

From 2017 strategy partners intend to engage more widely with stakeholders and residents of Greater Christchurch to renew the vision for the Strategy, and identify what is important for Greater Christchurch over the next 30–40 years.

This feedback will be the starting point for developing a comprehensive replacement Strategy, including a review of the settlement pattern in 2018. The future full review will develop a strategy to plan for beyond 2041. This future strategy will provide for land use and urban development, and put in place implementation mechanisms, before the next review of the relevant district plans.

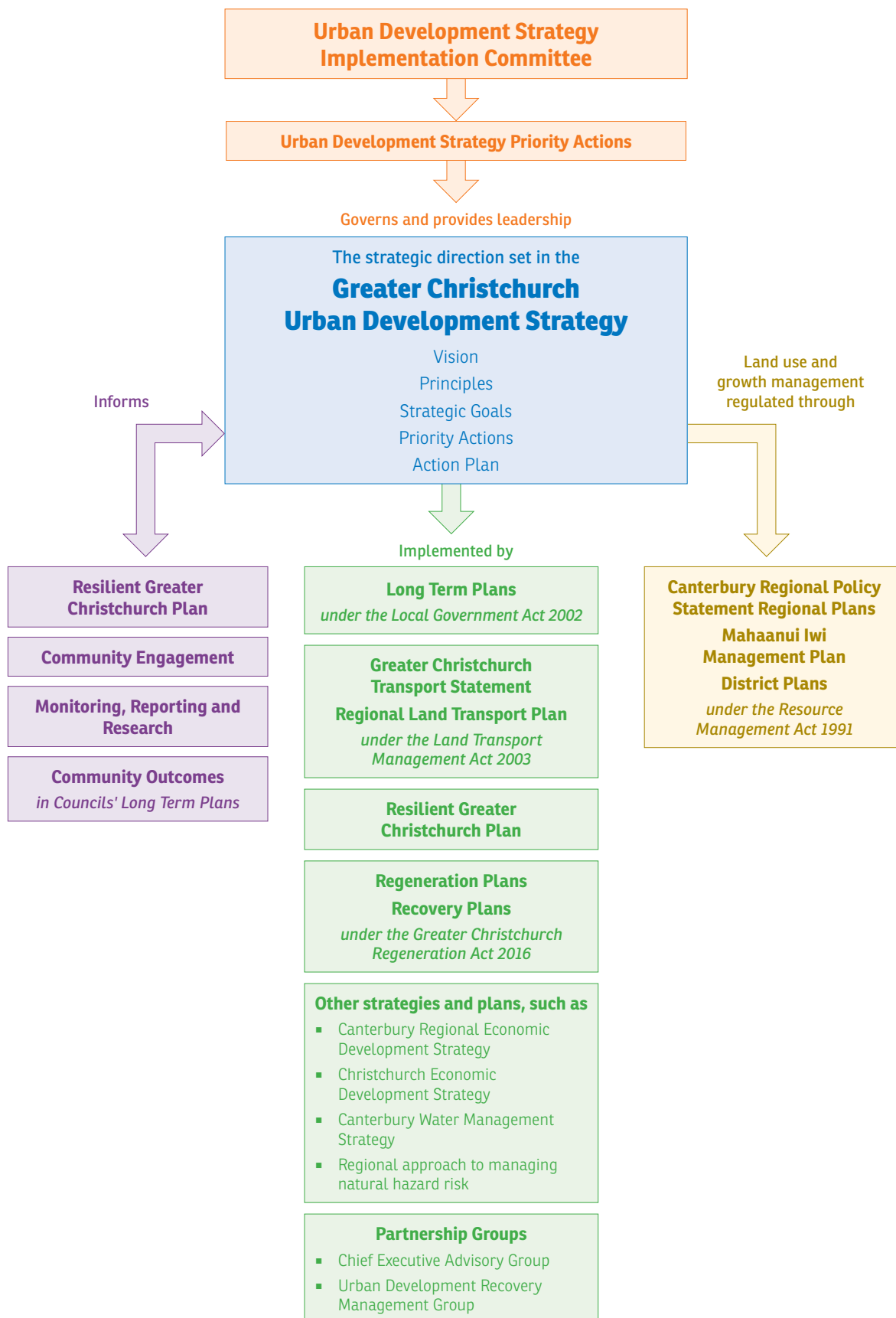


Figure 3: Relationship of the Urban Development Strategy to the strategies, policies and plans of the strategy partners and relevant legislation



3. What we did to respond to the earthquakes Ngā mahi kua mahia

The Canterbury earthquake sequence impacted severely on Greater Christchurch. Most homes experienced some form of damage and up to 20,000 homes were lost in the short term.^[2] Between 10,000 and 15,000 homes became uninhabitable in Christchurch alone.^[3] Over 4,500 businesses ceased trading and a range of commercial centres and community facilities were closed until they could be repaired or redeveloped. The transport network was also extensively affected, both by immediate damage and by changes to land use patterns. There was a subsequent focus on land use decisions for natural hazard management.

In response to the earthquakes, Greater Christchurch communities quickly formed groups to help those in need. The wider New Zealand public donated generously to earthquake response efforts. People helped each other to deal with the difficult situations the earthquakes created.

Central and local government responded with new legislation, a recovery strategy, and recovery plans and programmes (Figure 4). To have a government presence in Greater Christchurch, the Canterbury Earthquake Recovery Authority was established and the Minister for Canterbury Earthquake Recovery appointed. The Canterbury Earthquake Recovery Act 2011 provided CERA and the Minister with special powers to help Greater Christchurch recover.

The Greater Christchurch Regeneration Act 2016 replaced the CER Act in April 2016. The new Act recognises the shift in emphasis from recovery to regeneration, including the establishment of Regenerate Christchurch and Ōtākaro Limited. It provides for regeneration plans, which are similar to recovery plans but have more specified development processes, including stronger involvement of local organisations.

UDSIC is building relationships with the new entities to ensure work programmes are aligned with theirs, and to take into account one another's objectives. It works with central government through the Greater Christchurch Group of the Department of the Prime Minister and Cabinet.

The task of recovering from the earthquakes brought complex and unprecedented challenges. It required coordination to identify needs and priorities more effectively, reallocate existing resources and engage community partners. Existing structures were adapted, and new structures established, to address the recovery needs of affected communities and support coordination with public, non-profit, voluntary agencies and private stakeholders. There are many lessons to learn on what could have been done differently or better. Information on lessons learned in Greater Christchurch can help influence planning and build capability for future events.

2. Land Use Recovery Plan

3. Independent Hearings Panel, 2015, Decision 1 Strategic Directions and Strategic Outcomes



Food Resilience Network

The Food Resilience Network wants to make Christchurch the best edible garden city in the world, where all people have access to healthy, affordable and locally grown food. Being food resilient supports health and wellbeing, self-reliant communities, lifelong learning, a thriving local food economy, stewardship of public green spaces and a diverse garden city.

Mt Pleasant Community Centre

After the February 2011 earthquake, local residents established a farmers market at the centre as the area had few food shops. This market continues to operate and is now run by the Mt Pleasant Community Centre and Residents Association as a sustainable social enterprise. The Association also established a temporary community centre, is rebuilding its damaged community centre, continues to run community events and has created a community response and resilience plan.



Māori Recovery Network

The Māori Recovery Network was set up as an emergency response to provide support and access to services for those whānau most in need. The network was led by Ngāi Tahu in collaboration with Ngā Mātā Waka organisations from across the country.



Figure 4: Timeline of key documents for Greater Christchurch since 2007



Canterbury Regional Policy Statement



Greater Christchurch Freight Infrastructure Statement



Regional Land Transport Plan



Greater Christchurch Urban Development Strategy Update



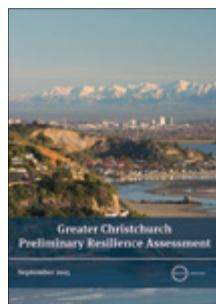
Greater Christchurch Transport Statement



Mahaanui Iwi Management Plan



Canterbury Regional Public Transport Plan



Greater Christchurch Preliminary Resilience Assessment



Resilient Greater Christchurch Plan

2012

2013

2014

2015

2016



Recovery Strategy for Greater Christchurch: Mahere Haumanutanga o Waitaha



Land Use Recovery Plan: Te Mahere Whakahaumanu Tāone



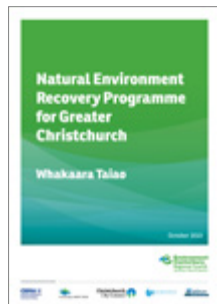
Community in Mind: He Puāwai Waitaha – a flourishing Waitaha



Te Kōwatawata: The Dawn of a New City



Christchurch Central Recovery Plan: Te Mahere 'Maraka Ōtautahi'



Natural Environment Recovery Programme for Greater Christchurch: Whakaara Taiao



Lyttelton Port Recovery Plan: Te Mahere Whakarauora i Te Pūaha o Ōhinehou



Economic Recovery Programme for Greater Christchurch: Te Whakaara Tahua



Christchurch Central Streets & Spaces Design Guide: Ngā Huanui me Wāhi, Ārahi Hoahoa

4. Our changing opportunities and challenges

Ngā angitu me ngā wero

To achieve the Strategy's vision, we need to understand the challenges and opportunities in Greater Christchurch. The key issues from 2007 of population, household and labour force growth are still relevant. The earthquakes have added other challenges.

The key opportunities and challenges for Greater Christchurch now

Planning for regeneration in a period of uncertainty

As we move into regeneration, Greater Christchurch is still in a period of some uncertainty. Trends and issues are still emerging, important decisions are yet to be made such as on the future of the residential red zones, and many people are dealing with ongoing difficulties. We therefore need to include resilience as a part of everything we do.

Responding to the needs of a changing population

Housing, health, transport and other services will need to adapt to meet the needs of a population that is ageing and becoming more culturally diverse.

Recognising the Treaty partnership in all aspects of urban development

Active and appropriate involvement of Ngāi Tahu is needed in all aspects of urban development.

Ongoing health and wellbeing challenges

The earthquakes intensified some existing challenges for people's health and wellbeing. They also created new issues, particularly in relation to psychosocial recovery.

Improving the quality, choice and affordability of housing

We will need higher residential densities, and more diversity and choice in housing with access to existing infrastructure, community facilities, public transport and jobs.

Supporting key activity centres and neighbourhood centres as focal points

We need to recognise the importance of having neighbourhood meeting places, and community facilities and services that support the needs of individuals and whānau. Such facilities and services also need to keep up with growth and adapt to the particular needs of each community.

Consolidating and intensifying urban areas

Existing and future urban land must be used more efficiently to achieve a range of social, economic and environmental benefits.

Managing water, and protecting, enhancing and working with our natural environment

We need to protect the sources of drinking water, improve the quality of urban waterways, protect and expand areas of indigenous biodiversity, and promote mahinga kai values.

Adapting to the impacts of climate change

We need to work with nature to adapt to the changing climate, sea level rise and more extreme weather events, and mitigate the extent of future change by reducing our greenhouse gas emissions.

Adjusting to a changing economy

Greater Christchurch has a strong economic base and the earthquake rebuild provided jobs and increased economic activity. However, we need to adapt to declining rebuild activity and respond to future opportunities in tourism and technology.

Integrating infrastructure, transport and land use

Changes in land use and new development, particularly since the earthquakes, require integrated planning and investment in infrastructure. An especially important focus is a transport system that moves people and freight efficiently.

Providing transport choice

We need well-designed, walkable neighbourhoods to encourage and enable more people to use active and public transport more often.

5. What we are going to do

Ngā mahi matua

5.1 How we work – visible and collaborative leadership

The strategy partners are committed to showing visible leadership and using a collaborative approach to address issues faced in Greater Christchurch. The governance and implementation of the Strategy are coordinated through groups established at various levels of the strategy partners. The Urban Development Strategy Implementation Committee has overall responsibility.

A Stakeholder Forum will be established in 2017 to provide broader views to UDSIC, and advise it on how best to liaise and engage with the wider communities of Greater Christchurch.

Uncertainty is part of life. Factors that increase uncertainties in Greater Christchurch include:

- altered growth patterns;
- demographic changes;
- new regeneration legislation and organisations;
- decisions on residential red zones; and
- the continuing rebuild activity.

Wider issues – such as planning for multiple hazards, and changes to national planning legislation and direction – add further complexity.

5.2 Supporting the Resilient Greater Christchurch Plan

Resilience is critical to recovering from disasters and other stressors across all economic, social, cultural and environmental aspects. It has become a critical consideration for all partners and communities during the recovery from the earthquakes, and it is important to carry this forward into the regeneration period.

The Resilient Greater Christchurch Plan is complementary to and helps inform and implement this Strategy. Integrating the intentions of the Resilient Greater Christchurch Plan into the Strategy is an important part of this Strategy Update and future strategy review.

Resilient Greater Christchurch Plan

In December 2013, Christchurch was selected by the Rockefeller Foundation to take part in the global 100 Resilient Cities Network (100RC). 100RC is dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century. 100RC defines urban resilience as:

The capacity of individuals, communities, businesses and systems to survive, adapt and grow, no matter what chronic stresses and acute shocks they experience.

Resilience thinking accepts that chronic stressors, such as poverty and homelessness, and acute shocks, like earthquakes and flooding, rarely happen in isolation. By considering shocks and stressors at the same time, communities are able to be more responsive to adverse events and deliver core functions and services more effectively in both good times and bad.

The September 2015 Preliminary Resilience Assessment identified four critical issues:

- participative leadership and governance;
- securing a prosperous future;
- understanding and responding to future challenges; and
- connected neighbourhoods and communities.

Further investigation of these issues and the identification of projects and policies to address them led to the Resilient Greater Christchurch Plan. Councils finalised and adopted it in August 2016.

5.3 Monitoring and review

The Strategy must continue to be monitored and reviewed periodically so that it remains relevant and appropriate to the needs of Greater Christchurch in a changing environment. A monitoring and reporting framework will establish the indicators and data sources the partners will use to track the progress of the implementation of the Strategy, and provide information on where changes may be required in the future.

Half-yearly reports are to be prepared and provided to UDSIC. These reports will provide information on the progress made on the priority actions, indicator tracking, and the progress on achieving the strategic goals of the Strategy.

A review of the Strategy, and the development of a new strategy to address urban development and regeneration and long-term wellbeing are proposed for 2018. The review will also take into account the information gathered through the monitoring and reporting framework.

5.4 Priority actions

To progress the vision and strategic goals of the Strategy, a number of actions need to be taken within the next few years.

The priority actions in Table 1 are intended to provide a pragmatic action programme before the full review of the Strategy from 2018. They have been developed to address the Greater Christchurch issues requiring the collaboration and coordinated effort of strategy partners and other supporting organisations. They represent the areas where the partners can make real gains in the short term. While they are intended to progress the strategic goals of the Strategy, they do not explicitly address all goals.

The priority actions acknowledge and build on the priority actions from the 2007 Strategy and 2010 Action Plan.

During 2016 UDSIC has been considering the critical strategic issues for Greater Christchurch that would benefit from collaborative partnership until the Strategy is fully reviewed. These are included in this Update.

Table 1: Priority actions

Action	Lead	Agencies	When
<p>a. Understanding current and future land use and housing needs</p> <p>Identify, research and collate information on land use, housing and business provision and development capacity.</p> <p>Ensure ongoing monitoring of the objectives, policies and settlement pattern as set out in Chapter 6 of the Canterbury Regional Policy Statement.</p> <p>Take account of changes to national direction through legislation and regulatory documents.</p>	UDRMG	All partners	2016–17
<p>b. Monitoring and reporting</p> <p>Develop a robust Urban Development Strategy Monitoring and Reporting Framework that:</p> <ul style="list-style-type: none"> ▪ monitors progress of the strategic goals, priority actions, and demographic, social, health, economic and environmental changes in Greater Christchurch; ▪ builds on and integrates with other monitoring processes at local, regional and national levels, including the central government whole-of-recovery monitoring and the Canterbury Wellbeing Index and Survey; and ▪ gives effect to Policy 6.3.11 Monitoring and Review in Chapter 6 of the Canterbury Regional Policy Statement. 	UDRMG	All partners	Development 2016–17

Action	Lead	Agencies	When
<p>c. Reviewing the Strategy</p> <p>Identify actions in the 2010 Action Plan that are still relevant.</p> <p>Undertake community engagement aligned with a communications strategy to refine the vision for Greater Christchurch.</p> <p>Develop and implement a new strategy to address urban development and regeneration and long-term wellbeing.</p>	UDRMG	All partners through a collective and collaborative process	2016–17 2017–18 2018–19
<p>d. Implementing the Resilient Greater Christchurch Plan</p> <p>Increase resilience of Greater Christchurch by providing governance oversight and ensuring the implementation and integration of the Resilient Greater Christchurch Plan.</p>	UDSIC	All partners	Ongoing
<p>e. Ngāi Tahu values and aspirations</p> <p>Ensure Ngāi Tahu cultural and heritage values and aspirations are recognised and incorporated into all plans and strategies to achieve tangible outcomes by:</p> <ul style="list-style-type: none"> ▪ giving effect to the Mahaanui Iwi Management Plan and other iwi planning documents. 	UDRMG	All partners	Ongoing
<p>f. Healthy communities</p> <p>Improve the health of communities through supporting the continuation and enhancement of the Healthy Christchurch partnership, by promoting:</p> <ul style="list-style-type: none"> ▪ a Health in all Policies (HIAP) approach and Integrated Assessments for significant strategies and plans, including consideration of regeneration plans; ▪ psychosocial wellbeing in Greater Christchurch; ▪ housing quality improvement options so that all people have warm and dry homes; ▪ the benefits of housing built using a universal design approach to increase the accessible housing stock in Greater Christchurch; and ▪ the application of the strategic guidance in the Christchurch Central Streets & Spaces Design Guide: Ngā Huanui me Wāhi, Ārahi Hoahoa. 	UDRMG	All partners	Ongoing
<p>g. Housing provision</p> <p>Increase the development of affordable and diverse housing and appropriate residential intensification by:</p> <ul style="list-style-type: none"> ▪ investigating and reporting on the uptake of mechanisms and processes that provide for intensification and affordable housing options. Provide recommendations on how these could be refined and improved in the future; ▪ promoting residential intensification opportunities available through land use planning documents; and ▪ developing a Greater Christchurch housing policy. 	UDRMG	All partners, MBIE	2016–18

Action	Lead	Agencies	When
<p>h. Enhanced natural environment</p> <p>Enhance the natural environment in Greater Christchurch by:</p> <ul style="list-style-type: none"> ▪ recognising the ecosystem services a healthy environment provides; ▪ improving the health and values of urban waterways; ▪ ensuring the continued supply of clean and healthy untreated drinking water; and ▪ taking a coordinated approach to identifying and improving biodiversity. <p>Support the implementation of the Canterbury Water Management Strategy Zone Implementation Programmes in the Selwyn – Te Waihora, Waimakariri, Banks Peninsula and Christchurch – West Melton zones, and help to resolve any identified cross-boundary concerns.</p>	UDRMG	All partners, Zone Committees, UDS Natural Environment Group	Ongoing
<p>i. Risk from natural hazards</p> <p>Increase the understanding of and improve planning for natural hazard risk by:</p> <ul style="list-style-type: none"> ▪ supporting the development of a regional approach to managing natural hazard risk; ▪ developing a shared statement of Greater Christchurch responses to natural hazard risks; ▪ implementing a consistent approach to address the major hazard risks in relevant planning documents; and ▪ understanding the variation in vulnerability of different communities across Greater Christchurch. 	ECan	All partners, Canterbury Natural Hazard Risk Reduction Group	2016–17
<p>j. Prosperous economies</p> <p>Support the implementation of the Canterbury Regional Economic Development Strategy and the Christchurch Economic Development Strategy where they have particular relevance to Greater Christchurch.</p>	UDSIC	All partners	Ongoing
<p>k. Transport</p> <p>Improve transport system performance and travel choices in Greater Christchurch through:</p> <ul style="list-style-type: none"> ▪ the Greater Christchurch Public Transport Joint Committee; ▪ implementing the Greater Christchurch Transport Statement; ▪ implementing the Greater Christchurch Freight Action Plan; ▪ funding and coordinating the implementation of the updated Greater Christchurch Transport Demand Management Strategy; ▪ promoting improvements to public transport and investigating future rapid public transport; and ▪ supporting and promoting the development of the Christchurch Major Cycle Routes network and investigating the integration, improvement and increased use of the cycling and walking networks within neighbourhoods and across Greater Christchurch, and with other transport modes. 	UDRMG	ECan, CCC, NZTA, SDC, WDC, CDHB, UDS Transport Group	2016–18

6. Recovery plans and programmes

Ngā mahere me ngā kaupapa

Recovery Strategy for Greater Christchurch: Mahere Haumanutanga o Waitaha

The Recovery Strategy for Greater Christchurch was approved in May 2012. It was developed to guide and coordinate the recovery from the effects of the Canterbury earthquakes, particularly the recovery programmes and plans delivered by a range of agencies. The goals in the Recovery Strategy provide desired outcomes under the six components of recovery: leadership and integration, economic, built environment, natural environment, cultural and social (Figure 5).

Recovery plans were developed under the CER Act to focus and advance recovery planning for a range of issues, and allowed changes to be made to statutory documents to facilitate recovery. The most relevant to this Strategy Update are the Christchurch Central Recovery Plan, Land Use Recovery Plan, Lyttelton Port Recovery Plan, and the Waimakariri Residential Red Zone Recovery Plan.

Recovery programmes were a non-statutory way of coordinating and facilitating recovery, particularly where stakeholders were from a range of agencies, groups and communities, and changes to statutory documents were unlikely to be effective ways of achieving recovery.

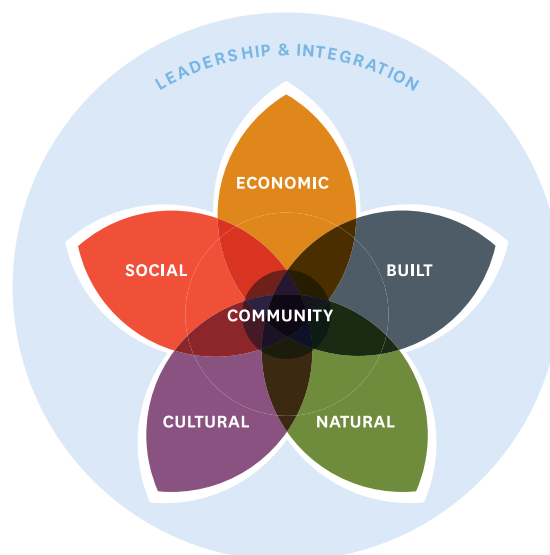


Figure 5: Components of recovery in the Recovery Strategy for Greater Christchurch



Land Use Recovery Plan: Te Mahere Whakahaumanu Tāone

The Land Use Recovery Plan was approved in December 2013. It provides direction for residential and business land use to support recovery and rebuilding across Greater Christchurch through to 2028, including residential and business greenfield growth in specific areas. Some residential areas (e.g. Prestons and Highfield) included in the LURP had not been contemplated in PC1, but had been considered extensively through resource consent processes while PC1 was being debated.

A critical component of the LURP was the statutory directions for changes to RMA documents. These included amendments to district plans and the insertion of Chapter 6 into the CRPS (see below).

Actions in the LURP aim to intensify housing while maintaining amenity values; improve the range, quality and choice of housing options; rebuild social housing; provide community facilities; support rebuilding of commercial businesses within key activity and neighbourhood centres; and help to integrate land use, infrastructure and the transport network.



Chapter 6 – Recovery and Rebuilding of Greater Christchurch, Canterbury Regional Policy Statement

Chapter 6 of the Canterbury Regional Policy Statement, inserted by the LURP in December 2013, sets out objectives and policies specific to Greater Christchurch relating to land use and development. Changes through the Christchurch Replacement District Plan and the planned reviews of the Selwyn and Waimakariri District Plans will give effect to the CRPS. There is also a requirement to have regard to the CRPS when considering resource consents.

In the chapter, Map A (reproduced at Figure 6) shows the settlement pattern for Greater Christchurch to 2028. It also identifies greenfield priority areas for business and residential development. A projected infrastructure boundary shows the planned extent of urban development in Greater Christchurch after 2028.

The settlement pattern emphasises the intention to consolidate and intensify urban areas, a key feature of the 2007 Strategy. Greenfield growth in Waimakariri and Selwyn Districts is focused primarily around the townships of Kaiapoi, Lincoln, Rangiora, Rolleston, Woodend and Pegasus. Within Christchurch City, greenfield land for

housing and business is mainly in the northern and southwest areas. Residential greenfield land is to be developed

at identified minimum densities, based on good urban design principles, and be consistent with an outline development plan. Another key feature of the 2007 Strategy advanced by the CRPS is the integration of land use and infrastructure, particularly an effective and efficient transport network.

The chapter identifies a network of activity centres, including 14 Key Activity Centres, which are to be focal points for commercial, community and service activities. They support diverse business activity, mixed-use development and distinctive, high-quality public environments. Chapter 6 integrates with the Christchurch Central Recovery Plan by identifying the central city in the hierarchy of activity centres as the city's primary commercial area.



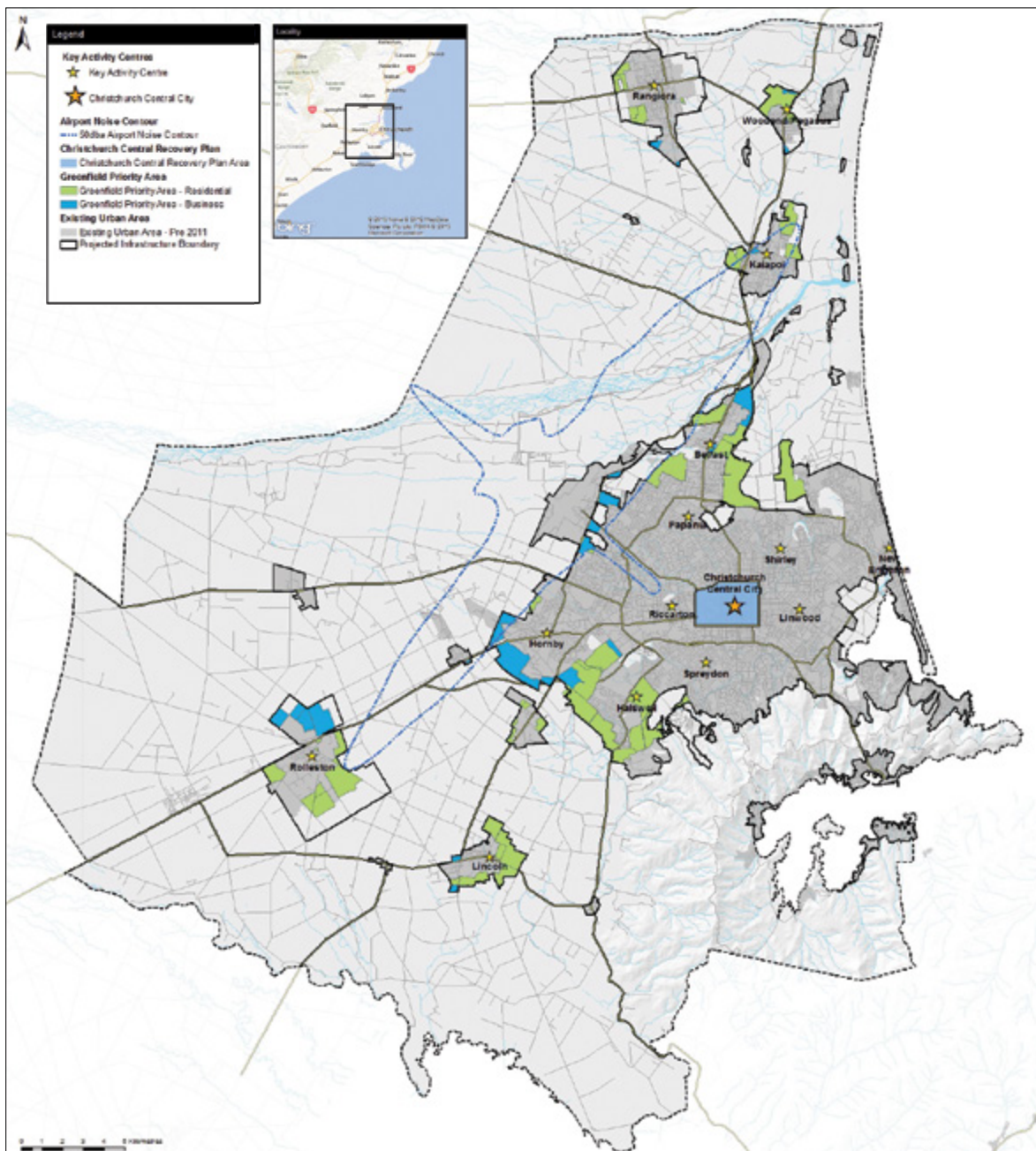


Figure 6: The Greater Christchurch settlement pattern through to 2028 (Map A, Chapter 6, CRPS)



Lyttelton Port Recovery Plan: Te Mahere Whakarauora i Te Pūaha o Ōhinehou

Lyttelton Port was significantly damaged in the Canterbury earthquakes. While the port was able to continue operating with minor disruption, much of the infrastructure on which the port relies needs repair or replacement so that it can continue to provide vital services in the future.

The Minister for Canterbury Earthquake Recovery directed the preparation of the Lyttelton Port Recovery Plan. This direction responded to the recovery issues faced by the port, and recognised the port's significant contribution to the economy and wider wellbeing of Greater Christchurch and beyond. Environment Canterbury developed the draft Lyttelton Port Recovery Plan in consultation with the strategy partners and the community.

The final recovery plan, gazetted in November 2015, provides a streamlined regulatory framework for the rebuild and repair of port infrastructure.

In addition, it provides for a large reclamation for future development, allowing some port activities to be shifted from the inner harbour, which can then be redeveloped for commercial and community purposes.

The organisations involved in the plan have committed to the development of a catchment management plan for Whakaraupō/Lyttelton Harbour, a Memorandum of Understanding to address transport matters, facilitation of pedestrian access across Norwich Quay and to Dampier Bay, and future cruise ship berth solutions.



Natural Environment Recovery Programme for Greater Christchurch: Whakaara Taiao

The Recovery Strategy for Greater Christchurch required Environment Canterbury to develop a Natural Environment Recovery Programme. The strategy partners and the Department of Conservation worked together to develop the programme, which was approved in October 2013. Since then the focus has been on implementing it and reporting on progress.

The purpose of the recovery programme is to repair and restore the natural environment, and protect it from further damage during the rebuild. It is also concerned with increasing the resilience of the natural environment to future events and processes. It considers the effects of natural hazards and other environmental factors, including the effects of climate change and sea level rise.

The recovery programme recognises the change and impacts to the natural environment because of the earthquakes, and identifies the projects and programmes that respond to these changes.



Residential red zone land

Beginning in 2011 CERA identified land in Christchurch City and Waimakariri District that had been so badly damaged by the earthquakes that engineering solutions to allow rebuilding were uncertain, disruptive, costly and unlikely to be timely. These properties are located in the east of Christchurch along the Avon River/Ōtākaro, Southshore, Brooklands, Kaiapoi, Kairaki and The Pines. The owners of properties in these residential red zones received a voluntary purchase offer from the Crown. By May 2015, 92 percent of owners had settled with the Crown for the purchase of their properties.

In the Port Hills, properties at risk from cliff collapse were red zoned based on unacceptable risk to life. CCC and CERA also made voluntary purchase offers to owners of residential properties at risk from rockfall and mass movement. These properties are scattered throughout the Port Hills. The demolition of these properties will be completed by 2018.

WDC is developing a recovery plan for the 89 hectares of residential red zone land in the Waimakariri District. Regenerate Christchurch intends to propose regeneration plans for the residential red zones in Christchurch City.

Christchurch Central Recovery Plan: Te Mahere 'Maraka Ōtautahi'

The Christchurch Central Recovery Plan, published in July 2012, defines the future form of the central city and sets out the locations of key anchor projects. It was developed by CERA's Christchurch Central Development Unit, following a draft Central City Plan produced by CCC in December 2011.

The recovery plan envisions a greener, more accessible city with a compact core and a stronger built identity. It sees a city for all peoples and cultures, recognising, in particular, Ngāi Tahu heritage and places of significance.

The plan locates precincts for health, arts and entertainment, retail, innovation and the justice and emergency sectors. The anchor projects are intended to catalyse investment, growth and social energy, and bring people back into the central city. Anchor projects in the recovery plan that have been completed or are making good progress are the Earthquake Memorial, Te Papa Ōtākaro/Avon River Precinct including the Margaret Mahy Family Playground, the Hagley Oval and the Bus Interchange. Some other proposed anchor projects are the East Frame, Central Library, The Square, Convention Centre Precinct, a Residential Demonstration Project, the Metro Sports Facility, and a stadium.

Two additional chapters were developed after the Recovery Plan was published – An Accessible City and A Liveable City.





Sport and Recreation Recovery Programme – People, Places and Spaces

A Sport and Recreation Recovery Programme was developed through collaboration between territorial authorities, Sport Canterbury and Sport New Zealand. This online, living document will be developed further and shaped by community input, to address the recovery of sport and recreation across Greater Christchurch.

Community in Mind: He Puāwai Waitaha – a flourishing Waitaha

CERA published *Community in Mind* in 2014. This strategy addresses health and wellbeing from a psychosocial perspective. It sets out a number of objectives under the six components of recovery (Figure 5) with a goal to ensure that people belong to positive and inclusive communities and actively lead the lives they want. Priority actions are set out under three focus areas: community-led, communication and engagement, and innovative services.



CDHB and the Ministry of Social Development are overseeing psychosocial services. Their main goals are to respond to the needs of the most vulnerable, and benefit the wellbeing of people and communities most affected by the earthquakes.

Directions for Education Renewal in Greater Christchurch: Shaping Education: Te Tāreinga Mātauranga

Given the scale of change and investment needed in the education system in Greater Christchurch after the earthquakes, the Ministry of Education decided it was not feasible to simply repair existing buildings. Instead it developed a plan for new and improved facilities with the intention to 'reshape education, improve the options and outcomes for learners, and support greater diversity and choice'.



This was set out in this recovery programme, which embraced the opportunities to enhance the education network in Greater Christchurch, and achieve better outcomes for young people, families, whānau, communities and New Zealand.

7. What informed the Update

Te pūtake o te Rautaki

The information in this section has informed the strategic goals in Section 1, the opportunities and challenges in Section 4, and the priority actions in Section 5.

7.1 A changing population

In Greater Christchurch, the number of households is growing and the population is both growing and ageing. Cultural diversity is increasing with a growth in immigration. The population distribution within Greater Christchurch is also changing.

7.1.1 Population growth

The Greater Christchurch population was 414,000 in 2006, when it was expected that it would continue to grow to just over 500,000 in 2026 and 548,520 in 2041.^[4] These expectations were based on medium to high growth projections.

The earthquakes caused an initial outflow of people. About 15 percent of the Christchurch population was estimated to have left in the week after the February 2011 earthquake.^[5] While many came back, some stayed away permanently. Since then many people have come to Greater Christchurch to work on the rebuild.

The population in Greater Christchurch grew to a total of about 428,000 in 2013.^[6] The projections for the population are shown in Table 2. The medium growth projections are above those projected in 2006 while the high growth projections are significantly higher than those earlier projections. The Census in 2018 will provide information to confirm existing trends or show new ones.

This variation in projections emphasises the need to plan well now, but also to develop an adaptable and flexible growth management strategy for the future. There is a need for coordinated information gathering and analysis to inform a future review of the Strategy.

Table 2: Greater Christchurch population projections, 2028 and 2043^[7]

	2028	2043
Low Growth	459,600	457,000
Medium Growth	512,300	566,900
High Growth	564,800	679,300

7.1.2 Household growth

Providing for a range of affordable, high-quality housing is one of the most important aspects of the Strategy. The availability of housing is affected by both demand and supply factors. The demand factors include population growth, workforce migration, and changes to the composition of households. The quality and affordability of housing are in turn affected by housing supply.

The 2007 Strategy planned for an increase of 75,000 households between 2006 and 2041, to a total of 238,910 to accommodate the expected 2041 population.

From a 2013 level of 163,500 households, the medium projections show the number of households in Greater Christchurch in 2043 as 228,800, an increase of 65,300 households, with slower growth in households continuing after that (Figure 7).^[8]

4. Greater Christchurch UDS 2007

5. CERA, Canterbury Wellbeing Index June 2015

6. Customised household projections for UDS and Non UDS Areas of Christchurch, Selwyn and Waimakariri, 2013 (base) – 2068

7. Ibid

8. Ibid

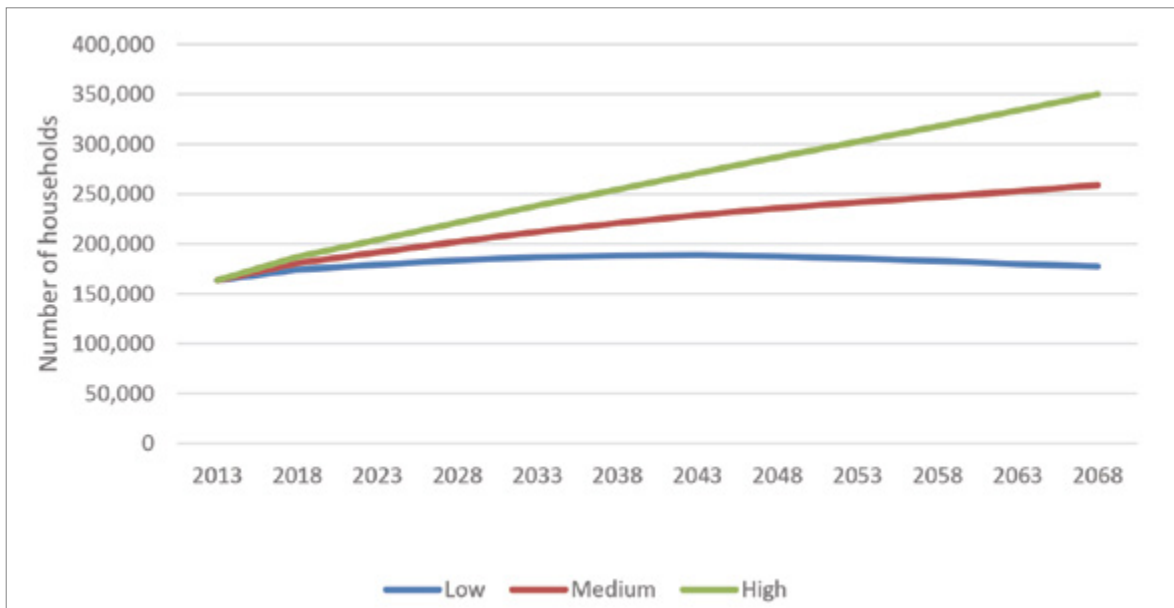


Figure 7: Projected Greater Christchurch area household growth, 2013–2068

7.1.3 Changing distribution of population

Populations in different areas of Greater Christchurch are growing at variable rates.

An estimated 167,500 properties were damaged in the earthquakes, 24,200 seriously.^[9] The residential red zone contained over 8,000 properties, whose residents had to find accommodation elsewhere. These effects, and subsequent recovery efforts, have changed the household distribution in Greater Christchurch, with more growth in Selwyn and Waimakariri Districts. Figure 8 shows that between 2006 and 2013 the populations of Selwyn and Waimakariri grew significantly, and Christchurch's shrank slightly.

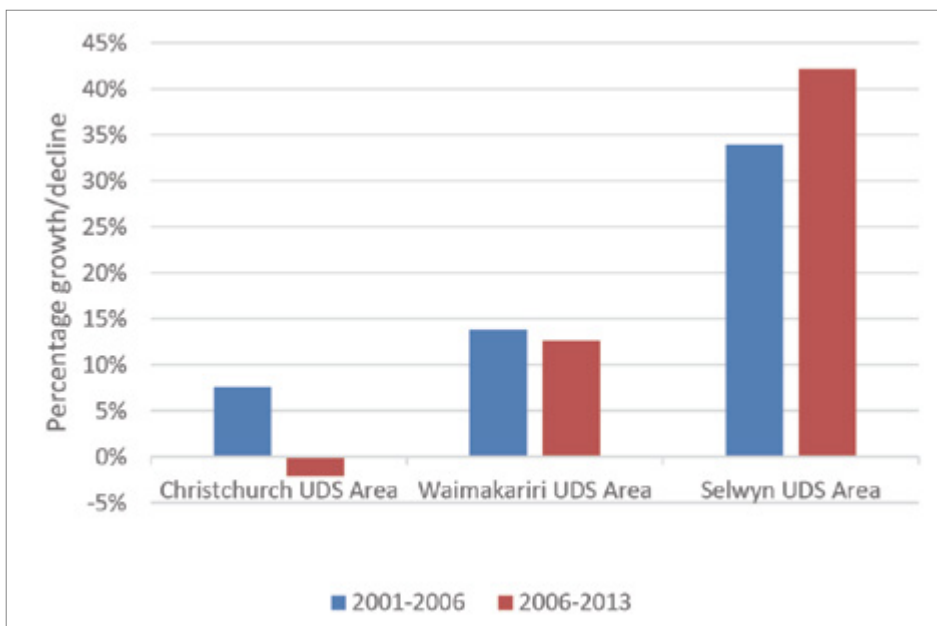


Figure 8: Population growth in Greater Christchurch, based on Census data, 2001–2013

9. CERA, Canterbury Wellbeing Index June 2015



The growth in Selwyn and Waimakariri Districts to date has been accommodated within the planned greenfield areas. This was necessary to meet the increased demand for both temporary and long-term housing because of the earthquake damage to, and loss of, homes.

If this growth in Selwyn and Waimakariri Districts continues, the desired population growth distribution in the 2007 Strategy may not be achieved. The challenge is therefore to encourage more household growth in Christchurch, particularly through urban intensification.

7.1.4 Ageing population

Across New Zealand and in Greater Christchurch the population is ageing as the proportion of those over 65 years grows. The earthquakes have also affected the age structure in Greater Christchurch. The initial outflow included many families with children, and students who then did not return to study in Christchurch. The inflow of rebuild workers also increased the proportion of young males in the region.^[10]

The population structure is expected to continue to change. From 2013 to 2041 across the three districts (including the areas outside Greater Christchurch), the percentage of people aged 65 years and over is projected to increase from 14 percent of the population to 25 percent. The number of those over 80 years is also projected to increase, from 4 percent of the population to 11 percent. This trend has significant implications for many aspects of the urban environment, including housing, social infrastructure, and service provision, as well as raising issues for funding council services.

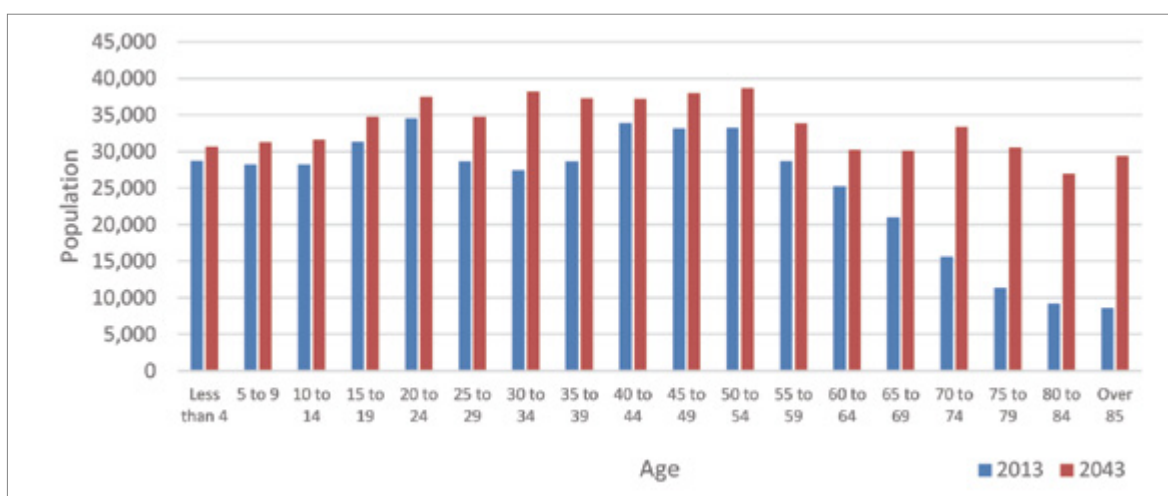


Figure 9: Estimated resident population by age group for the three districts combined, 2013 and 2043

10. CERA, Canterbury Wellbeing Index June 2015

7.1.5 Cultural diversity

The earthquakes increased the cultural diversity of Greater Christchurch as many migrant workers arrived to take part in the rebuild. Figure 10 shows recent net migration for Christchurch City, which indicates how it is becoming more culturally diverse.^[11]

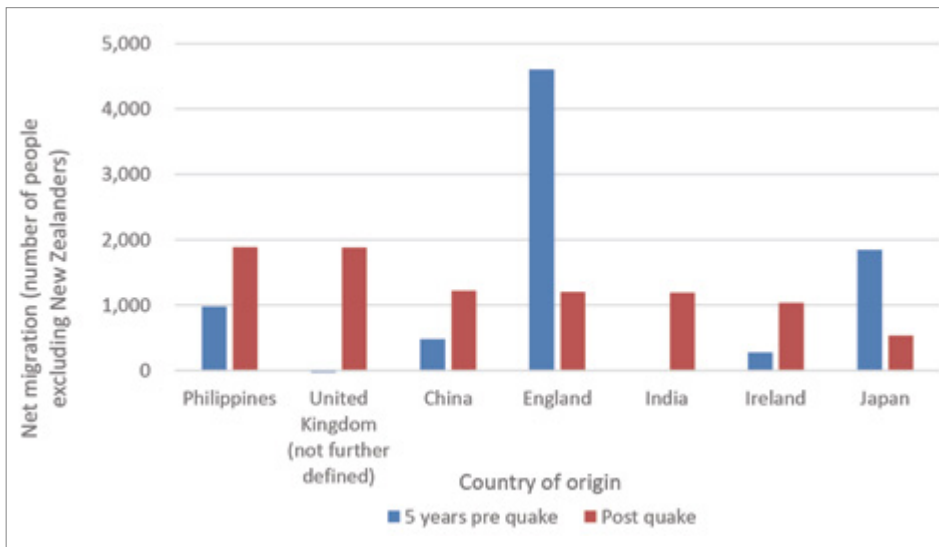


Figure 10: Recent net migration to Christchurch City

The Ngāi Tahu and Ngā Mātā Waka populations across the three districts increased by 12 percent between 2006 and 2013. Of the Māori population, the majority live in Christchurch City and have diverse iwi affiliations. The Ngāi Tahu population is relatively young, with 42 percent under the age of 20 years.^[12]

Figure 11 shows that, across the three districts, Māori, Pacific and Asian populations are projected to increase faster than other ethnicities. This means that in the future, people from these groups will make up a greater proportion of the Greater Christchurch population than now.

It is not just migration that is driving this increase. It is expected that much of the growth in the Pacific and Asian populations will be due to a natural increase in the population already living in the region.

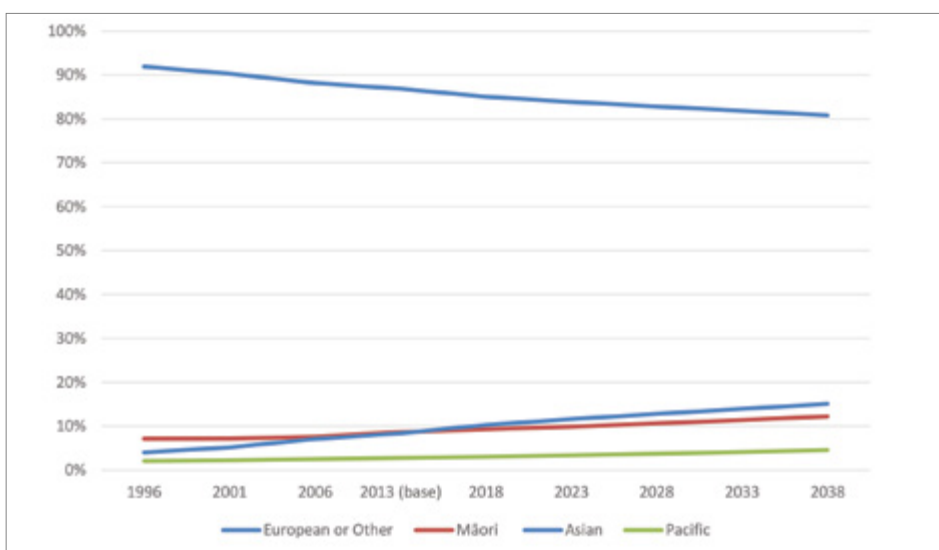


Figure 11: Actual and projected change in population of selected ethnicities for the three districts, 1996–2038

11. Based on data provided by CCC

12. Te Kōwatawata: The Dawn of a New City



7.2 Housing

An adequate supply of appropriate housing in Greater Christchurch has been an important part of the Strategy, and further emphasised since the earthquakes.

7.2.1 Urban consolidation and intensification

The 2007 Strategy assumed housing would be intensified in existing urban areas in Christchurch City to meet the targets for household growth distribution. Historically, about half of all new housing in Christchurch City has been within its existing boundaries, at a rate ranging from about 40 to 60 percent between 2001 and 2010 (Figure 12). After the earthquakes, intensification rates fell, continuing the trend of the previous few years, to around 30 percent of all net new development in the City. However, the rates started to increase again after 2013.

The rate of intensification across Greater Christchurch is much lower, due to the large amount of greenfield housing development, particularly in Waimakariri and Selwyn. After the earthquakes, intensification fell to a low of about 10 percent of all net new housing, after being above 30 percent before the quakes.^[13] Although the rate of intensification has increased since this low point, it is still below the desired target rate set in the LURP (Figure 13).



Figure 12: Rate of intensification development in Christchurch City, 2001–2016^[14]

13. CERA, 2015, LURP Monitoring Report

14. Data provided by CCC. Intensification rates include all new dwellings provided within the existing urban area since 2000

Achieving housing intensification

The Canterbury Regional Policy Statement defines intensification as an increase in the residential household yield within existing urban areas. This means that there are more places for people to live on the same area of land.

Intensification, and the more dense urban area that results, have a range of economic, environmental and social benefits, including more efficient use of urban infrastructure, more effective public transport, and greater social interaction. Having more people living in an area can also help to reduce housing development costs. To achieve these benefits, intensification needs to be well designed and occur in appropriate areas supported by infrastructure, services and community facilities.

Intensification can be achieved a number of ways. These include infill, where the existing buildings usually remain but additional buildings are constructed to provide more housing, or redevelopment, where new buildings with a greater number of dwellings replace the existing dwellings. Another approach is to undertake more comprehensive developments, which may combine multiple land parcels with buildings designed to fit well with the surrounding neighbourhood from the beginning of the development.

The CRPS sets intensification targets in Greater Christchurch. Achieving these targets will be challenging with the current high rates of greenfield development.

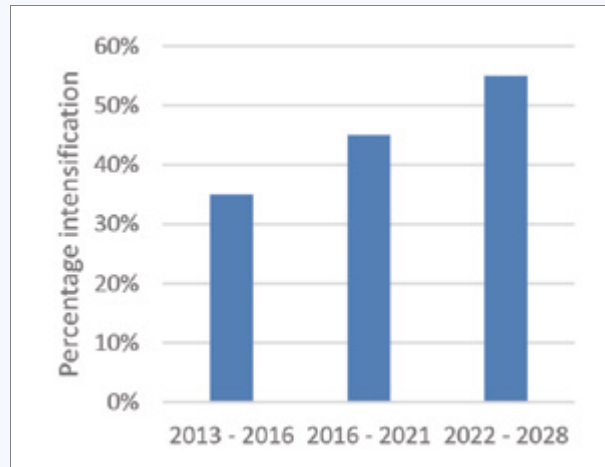


Figure 13: LURP and CRPS intensification target as a proportion of overall growth, 2013–2028

7.2.2 Affordability and choice

Housing affordability and choice are important ongoing issues for Greater Christchurch. Earthquake damage has reduced much of the available social and community housing, and there has been high demand for temporary accommodation, an inflow of the rebuild workforce, and a lower supply of low-cost private rental housing.^[15]

The housing pressures have reduced now that many homes have been repaired or rebuilt and demand for alternative accommodation has fallen. Housing supply is expected to meet demand by mid-2017.^[16]

The supply of land has largely been addressed to 2028 through the LURP changes to the CRPS, and by other mechanisms such as housing accords and changes to district plans. However, the affordability and range of available housing remains an issue.

Between 2001 and 2013 the greatest increases in housing have been in four-bedroom homes.^[17] In contrast, the number of one-bedroom and two-bedroom units has remained relatively stable, or fallen (Figure 14). One reason for this trend is the loss in housing stock through earthquake damage, in particular from residential red zone areas.

This is a significant issue as the makeup and size of households are changing, driving higher growth rates in households compared with the growth rate of the population. Figure 15 shows that the number of one-person and two-person households is projected to increase much more than households made up of three or more people. This will result in a potential deficit in the supply of one-bedroom and two-bedroom houses.

15. CERA, Canterbury Wellbeing Index June 2015

16. MBIE, 2016, Quarterly Canterbury Job-matching Report

17. Statistics New Zealand, 2013 Census data

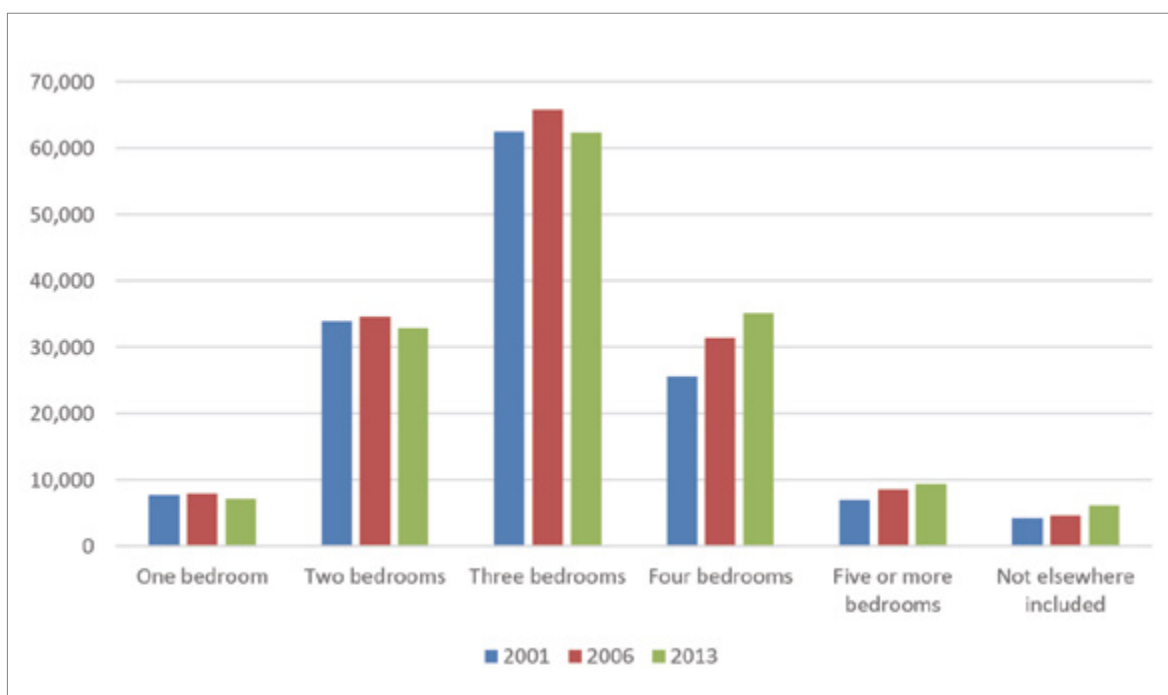


Figure 14: Number of private occupied dwellings by number of bedrooms, 2001, 2006 and 2013

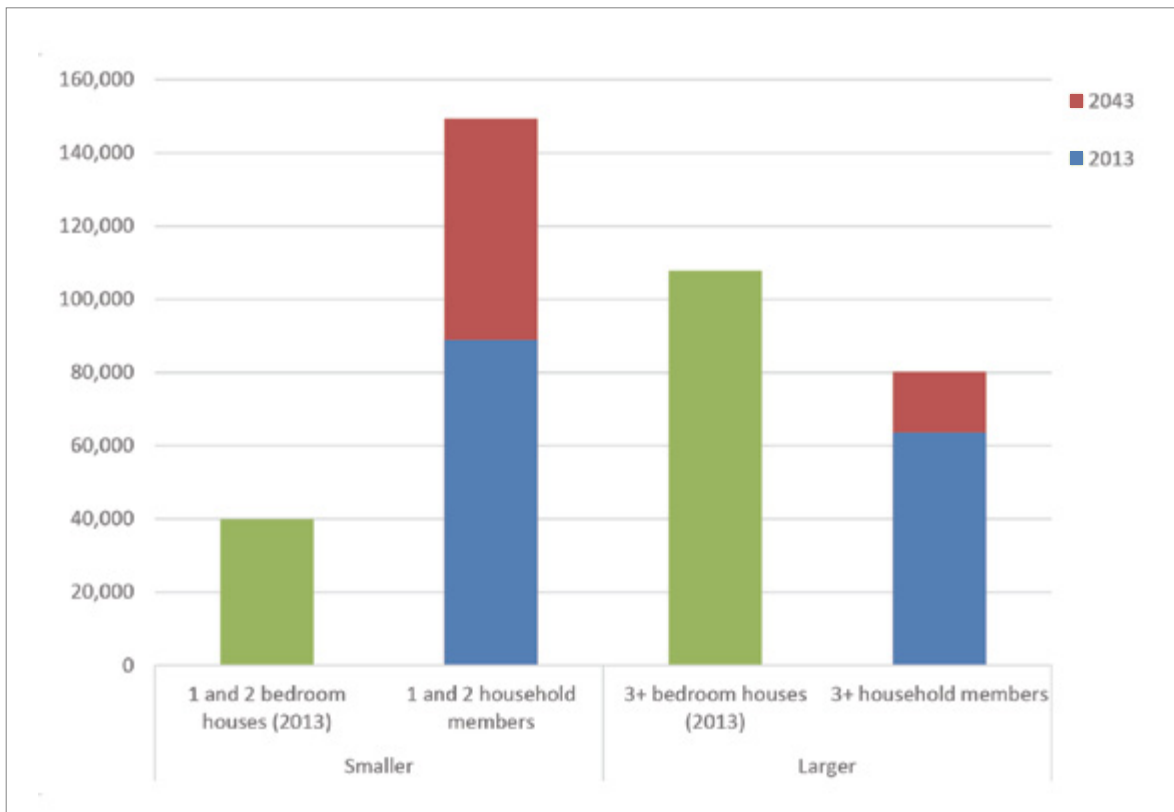


Figure 15: Actual and projected housing stock and household size for three districts, 2013 and 2043

An increase in the amount of smaller and more affordable housing located close to facilities and infrastructure is needed. The rebuild of the Christchurch central city in line with the Christchurch Central Recovery Plan will meet some of this demand, as will intensification in other areas of Greater Christchurch.

The challenge for the strategy partners is to ensure that the opportunities for providing smaller and more affordable housing are appropriately taken up, including through intensification. Providing such housing will help to address both the desired targets for household growth distribution through intensification, and housing affordability and choice issues. To achieve this, it is necessary to have a better understanding of the existing mechanisms, such as those provided by the LURP, how these have worked in practice, and what further actions should be taken to promote and encourage the development of smaller and more affordable dwellings.

There are also opportunities to allow for other types of development such as papakāinga/kāinga nohoanga, and cohousing communities which are created and run by their residents. With cohousing, homes are clustered together and residents have some common facilities and a shared neighbourhood life.

Papakāinga/kāinga nohoanga

Papakāinga/kāinga nohoanga are used to describe traditional forms of Māori communal living on ancestral or tribal lands.

The LURP enabled land use planning changes to better provide for papakāinga/kāinga nohoanga and the development of Māori reserves in Greater Christchurch. These changes recognised that Ngāi Tahu whānau who were impacted by the earthquakes needed to build new homes on Māori reserves. They also recognised the original intent of the reserves under Kemp's Deed was for Ngāi Tahu whānau to develop and use this land to provide for their economic, social and cultural wellbeing.

7.2.3 Housing quality

Housing quality is another important issue, especially for rental housing.^[18] Cold and damp homes have been shown to significantly increase the number of days off school and work and to increase the number of hospital admissions for respiratory and cardiovascular conditions.

In Greater Christchurch, household ownership is decreasing, while the proportion of those in rental accommodation is correspondingly rising.^[19] This was identified as an issue before the 2007 Strategy was developed, and is consistent with wider New Zealand trends.

The strategy partners can make a difference to the health and wellbeing of our communities by promoting existing opportunities to increase the quality of housing, particularly rental housing. They can promote the use of features such as double glazing, and better heating, insulation and ventilation in both existing and new housing, with a focus on providing warm and dry homes. These efforts would be assisted by knowing the areas in which poor-quality housing is concentrated.

There is also the opportunity to increase the stock of more accessible homes, based on good urban design principles. These homes would support people to continue to live in their own homes as they grow older and encourage community participation for people with disabilities.

18. www.beaconpathway.co.nz/images/uploads/Performance_of_Rental_Housing_v3.pdf

19. From Census data

Build Back Smarter

The Build Back Smarter campaign is a collaboration between the Energy Efficiency and Conservation Authority, Ministry of Business, Innovation and Employment and CCC to provide free advice to homeowners on making their homes warmer, drier, healthier and cheaper to run. The service is available across Greater Christchurch.

Build Back Smarter advisors visit homes, give homeowners specific and practical advice, and help prepare a Healthy Home Improvement Plan. The advice is available for both home renovation and new buildings, and is particularly relevant during earthquake repairs.

Canterbury Sustainable Homes Working Party

The working party first met in November 2011. It is involved in improving housing quality by promoting better solar and thermal design in new homes and developments; use of supplementary water supply and water tanks in new homes; diverse house size and better affordability in new subdivisions; and maximising sustainability outcomes through the repair process.

The working party, with Beacon Pathway, has sponsored a number of initiatives including 'Build Back Smarter' and 'Housing Matters' – a series of workshops and site visits focused on solutions for quality housing development.



Canterbury Wellbeing Index

CERA, with strategy partners, set up the Canterbury Wellbeing Index to track the wellbeing of communities through the recovery process. In 2015, while the recovery was progressing in areas such as economic opportunities and physical repairs and rebuilds, issues remained, such as:

- loss or relocation of services;
- housing pressures;
- pressures on family wellbeing and strained relationships;
- additional and compounding stressors, such as insurance issues, living in more damaged areas, and pre-existing vulnerabilities; and
- loss of recreational, cultural and leisure facilities, and the lack of opportunities to engage with others in the community through arts, cultural, sports or other leisure activities.



Since the disestablishment of CERA, CDHB and Ministry of Health have continued this monitoring.

7.3 Healthy communities

The 2007 Strategy responded to concerns about community health, identity and wellbeing. The earthquakes had major impacts on the health and wellbeing of people in Greater Christchurch. People's homes, workplaces, recreational facilities and supporting infrastructure were damaged or destroyed. Such damage worsened some existing issues and created new ones. These included accommodation challenges, the dislocation of people from their existing neighbourhoods, and secondary stressors like insurance problems. Community organisations were also dislocated, reducing their capacity to respond to and cater for increased demand.

A significant new issue has been the ongoing psychosocial effects of the earthquakes. Psychosocial recovery after a disaster can take many years. The challenge of psychosocial recovery has been particularly significant in Greater Christchurch due to the number of aftershocks and widespread impacts that people have experienced. For some people these factors have hindered their personal recovery. The Community in Mind strategy was released in 2014 to guide actions to address psychosocial wellbeing.

Healthy Christchurch

Healthy Christchurch is a collaborative partnership, led by CDHB, based on the World Health Organization's Healthy Cities model. The partnership recognises all sectors and groups can contribute to creating a healthy city. The Healthy Christchurch Charter has over 200 signatories.

Healthy Christchurch ran the All Right? campaign to support Cantabrians' mental health and wellbeing recovery from the psychosocial effects of the earthquakes. The campaign uses local research and international evidence to identify mental health promotion messages that support people in 'taking stock of where we're at, playing to our strengths and taking small steps towards a happier, healthier life'.



7.3.1 Healthy people

Life expectancy continues to rise across New Zealand. Canterbury has a higher proportion of elderly people, especially those aged over 85 years, than most of New Zealand. Within Greater Christchurch, Waimakariri has a particularly high proportion of older people.

Increasing age is one of the risk factors for chronic diseases such as Type Two diabetes, cancer, cardiovascular disease and dementia. The other significant risk factors are being obese or overweight, and inactivity. These risk factors are strongly influenced by the environments in which we live, learn, work and play, and can be modified.

In the CDHB area, about one in four adults and one in twenty children are obese. The proportion of those with diabetes^[20] is rising each year – currently about 4 percent of adults are diagnosed with diabetes. Just under 6 percent are diagnosed with heart disease. Other risk factors for chronic non-communicable diseases include smoking and hazardous levels of alcohol consumption.

Initiatives that impact on health and wellbeing need to be integrated across all other policy and planning decisions. Integrated Assessments are a good way to ensure that the health of people and communities is considered during these processes.

7.3.2 Community facilities

It is important for all Greater Christchurch residents to have access to appropriate community facilities and services, including those for health, education and recreation. These serve as focal points for creating connections between people and developing a sense of place.

The earthquakes caused significant damage to community facilities in Greater Christchurch. In Christchurch City most of the 1000 community facilities, including community centres, libraries and pools, were damaged to some degree. All schools experienced some damage, with repairs estimated to cost somewhere between \$500 million and \$750 million.^[21] Health infrastructure was also severely damaged, at a cost of \$518 million.^[22]

A large proportion of people in Greater Christchurch lost access to the natural environment and to sports and active recreation facilities.^[23] Community cohesion based around local sports events was fragmented and wellbeing was reduced because of the loss of facilities. Families faced additional costs for increased travel to new venues or for accessing alternative forms of recreation.

Councils are rebuilding community facilities, and with other organisations have taken initiatives to encourage community connections.^[24] A Sport and Recreation Recovery Programme was developed to address the recovery of sport and recreation. The Minister for Education and the Tertiary Education Commission produced the Education Renewal Recovery Programme to renew the education network in Greater Christchurch. CDHB is undertaking a rebuild and recovery programme for the health system.

Appropriate community and recreation facilities need to be re-established in existing neighbourhoods, and established in urban renewal and greenfield growth areas as early as possible. Where neighbourhoods are growing, community facilities and services need to keep up with this growth. They must also reflect the needs of the changing population so that they are appropriate for older and more culturally diverse residents and for changing lifestyles. Community groups need support to get affordable accommodation in which they can provide their services.

The challenge for Greater Christchurch now is to continue to successfully implement the rebuild and repair programmes and CRPS policies. It also has the opportunity to take account of the changing population in providing sports fields, parks and open spaces, and in council facility rebuild programmes, to make them fit-for-purpose for the future.

20. The data available does not differentiate Type One diabetes, which is largely a genetic disease, from Type Two diabetes, which is largely caused by obesity and underactivity. Approximately 90 percent of 'diabetes' diagnoses will be Type Two

21. Directions For Education Renewal in Greater Christchurch: Shaping Education: Te Tāreinga Mātauranga, 2012

22. CDHB, 2016, Canterbury DHB Annual Plan 2015/16

23. CERA, Canterbury Wellbeing Index June 2015

24. Ibid



7.3.3 Community identity

Where we live influences not only our health, but also our identity as communities. The development of the 2007 Strategy responded to the issues of:

- urban expansion changing the use and look of rural areas;
- conflicts between rural and lifestyle expectations in rural environments;
- small towns getting bigger; and
- poor developments eroding a sense of place.

The earthquakes intensified concern for some of these issues by increasing population growth and development in the areas around Christchurch, particularly in Selwyn District. New issues also emerged because people became dislocated from their communities when they moved home either temporarily or permanently, and social networks were disrupted through changes to the school network. The eastern areas were particularly affected. However, social connectedness also grew stronger initially as people helped each other in a time of great difficulty, and communities responded with activities such as spontaneous volunteering.

Responses to issues of rural residential development and urban expansion were considered through the LURP. They included actions, and policies in the CRPS, to address rural residential development, good urban design, and integration with the surrounding urban environment for new developments. There have also been more local responses for existing urban areas, such as CCC's Suburban Masterplan Programme.

Guidance for urban design in Christchurch central has been provided in the Christchurch Central Streets & Spaces Design Guide: Ngā Huanui me Wāhi, Ārahi Hoahoa, developed in 2015 by CCC, CERA and Te Rūnanga o Ngāi Tahu. The vision in this guide is for central Christchurch streets and public places to be greener, easier to move around and full of people enjoying a vibrant city life.

The challenge and opportunity for the Strategy over the next few years is to work with Regenerate Christchurch on programmes to support the regeneration of the eastern suburbs, and to recognise the importance of providing facilities and services close to where people live.

7.4 Enhanced natural environments

Freshwater management

The Canterbury Water Management Strategy was released in 2009. The Christchurch – West Melton, Selwyn – Te Waihora, Waimakariri and Banks Peninsula zone committees have been established since that time. The Zone Implementation Programmes provide recommendations for water, biodiversity and recreation. These recommendations help inform the development of the regulatory framework for integrated water management through chapters in the Canterbury Land and Water Regional Plan.

Before the earthquakes, urbanisation was already affecting the natural environment through contamination of waterways from stormwater and wastewater; loss of habitat and biodiversity; poor air quality; and impacts of waste disposal. The earthquakes caused changes to this environment, some of them immediate and short term, and others taking much longer to have an impact.

7.4.1 Water

Before the earthquakes, the lowland rivers in Greater Christchurch had poor to very poor recreational water quality ratings, while most coastal sites were rated good to very good.^[25] The diversity of benthic invertebrates, a common indicator of waterway health, was low and species that can tolerate pollution and sediment were prevalent. Despite this, there was a significant inanga (whitebait) fishery on these rivers. The ecological health of the Avon Heathcote Estuary/Ihutai was improving after the city's wastewater discharge was diverted from the estuary direct to the ocean through a 3-kilometre pipeline. Greenfield residential developments included stormwater treatment systems, and riparian management practices were increasingly considering stream health, in both rural and urban areas.

As a result of earthquake damage to infrastructure, sewage and trade waste discharges into the coastal waters, estuaries and rivers for many months reduced the coastal and estuarine water quality. This in turn had impacts on public health, recreation, the inanga fishery and the relationship of Ngāi Tahu with coastal waters, estuaries and rivers.

Ngāi Tahu's aspiration is to restore the life-supporting capacity of urban waterways by eventually eliminating discharges of sewage and other contaminants.

The challenges to improving water quality and reducing flood risk in the urban rivers are to:

- reduce volume and improve quality of runoff;
- restrict the use of building and vehicle materials known to generate contaminants;
- encourage individual responsibility for stormwater generation;
- reduce the amount of sediment entering waterways; and
- help streams in developed urban areas to recover effectively.

Groundwater quantities and quality were largely unaffected by the earthquakes, but face other challenges from land use changes, increasing demand for water and climate change. If groundwater is to continue to be a sustainable source of drinking water for Greater Christchurch, we need to:

- reduce our reliance on groundwater for uses other than drinking water;
- reliably determine the recharge rates to better assess abstraction limits and vulnerability to land use change to the west of Christchurch;
- continue to protect the unconfined aquifer west of Christchurch;
- develop strategies to reduce nitrate entering our drinking water supply; and
- recognise that where there has been land subsidence, the water table is higher than before the earthquakes.

25. <http://maps.ecan.govt.nz/WaterQuality/>

7.4.2 Biodiversity

There has been significant loss of biodiversity in Greater Christchurch over many decades, with lowlands and river plains experiencing the greatest losses. Biodiversity is affected by the acute and chronic impacts of human activities through habitat loss, degradation and fragmentation; pollution from sediment, heavy metals and nutrients; and ongoing disturbance.

The earthquakes brought further change with disturbance to wetlands, the loss of trees and forests, and the spread of pests and weeds.

Indigenous biodiversity and habitats, outstanding landscapes, wetlands, waterways, and places of historical or traditional importance to Ngāi Tahu continue to need careful management to ensure their wider cultural and ecosystem values are recognised and protected. Protection of the biodiversity that remains, and ecological restoration, are critical to meet our biodiversity goals.

An area that is culturally and historically significant to Ngāi Tahu

The area known as Ōtautahi/Christchurch is of special cultural and historical significance to Ngāi Tahu. Before European settlement, Ngāi Tahu, and before them Ngāti Māmoe and Waitaha, maintained numerous permanent and temporary kāinga and pā within Greater Christchurch. From these settlements, Ngāi Tahu gathered and used natural resources from the network of springs, waterways, wetlands, grasslands and lowland podocarp forests. These resources were vital to the Ngāi Tahu settlements. Historical associations remain important to local hapū and rūnanga, especially those who continue to live in and use the areas.

7.4.3 Mahinga kai

Mahinga kai is the concept that shows the complex, interconnected cultural beliefs and practices of Ngāi Tahu in relation to the environment. It describes not only the species gathered but also the places and practices involved in doing so. Mahinga kai, meaning to mahi ngā kai (work the food), is a management concept, and a way of thinking that involves and understands the simultaneous protection and use of resources.

Mahinga kai is the cornerstone of Ngāi Tahu spiritual, historical, cultural, social and economic wellbeing. Protecting, enhancing, using and maintaining mahinga kai sites and resources, and the ability of whānau and hapū to access these, form the basis of natural resource management by Ngāi Tahu.

Before the earthquakes, urbanisation negatively affected the relationship of Ngāi Tahu to mahinga kai resources and sites, because of degradation and modification of the natural environment.

There are opportunities and challenges to:

- incorporate mahinga kai outcomes into the urban built environment;
- recognise the relationship between mahinga kai and Ngāi Tahu cultural identity and wellbeing;
- restore, protect and enhance indigenous flora, fauna, habitats, ecosystems and biodiversity, particularly those associated with waterways, the coast, wetlands, grasslands and lowland podocarp forests, and in and around traditional mahinga kai sites; and
- protect, restore and manage mahinga kai values and resources, including surveying, cultural interpretation and monitoring of sites.

Whaka Īnaka

Whaka Īnaka, meaning 'causing whitebait', is a project trying to improve the success of ĩnanga spawning in the 2016 season. Straw bales have been installed along the rivers to provide spawning habitat and to find out where ĩnanga prefer to spawn. The project is a collaboration between EOS Ecology, the University of Canterbury and Ngāi Tahu, funded by the Department of Conservation and with support from a number of local businesses, trusts and organisations.



7.4.4 Land

Knowing the location of contaminated sites has become more important after the earthquakes because of the extent of construction that is disturbing soil. Following the earthquakes, information on Hazardous Activities and Industries List (HAIL) sites was collated rapidly. Sites that have been investigated and shown to be contaminated are being managed or remediated.

Before the earthquakes, the total measured solid waste per person, per year had been decreasing in Waimakariri District and Christchurch City. Domestic waste management in Christchurch had improved with the introduction of a three-bin system in 2009, helping to increase waste diversion from landfill. A construction and demolition waste management industry was also well established in Greater Christchurch.

Managing tonnes of demolition rubble from the earthquake has been a challenge. Some of the waste has been sorted and disposed of at the Burwood Resource Recovery area; some has been used for a 10-hectare reclamation at Lyttelton Port; some has been handled through private facilities; and hazardous waste, including asbestos, has been transported to Kate Valley Landfill. Household hazardous waste during demolitions on residential red zone land has been managed through a partnership team, and detecting and managing asbestos has been a priority.

While the Burwood Resource Recovery area and Kate Valley Landfill provide waste disposal for Greater Christchurch communities, monitoring private sites used for waste and demolition will continue to be a challenge. Preparing plans for waste management for any future events needs to be a priority.

7.4.5 Air

Although air quality has improved significantly since 2006, mainly due to the shift to cleaner home heating, air quality in some urban centres fails to meet guideline levels in winter (Figure 16). The earthquakes reduced air quality in some areas for a time due to dust sources such as liquefaction silt, demolition and construction. The Canterbury Air Regional Plan has been developed to continue to improve air quality in Christchurch, Rangiora and Kaiapoi, with the aim of achieving nationally set targets.

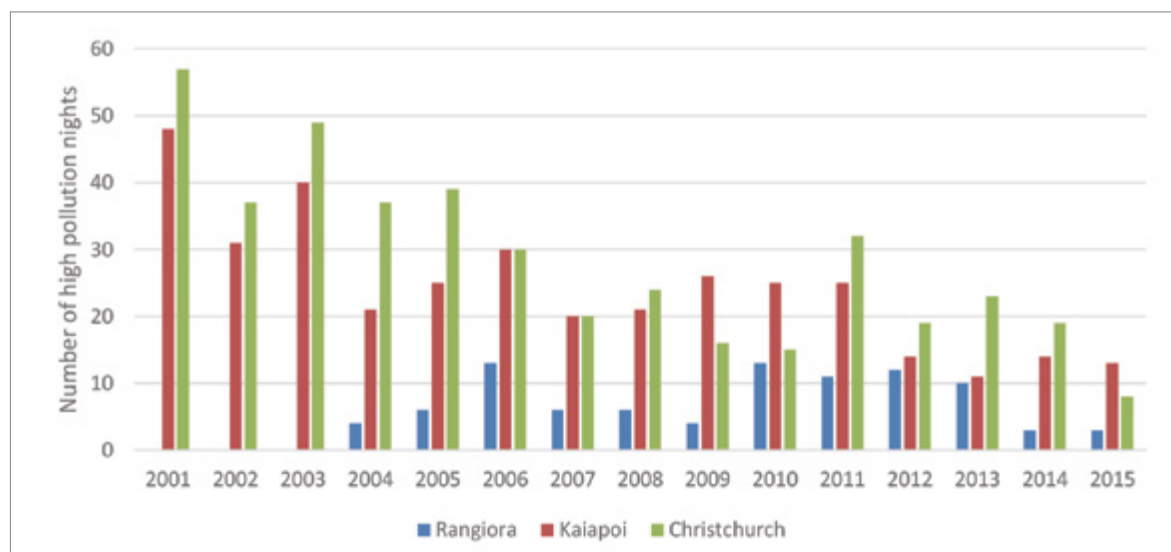


Figure 16: Number of measured high pollution nights in Greater Christchurch airsheds per year, 2001–2015^[26]

26. High pollution nights are when the 24-hour average PM10 concentration exceeds 50µg/m³

7.5 Natural hazards

Before the earthquakes, Greater Christchurch was vulnerable to, and had experienced, a wide range of natural hazards. Environment Canterbury is the lead agency for gathering and providing information on natural hazards. This informs planning and activities under the Civil Defence Emergency Management Act 2002. The Canterbury Regional Policy Statement includes a chapter on natural hazards, which sets out a hierarchy for managing natural hazards: avoidance, mitigation, and response and recovery. Territorial authorities generally manage hazards through subdivision and the Building Act 2004.

The earthquakes damaged land through liquefaction and lateral spread and rockfall, cliff collapse and landslides in the Port Hills. Siltation and lateral spread reduced waterway flood flow capacities; stopbanks were damaged and temporary banks constructed; and land tilted around the Avon Heathcote Estuary/Ihutai.

Among the changes that resulted are:

- increased flood risks to low-lying land due to the effects of tidal flooding, altered land and riverbed levels, and smaller river channel capacity. Some of these effects will be made worse by climate change and sea level rise;
- changes to areas potentially affected by storm surge or tsunamis;
- the greater risk of earthquakes and aftershocks, which will continue for years; and
- increased susceptibility to rockfall, cliff collapse and landslide hazard in parts of the Port Hills, with reduced access to walking tracks.

One more positive result of the damage was to raise awareness that we need to understand, plan for and respond to natural hazards and their consequences.

Environment Canterbury is leading a regional approach to the management of natural hazard risk. The purpose of this approach is to share resources to achieve a number of 'quick wins' such as improving accessibility of hazard information, building a toolbox of existing hazard risk consultation methods, and providing a structure for new research and investigative projects. The local authorities will agree on ways of working so industry, developers and the public experience consistency across the region.

7.5.1 Flooding

Flooding is a major hazard for Greater Christchurch. Before the earthquakes, Greater Christchurch was already at risk of flooding.

The earthquakes caused floodplain subsidence of up to a metre along the tidal stretches of the lowland rivers – the Avon River/Ōtākaro, Heathcote River/Ōpāwaho, Styx River/Pūrākaunui and the Kaiapoi River. This increased the extent and severity of flooding from heavy rainfall, storm surges and sea level rise. River channels became narrower and shallower due to liquefaction, lateral spreading and sedimentation, which further increased flood hazard.

High flows in the Waimakariri River are generated by heavy rainfall in the upper catchment near the main divide. This can result in flooding downstream. The Waimakariri Flood Protection Project includes constructing a secondary stopbank along the Waimakariri River. The secondary stopbank system will provide an additional line of defence if the primary banks fail. The project is due for completion in 2020.

7.5.2 Earthquakes and land instability

Following the 2010 and 2011 Canterbury earthquakes, the area remains at increased risk from earthquakes and aftershocks. Changes to the Christchurch District Plan have introduced provisions to restrict and manage the use of affected land. The provisions aim to reduce the risk to people and property from liquefaction and land instability. Selwyn and Waimakariri District Councils will also make provisions when they review their district plans.

The Alpine Fault has a high probability (estimated at 30 percent) of rupturing in the next 50 years. The rupture will produce one of the biggest earthquakes since European settlement of New Zealand, and will have a major impact on the lives of many people.

7.5.3 Coastal hazards

Cities and towns built on low-lying coastal and river plains are highly vulnerable to coastal hazards (e.g. sea level rise, storm surges, tsunamis) and land-based hazards (e.g. surface subsidence and compaction, flooding, erosion, sediment supply changes, groundwater table changes) caused by natural processes or human activities. Many of these risks were increased by the earthquakes in Greater Christchurch. Coastal population growth and concentration, and urbanisation are expected to greatly increase exposure and loss to the impacts of relative sea level rise and coastal flooding through the next century.^[27]

27. Hughes et al, 2015, The Sinking City: Earthquakes Increase Flood Hazard in Christchurch, New Zealand

7.5.4 Climate change

The planet is warming, the world's weather is becoming more variable, and sea levels are rising in ways that will affect where we live and how we use land and natural resources.

Climate change is intensifying a range of natural hazards. This means Greater Christchurch needs to adapt and fund responses to:^[28]

- sea level rise: It is likely that we will face increased water levels, storm surges, flooding and coastal erosion across Greater Christchurch, particularly around the coast and the lowland rivers; and increased liquefaction risks from raised water table levels;
- sediment budget: With changes to rainfall, the sediment delivered to the coast by the Waimakariri River will change;
- water shortages: Higher temperatures, less rainfall and more evaporation and plant transpiration are likely to increase pressure on water supplies. By 2090, the time spent in drought is likely to more than double, compared with 1990;
- increased fire risk: Strong winds, combined with high temperatures, low humidity and seasonal drought, may increase the fire risk in some areas;
- changed biosecurity risk: Climate change could increase the spread and survival of pests and weeds;
- changes to agriculture: Warmer temperatures, a longer growing season and fewer frosts could provide opportunities to grow new crops and farmers might benefit from faster growth of pasture. These benefits may be limited by negative effects of climate change such as prolonged drought, increased flood risk, or greater frequency and intensity of storms; and
- changed risks to human health: With increasing temperatures, mosquitoes that carry diseases such as dengue fever and Ross River virus can now survive in New Zealand's climate.

7.5.5 Acceptable levels of risk

Some longer-term effects of the earthquakes will take many years to become apparent and be understood. Existing risks will be increased with climate change and sea level rise. For this reason, it will be necessary to continue to reassess risk profiles.

Risk is expressed as the probability of a hazardous event multiplied by its consequence:

- a hazard is a physical event with the potential to cause harm; and
- the consequence is a measure of the costs of impact on a community and its environments.

A disaster occurs when there is a serious disruption of a community that exceeds its ability to cope using its own resources.

It is important for communities to discuss what levels of risk will be acceptable to them in relation to natural hazards. Talking about retreating from vulnerable areas is difficult. This is especially so given the recent experience of damaged or destroyed homes for whole communities through the impacts of the earthquakes, and the subsequent residential red zone process. However, 'managed retreat' can be an evolving and adaptive process over several decades.

Communities need to be involved in creating possible solutions for their neighbourhoods. These solutions may need to consider adaptation responses such as:

- assessing and allowing for natural hazards, climate change and sea level rise in planning documents, including the risks from multiple natural hazards;
- preparing a long-term flood management plan for Greater Christchurch;
- providing for sufficient land and appropriate land uses to allow for natural variations and future human-induced and natural changes;
- planning for and providing additional buffer space to allow for effects of coastal processes, and planning for and changing land uses in areas at risk from coastal processes;
- retreating from threatened areas, particularly in response to coastal inundation and coastal erosion driven by climate change (sea level rise and more frequent storms); and
- setting up water storage so that primary industries are better able to cope with longer, drier summer weather.

28. <http://www.mfe.govt.nz/climate-change/how-climate-change-affects-nz/how-might-climate-change-affect-my-region/canterbury>

7.6 Sustaining the economy

Greater Christchurch is at the heart of the regional and South Island economy, with Christchurch as the commercial centre, and is a significant contributor to the wider New Zealand economy. Agriculture, tourism and manufacturing are the primary export earners.^[29]

Agricultural productivity in wider Canterbury has flow-on effects in Greater Christchurch through the transport, service, and value-added food manufacturing sectors, as well as increasing demand for efficient export infrastructure. Lyttelton Port, tertiary education providers, Crown Research Institutes and health services are other important parts of the Greater Christchurch economy.

The recovery from the earthquakes has provided an opportunity for economic growth as rebuild activity has substantially increased jobs available and contributed significantly to gross domestic product (GDP) output. From 2011 to 2015, construction sector jobs in the Canterbury region grew by 90 percent.^[30] Immigration has been an important way of meeting the demand for rebuild workers.

Responses to the economic environment in Greater Christchurch following the earthquakes have included:

- **Economic Recovery Programme for Greater Christchurch**, which aimed to revitalise Greater Christchurch through two broad areas of focus: 'Fixing what's broken' and 'Accelerating the development of high-growth and high-productivity industries';
- **Canterbury Regional Economic Development Strategy**, which identifies seven priority areas that range from investment in civic, digital, transport and irrigation infrastructure, through to improved skills, value added production, and activities to encourage visitors and migrants to come to the region; and
- **Christchurch Economic Development Strategy**, which aims for Christchurch to rank well in terms of economic performance and quality of life, grow total GDP, increase exports to China, increase the proportion of employment in high-value sectors, and increase the number of people getting tertiary qualifications.

Two key challenges and opportunities for Greater Christchurch that need to be addressed now, and for the next few years, are encouraging the ongoing recovery of the tourism sector and fostering the innovation and knowledge economy. A third is to ensure rebuild workers, including skilled migrants, are able to effectively transition into other sectors of the economy.

Rebuild progress and forecasts

Data from MBIE for employment across the wider region in 2015 provides some insight into the economic situation in Greater Christchurch:

- rebuild activity has levelled out and economic growth is expected to slow;
- retail activity has been increased by rebuild expenditure;
- tourism activity is showing signs of increasing;
- unemployment is still low, but increasing;
- construction industry job vacancies are declining;
- migrants are the main source of increased labour supply, but work visa arrivals related to the rebuild are decreasing; and
- residential construction work is decreasing; however, more complex residential repair and rebuild work is expected to continue to contribute to spending for the next three years.

MBIE modelling indicates that the rebuild reached its peak output in 2016, and predicts that that peak will continue until mid-2017, before economic activity returns to business-as-usual levels by 2021. About 31,000 construction workers were employed in Greater Christchurch at the end of 2015, compared with 15,000 before the earthquakes. The need for workers and the mix required will change as the rebuild refocuses on the commercial rebuild, and starts to decline from peak activity.

29. CERA, 2012, Economic Recovery Programme for Greater Christchurch

30. MBIE, 2016, Quarterly Canterbury Job-matching Report – December 2015



7.7 Integrated and managed urban development

Chapter 6 of the Canterbury Regional Policy Statement sets out the objectives and policies for the recovery and rebuilding of Greater Christchurch. It also shows the settlement pattern for the period until 2028 (Figure 6). This allows Councils to efficiently plan for and provide infrastructure within Greater Christchurch.

The future challenge will be for the CRPS to appropriately provide for growth beyond 2028, and to respond to the changes in population in Greater Christchurch, and the balance between demand and supply of housing.

7.7.1 Transport

The 2007 Strategy recognised transport as one of the major issues to be addressed. Specific issues identified included increasing congestion, freight links, limited alternatives to private vehicles, greater integration of land use and transport planning, effects on the environment, and increasing costs and energy consumption.

After the Strategy was agreed, central government committed to providing substantial transport funding for Greater Christchurch, now being delivered in part through the Roads of National Significance programme (Figure 17). Government is investing over \$1 billion in the Greater Christchurch transport network, and delivering the Christchurch Northern Arterial, the Western Corridor and the Southern Motorway.



Figure 17: Roads of National Significance – Christchurch Motorways^[31]

31. www.nzta.govt.nz/projects/christchurch-motorways/



The earthquakes had major effects on transport in Greater Christchurch. Direct effects included damage to 45 percent of roads in Christchurch.^[32] Other effects have come from business and household relocations, the development of new business activity areas, and more road works from rebuilding activity. All these changes have altered travel patterns, including increased commuting from surrounding districts to and from Christchurch City, and increased traffic congestion, especially in Christchurch's northwest. Because of continual growth in traffic from the north, peak-hour congestion on the Northern Motorway will never be totally eliminated, even when the new Western Corridor and Northern Arterial are completed.

Public and active transport modes have environmental and health benefits, and are more efficient ways of using transport infrastructure than private vehicles. Creating walkable environments is one of the most cost-effective methods known to improve community health and wellbeing. Use of public transport fell by 40 percent after the earthquakes.^[33] While use of the public transport system was showing strong signs of returning to higher levels from 2012, this has levelled off below pre-earthquake levels (Figure 18).

UDSIC adopted the Greater Christchurch Transport Statement in December 2012 (Table 3). It provides for a consistent, integrated approach to planning, implementing and managing the transport network and services across Greater Christchurch. As well as the strategy partners, signatories include the Ministry of Transport, KiwiRail, Christchurch International Airport Ltd and Lyttelton Port of Christchurch Ltd.

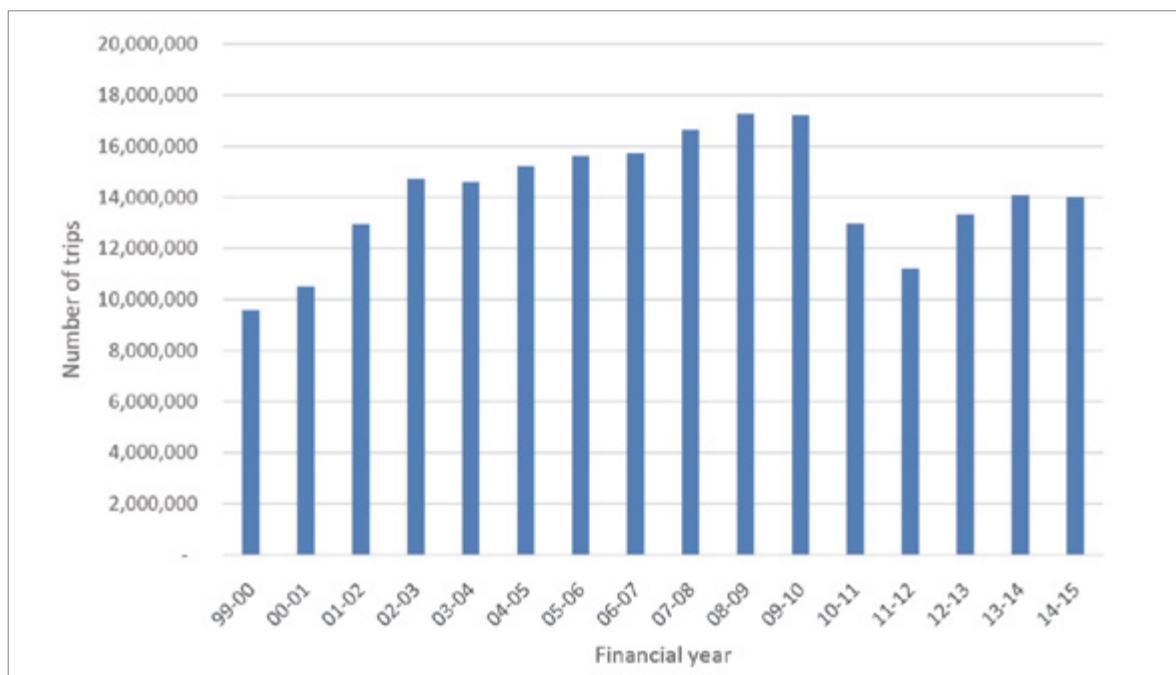


Figure 18: Greater Christchurch annual public transport trips, 1999–2015^[34]

32. Greater Christchurch Transport Statement

33. Environment Canterbury, 2014, Canterbury Regional Public Transport Plan 2014

34. Includes Christchurch urban and school services, plus Ferry, Burnham, Rangiora and Airport services

To address the transport issues that the earthquakes intensified, a number of plans and strategies have been developed or updated. These include:

- Greater Christchurch Travel Demand Strategy 2009;
- Christchurch Transport Strategic Plan 2012;
- Regional Land Transport Plan 2015–25;
- Lyttelton Port Recovery Plan;
- An Accessible City, the transport chapter of the Christchurch Central Recovery Plan;
- Land Use Recovery Plan; and
- Greater Christchurch Freight Action Plan.

The challenge is to implement the actions developed through these transport planning documents, to use existing and planned transport infrastructure more effectively, and to respond to ongoing change. This can be achieved by continuing to focus on managing travel demand and increasing the use of active and public transport. Maintaining an efficient freight network also needs to be a priority through the Freight Action Plan so that the economy continues to recover and grow.

The establishment of the Greater Christchurch Public Transport Joint Committee will help the sub-region to coordinate its public transport efforts and undertake effective strategic planning.

Table 3: Greater Christchurch Transport Statement outcomes and objectives

Transport outcomes		Objectives
Journey Links between people and places	Connectedness	Integrate land use activities with transport solutions, making movement between places easier
	Resilience, reliability and efficiency	Optimise the use of existing transport assets through managing travel demand and networks
		Provide safe, efficient and resilient links to connect people and places
		Make travel time between key places efficient and predictable
Travel choice	Provide more options for people to walk, cycle and use public transport	
Safety	Safe journeys	Minimise the severity and social cost of crashes
		Improve personal security
Environment	Liveable communities	Support place-making, and 'active travel' and public transport, to reduce emissions and improve public and environmental health
	Low environmental impacts	





7.7.2 Infrastructure

Infrastructure is a key part of urban development. Urban land use activities rely on infrastructure to connect dwellings and businesses, provide electricity, telecommunications and water, and remove waste. Social infrastructure is an important part of this, as discussed in Section 7.3.2. Transport is discussed separately above as it is a particularly significant challenge for Greater Christchurch (Section 7.7.1).

The earthquakes damaged or destroyed a significant proportion of horizontal infrastructure, roads and pipes in Greater Christchurch. Their wide-ranging effects included a lack of basic services for many people and businesses directly after the earthquakes, as well as effects on the natural environment, such as wastewater being discharged directly into rivers.

Responses to the earthquakes focused initially on reconnecting critical infrastructure services. Orion worked to quickly reconnect the electricity network. The Stronger Christchurch Infrastructure Rebuild Team was established as a partnership between local and central government to rebuild the earthquake-damaged infrastructure in Christchurch. Longer-term responses focused on the need to consider infrastructure development along with land use decisions for earthquake recovery. The LURP aimed for servicing of land for housing and business to keep pace with anticipated demand. A key aspect of CRPS policies is to integrate land use and infrastructure.

Key challenges and opportunities for Greater Christchurch now relate to reducing costs associated with infrastructure provision, use, upgrades and maintenance. It is vital to have certainty for future land use decisions and a common understanding and plan for urban growth so that infrastructure can be aligned, and funding planned with confidence. The Strategy aims to provide that certainty for the future through actions to investigate and plan for growth after 2028.

Expenditure on infrastructure can be reduced if infrastructure providers within Greater Christchurch collaborate more. Benefits could also come from investigating, implementing and sharing experiences with new technologies, and responding in consistent ways to changing legislation and regulation. These can be achieved through the closer ongoing ties between the strategy partners.

Earthquake damage to infrastructure in Christchurch – by the numbers:

- 300 km of sewer pipes damaged;
- 895 km of roads damaged;
- 124 km of water mains damaged; and
- over 50,000 individual road faults.

Glossary

Affordable housing

There is currently no nationally agreed definition of affordable housing. A common definition is that housing is affordable when a household spends no more than 30 percent of its gross income on housing costs, whether for rent or mortgage.

'Affordable housing' is sometimes used to mean lower-priced market housing or subsidised housing.

Christchurch central city

Area within the five avenues – Bealey, Fitzgerald, Moorhouse, Deans and Harper Avenues (including Hagley Park).

Community

People living in a particular area or who are considered to be a group because of their common interests, social group, or identity.

District or city plan

A plan developed to help territorial authorities to carry out their functions in order to achieve the purpose of the RMA.

Greater Christchurch

The eastern parts of Waimakariri and Selwyn Districts and the urban and some rural areas of Christchurch City including Lyttelton Harbour/Whakaraupō (Figure 1).

Greenfield land

Land at the urban edge, currently used for rural activities, that has been identified for future urban residential or business development.

Infrastructure

The facilities, services and installations needed for a community or society to function. Examples are transport and communications systems, water and power reticulation, community facilities such as halls, swimming pools and libraries, and public institutions including schools, post offices and fire stations.

Intensification

An increase in the number of places for people to live on the same piece of land.

Key activity centres

Existing and proposed commercial centres identified as focal points for employment, community activities and the transport network; and that are suitable for more intensive mixed-use development.

The centres shown on Map A (Figure 6) are the existing key activity centres in Greater Christchurch: Papanui, Shirley, Linwood, New Brighton, Belfast, Riccarton, Halswell, Spreydon, Hornby, Kaiapoi, Rangiora, Woodend/Pegasus, Lincoln and Rolleston.

Mahinga kai

The customary gathering of food and other natural materials, and the places where those resources are gathered (Ngāi Tahu Claims Settlement Act 1998, s. 167).

Mana whenua

Customary authority exercised by an iwi or hapū over land and other taonga within the tribal rohe. (Parliamentary Commissioner for the Environment, 1992).



Mixed-use development

Development that includes a range of activities, such as retail, commercial and residential, and that fosters a more integrated community.

Ngā Mātā Waka

Māori living in Greater Christchurch who do not identify as Ngāi Tahu.

Ngāi Tahu

The collective of the individuals who descend from the primary hapū of Waitaha, Ngāti Māmoē and Ngāi Tahu, namely Kāti Kurī, Kāti Irakehu, Kāti Huirapa, Ngāi Tūāhuriri and Kāi Te Ruahikihiki (Ngāi Tahu Claims Settlement Act 1998, Section 9).

Proposed Change 1 (PC1)

Proposed Change 1 to the Canterbury Regional Policy Statement was a framework proposed before the earthquakes for managing future urban growth in Greater Christchurch.

Recovery Strategy

Recovery Strategy for Greater Christchurch: Mahere Haumanutanga o Waitaha; prepared under the CER Act by CERA, a statutory document that sets out the principles, priorities, vision and goals for the recovery.

Residential density

A measure of the number of dwelling units per hectare.

Residential red zone

An area of residential land that suffered severe land damage due to the Canterbury earthquake sequence, and where a Crown offer was made to owners of properties to buy those properties.

Strategic infrastructure

Facilities, services and installations that are of importance beyond a local area and that sustain the community; includes horizontal infrastructure, transport networks, seaport, airport, railway, defence facilities, telecommunication facilities and electricity transmission network.

Stronger Christchurch Infrastructure Rebuild Team

This comprises owner participant partners CERA, NZTA and CCC, and non-owner participant partners Fulton Hogan, Downer Construction, Fletcher Construction, MacDow New Zealand and City Care.

Te Rūnanga o Ngāi Tahu

The body corporate known as Te Rūnanga o Ngāi Tahu established by section 6 of Te Rūnanga o Ngāi Tahu Act 1996.

Territorial authority

In Greater Christchurch, the territorial authorities are Christchurch City, Selwyn District and Waimakariri District Councils.

Abbreviations

100RC

100 Resilient Cities Network

CCC

Christchurch City Council

CDHB

Canterbury District Health Board

CER Act

Canterbury Earthquake Recovery Act 2011

CERA

Canterbury Earthquake Recovery Authority

CRPS

Canterbury Regional Policy Statement

DPMC

Department of the Prime Minister and Cabinet

ECan

Environment Canterbury

LURP

Land Use Recovery Plan

MBIE

Ministry of Business, Innovation and Employment

NZTA

New Zealand Transport Agency

PC1

Proposed Change 1

RMA

Resource Management Act 1991

SDC

Selwyn District Council

UDRMG

Urban Development Strategy and Recovery Management Group

UDS

Urban Development Strategy

UDSIC

Urban Development Strategy Implementation Committee

WDC

Waimakariri District Council



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Useful links

The following documents can be found on the Greater Christchurch website:

www.greaterchristchurch.org.nz

- Greater Christchurch Urban Development Strategy 2007
- Greater Christchurch Urban Development Strategy Updated Action Plan 2010
- Greater Christchurch Transport Statement
- Greater Christchurch Freight Study
- A range of background and supporting documents

The following documents can be found on the CERA archive website:

<http://ceraarchive.dpmc.govt.nz/>

- Canterbury Wellbeing Index
- Christchurch Central Recovery Plan: Te Mahere 'Maraka Ōtautahi'
- Community in Mind: Hei Puāwai Waitaha – a flourishing Waitaha
- Economic Recovery Programme for Greater Christchurch: Te Whakaara Tahua
- Land Use Recovery Plan: Te Mahere Whakahaumanu Tāone
- Lyttelton Port Recovery Plan: Te Mahere Whakarauora i te Pūaha o Ōhinehou
- Recovery Strategy for Greater Christchurch: Mahere Haumanutanga o Waitaha

The following documents can be found on the Environment Canterbury website:

www.ecan.govt.nz

- Canterbury Regional Land Transport Plan
- Canterbury Regional Public Transport Plan
- Canterbury Regional Policy Statement
- Canterbury Water Management Strategy
- Natural Environment Recovery Programme for Greater Christchurch: Whakaara Taiao

Christchurch Central Streets & Spaces Design Guide: Ngā Huanui me Wāhi, Ārahi Hoahoa

<http://resources.ccc.govt.nz/files/StreetsAndSpacesDesignGuideJune2015.pdf>

Christchurch City Health and Wellbeing Profile

www.healthychristchurch.org.nz/media/44655/chch_city_health_profile_2012.pdf

Te Kōwatawata: The Dawn of a New City

www.ngaitahu.iwi.nz/leadership/te-kowatawata/

Mahaanui Iwi Management Plan

www.mkt.co.nz/mahaanui-iwi-management-plan/

Directions for Education Renewal in Greater Christchurch: Shaping Education: Te Tāreinga Mātauranga

www.shapingeducation.govt.nz

Sport and Recreation Recovery Programme

www.sportcanterbury.org.nz/spacesplacespeople/



*He muka harakeke, he whītau tangata.
The harakeke is woven with the human strand
– binding people and places together.*