

## *Original Paper*

# The New Zealand Experience of a Design-Led Approach to Post-Earthquake Recovery in Christchurch

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### ***Abstract***

*This paper evaluates the masterplan for Christchurch which was conceived in the wake of the 2011 earthquakes, against projects completed in the intervening 8 years, paying special attention to three key objectives of the blueprint: a low-rise/compact core, a green city, and an accessible city. The paper finds that the design-led, top down, recovery approach forms a minimal framework for recovery, and that successful regeneration following the recovery phase will require significant community engagement and coherent governance.*

### ***Keywords***

*post-earthquake recovery, urban regeneration, spatial planning, community participation, disaster governance*

## **1. An Introduction to the Story of Planning in Post-earthquake Christchurch**

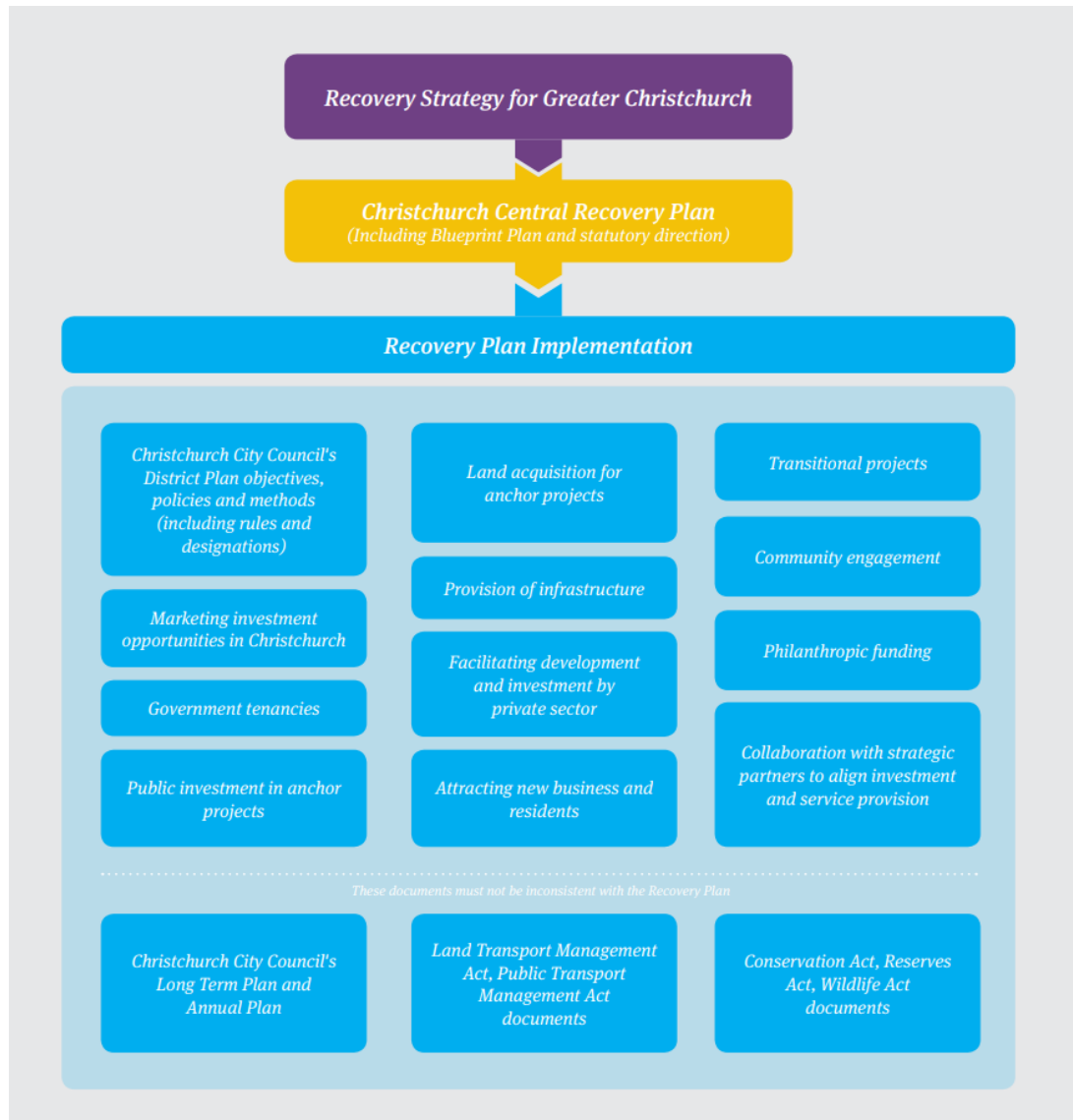
Christchurch, in New Zealand's South Island, is a city located in the province of Canterbury on large flat alluvial plains. It is characterised by its mountainous surrounds. It is the country's second largest city (See Figure 1).



**Figure 1. Location of New Zealand and Christchurch**

The narrative of the city of Christchurch was instantly and irreversibly changed on 22 February 2011 when a magnitude 6.3 earthquake caused significant damage to the city. In addition to the 185 lives lost and 7000 injured (The Greater Christchurch Partnership, 2016). As authorities proceeded to demolish 80% of the CBD and 20,000 people abandoned their city (ibid.), the opportunity arose to rethink the urban future of Christchurch and redesign the city's inner core. This manifest itself as a design-led approach to growth driven by national and local government agencies.

The Canterbury Earthquake Recovery Authority (CERA) and a Central City Development Unit (CCDU) was established by central government. These agencies were charged with the delivery of a design-led central city masterplan that embedded "best practice" (Note) (CERA 2013) for the 21st century and beyond. The vision for the central city was underpinned by the Recovery Strategy for Greater Christchurch (RSGC) and set out in the Christchurch Central Recovery Plan (CCRP) (Christchurch City Council, 2011; CERA, 2012a), a statutory plan mandated by the Canterbury Earthquake Recovery Act 2011. These documents were supported by a range of associated agreements and implementation strategies and policies, of both national and regional significance (See Figure 2).



**Figure 2. Diagram Showing the Relationships between the Recovery Strategy and Policy for Post-Earthquake Christchurch and the Additional Components of Plan Implementation (CERA, 2012a) (p. 7)**

The RSGC set out a vision for the rebuild; a Christchurch that was “a place to be proud of—an attractive and vibrant place to live, work, visit and invest” (CERA, 2012b, p. 8). To achieve this vision included the need “to address and promote social, economic, cultural and environmental wellbeing” (CERA, 2012b, p. 12) and the delivery of built environment outcomes to support overall community wellbeing; combined, these aspects of the vision were known as the six components of recovery (See Figure 3). These priorities included a focus on enabling people to access support, providing options for temporary or replacement housing, and “repairing and maintaining essential services to all homes and businesses until major infrastructure is completed and/or land use decisions are finalised and implemented” (CERA, 2012b, p.

12). Other priorities included creating favourable investment conditions to support the rebuild, creating operational efficiencies by coordinating work across the government, iwi (Indigenous New Zealand tribes), and private sectors and addressing land supply issues “through efficient consenting processes and timely provision, restoration or optimisation of infrastructure” (CERA, 2012b, p. 12). Engagement with communities was also listed as a priority and sat at the centre of the RSGC (CERA, 2012b, p. 12).



**Figure 3. “Components of Recovery”: Six Priority Areas for the Rebuild and Recovery of Christchurch (CERA, 2012b: p. 8)**

The recovery strategy for the built environment, in particular, was premised on the need to “develop resilient, cost effective, accessible and integrated infrastructure, buildings, housing and transport networks” (CERA, 2012b, p. 11). The RSGC acknowledged that this would require coordinating and prioritising infrastructure investment, supporting innovative urban strategy, design and delivery processes, and prioritising the delivery of a variety of affordable housing options that were

well-connected to urban amenities to help ensure the social resilience of Christchurch (CERA, 2012b, p. 11).

It followed that the CCRP included a new spatial plan for the rebuild of the central city and was designed to deliver on the priorities outlined in the RSGC (CERA, 2012a). At a high level the CCRP objectives, which also drew upon the *Share an Idea* community engagement campaign run by Christchurch City Council, were therefore intended to reflect aspirations for a more compact, green, vibrant and prosperous city. The objectives were represented by ten design principles:

- **Compress:** compress the expected development to intensify the core
- **Contain:** contain the city core in the east and south within new open space.
- **Catalyse:** position Anchor Projects where they will catalyse development.
- **Support:** locate Anchor Projects where existing amenity supports their success.
- **Repair:** focus on repairing the areas that need the most assistance to redevelop.
- **Embrace the river:** respond to the river corridor as a high amenity space.
- **Open space:** insert new and improve existing open space within new built form.
- **Complete:** complete parts of the city core as expediently as possible.
- **Existing value:** re-use existing building elements to provide continuity with the past.
- **Attract:** encourage people to live, work and play in the city again (CERA, 2012a, pp. 31-32)

The spatial framework - commonly referred to as the Blueprint Plan - provided a guide to the urban form and structure of the future Central City (See Figure 4). The intention was to create a new low-rise, green and accessible city which was informed by the 19th century plan with its permeable grid, laneways and variety of urban parks and squares. The Blueprint Plan had a clear physical layout to guide the creation of a new urban quarters and was enabled through enacting bespoke planning frameworks. The city was to have a compact core, framed by the south and east frames (a mixture of housing, campus style innovation and urban landscaping projects) and the north frame or Avon River Precinct (New Zealand's largest urban landscaping project).

Within "the core" of the Central City, The Blueprint also defined the location of nine "anchor projects" which were a series of social infrastructure projects, sport and recreation, civic, culture and arts, health and retail precincts, expected to catalyse investment (CERA, 2012a, p. 37). The themed precincts and urban development projects were supported by a new transport system (CERA, 2013). This became known as the Accessible City Programme and required a subsequent chapter of the CCRP to be developed. The Accessible City Programme prioritised walking, cycling and public transport over motor vehicle access in the central core, by including cycleways, bus lanes, shared spaces and lowering the speed limit to 30 kilometres per hour, to be further reduced over time (See Figure 4). Opportunities for smart cities and Crime Prevention Through Environmental Design (CPTED) principles were also considered.

A specific residential addendum to the CCRP was also added to the plan in 2015, outlining the strategy for housing in the central city. The importance of inner city living to the vitality and functioning of the

central city was recognised in the CCRP; it was anticipated that more detailed information would be required after a review of the central city Living Zones in the District Plan was carried out by Christchurch City Council. The Residential Chapter provides this detail: it puts forward a vision and objectives for central city living, along with several initiatives to stimulate the development of housing and communities and in this way help central Christchurch to recover and thrive (CERA, 2015). The residential addendum, named A Liveable City, contained changes to the residential provisions for the central city, previously outlined in Christchurch City Council’s District Plan. The vision for inner city housing presented was that: “the centre of Christchurch will be a highly desirable place to live for people who seek an urban lifestyle. Quality housing of different sizes and types will be home to thriving communities that are engaged with the life of the central city” (CERA, 2015, p. 5).

### Central City road use hierarchy and anchor projects

*An Accessible City* sets the direction and intent of the transport projects for the Central City. The new road classification, transport (speed) zones and road use hierarchy provide the framework for how the streets will be designed and operated.

- 1** Te Papa Ōtākaro / Avon River Precinct
- 2** Retail Precinct
- 3** Convention Centre
- 4** Health Precinct
- 5** Justice and Emergency Precinct
- 6** Performing Arts Precinct
- 7** Central Library
- 8** Metro Sports Facility
- 9** Town Hall

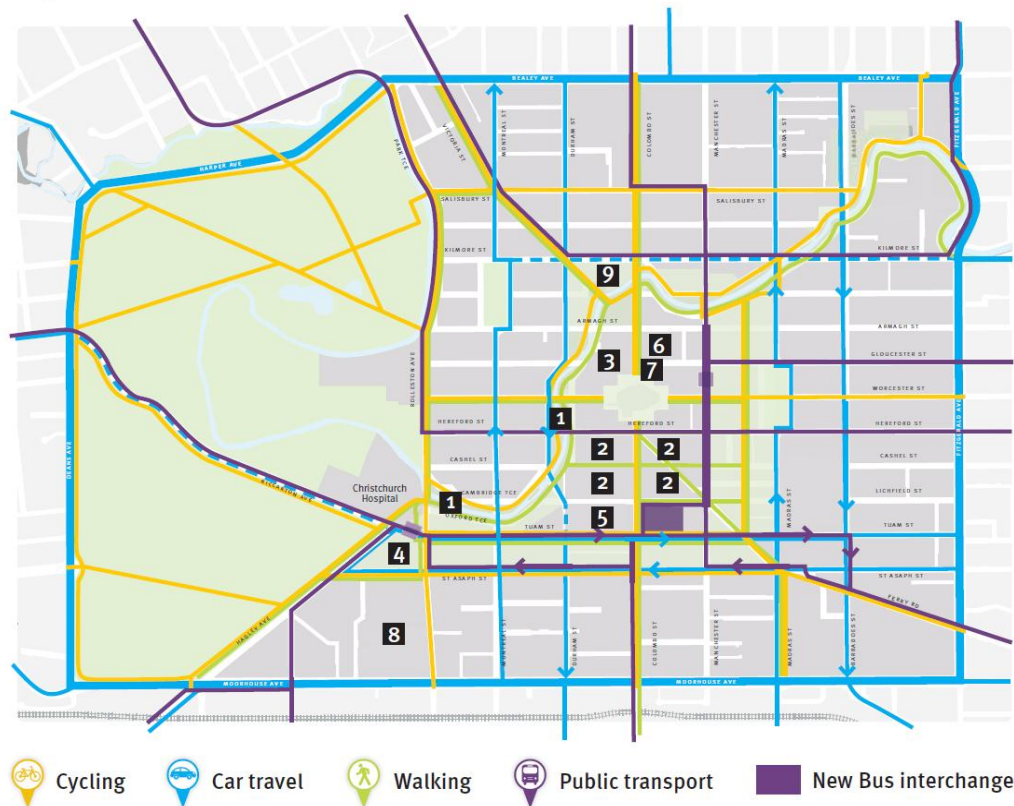


Diagram shows prioritised routes for different travel modes.  
Source: Christchurch Central Recovery Plan – An Accessible City page 4.

**Figure 4. The Blueprint Plan and the Relationship between the Road User Hierarchy and the Nine Anchor Projects (CERA, 2013)**

While the CCRP itself did not have a specific monitoring framework, monitoring indicators for the rebuild and recovery were mandated in the RSGC (CERA, 2012b, p. 17). These indicators were to be used to determine progress towards the six components of recovery (See Figure 3: the community, social, cultural, environmental, financial and built aspects of Christchurch). This research therefore explores how well the three defining objectives and key characteristics of the Blueprint Plan (a compact core, a green city, an accessible city) have been achieved by comparing the proposed scope for the precincts to the eventual scope and delivery of these precincts. The assessment of the projects will utilise the assessment themes identified in the 2018 Central City Momentum Review undertaken by Regenerate Christchurch—the agency established to lead the ongoing regeneration planning of Christchurch for the five years following the disestablishment of CERA in 2017. The themes include the city economy; development and delivery programmes; social recovery; ecological and environmental sustainability; and culture and heritage. The scope of these themes is outlined in the table below (See Figure 5).

WHAT DOES SUCCESS LOOK LIKE?	WHERE ARE WE AT?
THE ECONOMY	
<ol style="list-style-type: none"> <li>1. A vibrant, prosperous central city at the heart of a strong city and regional economy</li> <li>2. A central city that demonstrates a unique local identity that is relevant on a national and international scale</li> <li>3. A central city economy that leverages the City's traditional strengths and embraces the willingness to innovate and invest in pursuing new aspirations</li> <li>4. A central city that is accessible to all in offering the opportunity for employment and higher life-time incomes</li> </ol>	
DELIVERY AND DEVELOPMENT	
<ol style="list-style-type: none"> <li>1. A compact city centre creating denser patterns of economic activity</li> <li>2. A new city geography creating defined areas of business, activation and participation</li> <li>3. The facilities and amenities required to be a regionally, nationally and internationally relevant and competitive city</li> <li>4. Sufficient confidence in the future of the city for the private sector to continue to invest in and around the central city</li> <li>5. Attract and compete for talent</li> </ol>	
PEOPLE AND PLACE	
<ol style="list-style-type: none"> <li>1. Participation by locals, workers, students and tourists at levels that create a virtuous circle of attraction</li> <li>2. A place of arts, culture, festivals, entertainment and discovery; a great place to enjoy day and night</li> <li>3. A city for all people and cultures including incorporation of Ngāi Tahu values, aspirations and narratives; a hub for ethnic diversity</li> <li>4. A place where cultural revitalisation is a catalyst for urban regeneration; a hub for the creative economy</li> </ol>	
ENVIRONMENT AND ECOLOGY	
<ol style="list-style-type: none"> <li>1. A central city that is embracing a new environmental footprint and responding to the social, cultural, economic and environmental challenges and opportunities presented by climate change</li> <li>2. Demonstrable integration of the green economy by the public and private sector in choosing their development paths in the central city</li> <li>3. A central city that embraces the river with a high amenity space and a restored habitat</li> <li>4. New and improved existing green space as well as relative accessibility by residents and visitors</li> </ol>	
LIVING IN THE CENTRAL CITY	
<p>A central city resident population of between 12,000 and 24,000 people</p> <ol style="list-style-type: none"> <li>1. A diverse range of residential opportunities in the central city to support a wide range of economic activity</li> <li>2. A public sector delivery, planning and policy framework that favours Central City development over inner city or suburban infill</li> </ol>	

**Figure 5. Regeneration Themes, as Identified in the 2018 Central City Momentum Review (Regenerate Christchurch, 2018, p. 5)**

The Central City Momentum Review, undertaken in 2018 has been the most significant review of progress as the city transitioned out of the rebuild and recovery phases post-earthquake and towards an ongoing regeneration programme to continue to try and draw people back to the city. While monitoring and reporting had been occurring via the Department of Prime Minister and Cabinet (the government department responsible for ensuring the delivery of the portfolio), there was not a comprehensive assessment framework established to monitor and report against. The Central City Momentum Review, therefore, first established a framework for measuring progress, which included using a combination of qualitative and quantitative indicators within each of the five categories (See Figure 5) to assess how well each has been achieved thus far.

In summary, this review identified that while some of the initial objectives had been achieved, the city was only part way through its long-term regeneration process and many of the benefits expected in the original recovery plan had not yet been realised. This paper evaluates the design-led approach to recovery, and highlights the importance of having:

- all stakeholders committed to delivering a single vision—including national and local government and planning authorities, iwi as well as the wider community, and the private sector,
- clear governance and implementation mechanisms to deliver the vision, and
- a long-term view of regeneration with a clear understanding of the relationships between investment returns and the timescales required to deliver substantial socio-spatial outcomes.

The key research question that emerged was therefore: how well did the Christchurch recovery perform, relative to the parameters set by the governance agendas in the Recovery Strategy for Greater Christchurch and the Christchurch Central Recovery Plan?

## **2. A Design-Led Response to Recovery: A Review of the Literature**

In order to effectively assess this design-led recovery response in Christchurch and how its evolution has translated to the redevelopment of the city centre, it is fundamental to first contextualise this within the relationship between design-led recovery and community engagement. This will be done broadly in this section by identifying why design-led processes are often pursued in post-disaster recovery and the role that the local community play in this process.

Ozcevik et al. (2009) identify the lack of comprehensive planning before, during and after a disaster as the cause of the stagnation of recovery efforts. Unfortunately, there is often little consensus on what the best practice approach to these planning initiatives is, particularly during the recovery phase, which is often inefficient and poorly managed (Mannakkaram & Wilkinson, 2014). As cities are becoming increasingly bureaucratized, governing bodies are tending to pursue a technocratic approach to recovery, often utilising the aftermath of a disaster to implement comprehensive urban renewal projects (Campanella, 2006; Dionisio & Pawson, 2016). This approach to recovery imposes design-led, top-down solutions, including comprehensive spatial plans that enforce a narrative of what should and will happen.



This can range from particular activities and land uses, to the location of flagship projects and civic spaces, often bundled with global city marketing campaigns and efforts to stimulate local economic development (Boyle et al., 2018; Bell & Jayne, 2003).

Dionisio and Pawson (2016) argue that, despite having many limitations, a top-down approach to post-disaster recovery and subsequent regeneration can be beneficial. Bell and Janey (2003) and Park and Sohn (2013) identify that design-led interventions of this nature are perceived to contribute to all cultural, social and economic spheres, helping reshape and improve the future development of the city. They suggest that this results in a higher quality and more responsive urban environment, improved housing standards and greater accessibility to facilities and amenities. Ultimately, it is argued that because of this, a design-led approach can lead to improved liveability and wellbeing outcomes for residents (Park & Sohn, 2013). Using the example of recovery efforts following the 2011 North-Eastern Japan earthquake and tsunami, Dionisio and Pawson (2016) explain that it was because of a top-down approach from the Japanese government that infrastructure in affected cities was efficiency restored to a highly engineered standard.

However, Campanella (2006) cautions, that cities extend far beyond their built form, and imposing post-disaster recovery initiatives without the support of the local population is extremely challenging and often problematic. This is a notion emphasised by Dionisio and Pawson (2016), establishing that despite the undeniable benefits of a design-led approach, the role of local knowledge and grassroots community involvement cannot be overlooked. As Fischler (2000) discusses, growing inequity and inaccessibility to participation can skew the representation of “community”, thereby not truly engaging with community needs.

Social capital sits at the heart of a city’s resilience and its capacity to recover following disaster (Campanella, 2006; Contardo, Boano, & Wirsching, 2018) and the involvement of the community in recovery initiatives is proportionate to the level of buy in for recovery plans. Planners must therefore actively engage in dialogue with grassroots movements and engage with their initiatives in order to facilitate new ideas and validate recovery outcomes (Boyle et al., 2018; Cretney, 2015; Oliver et al., 2014).

In a “Shrinking Cities” context—the phenomenon of depopulating urban areas (Cunningham-Sabot et al., 2013)—Hollander et al. (2009) comment that a common planning response has been the establishment of economic development strategies to try and combat the decline and catalyze growth. They go on to argue that this conventional approach has failed; instead arguing for the value of “rethinking decline” to provide a non-economic view to respond to depopulation. In considering the literature it became evident that a response that considered the cultural, social, economic, and environmental alongside the spatial in an integrated way was fundamental to addressing the post-disaster recovery of Christchurch.

### 3. CCRP Momentum Review Framework: A Methodology for Considering Progress

Using Christchurch as a case study city, this research was able to explore how three key objectives of the city's post-earthquake Blueprint Plan (a low-rise/compact core, a green city, and an accessible city) have been achieved by comparing the proposed scope for the anchor projects to the eventual scope and delivery of these projects and precincts.

The methodology adopted in this paper uses the criteria established in the recent Central City Momentum Review, including a consideration of how the city economy; development and delivery programmes; social recovery; ecological and environmental sustainability; and culture and heritage are being addressed by the central city anchor projects. These projects are therefore collectively discussed throughout and used as examples to demonstrate how well various aspects of the CCRP have been delivered.

For the purposes of tracking progress against the CCRP objectives, given that the objectives are a mixture of tangible, intangible and perceptual goals, thresholds and targets, the assessment in this paper is largely a qualitative one. However, publicly available Cabinet Papers, media reports from the time and publications made subsequently, add additional evidence to the observations and discussions.

It is essential to understand that the CCRP objectives and community aspirations were much broader than just urban design outcomes, therefore a review that considers the state of recovery must also consider the city economy; development and delivery programmes; social recovery; environmental and ecological sustainability and culture and heritage. Given the context of post disaster recovery strategy and planning—namely, the speed at which it was delivered, and the lack of clear mandates, roles and responsibilities between the local and central government agencies involved - there remained existing policies and plans that came into conflict with those of the new recovery planning framework outlined in the CCRP. The assessment will therefore use a consolidation of the objectives from each of these policies and plans identified in the Current State Assessment of the Momentum Review.

### 4. The Results of the Blueprint Plan and a Discussion of Progress

The Blueprint Plan developed to guide the recovery of the Christchurch city centre was grounded in the research that Christchurch City Council had previously undertaken with Jan Gehl to develop Project Central City—A City for People Action Plan (Gehl Architects, 2010; Llewelyn-Davies, 2000). It was also developed from Christchurch Council's community engagement campaign, *Share an Idea*, which was ideated prior to the earthquakes. This campaign was an acknowledgment that the central city was in need of assistance because, in the face of becoming a shrinking city, the uptake of residential dwellings in the inner-city needed to be encouraged. Christchurch City Council considered that "cities the size of Christchurch require 3% to 6% of their population to live in the central city to support a prosperous commercial and entertainment hub" (Christchurch City Council, 2019). Prior to the 2011 earthquake, the estimated population in the central city was 8280 people. This dropped to 5050 people by 2014. Since this time, the population of the central city has increased to an estimated 6160 people. At 1.6% of the

overall city's population, this remains at half or less the 3% to 6% target of 11,000 and 23,000 people (Christchurch City Council, 2019). Therefore, even before the earthquakes, revitalising the centre of Christchurch to have a stronger regional focus for commerce and entertainment was widely recognised. Progress towards this goal was being made gradually, but the earthquakes set it back significantly and triggered the recovery agenda because key central city amenities were destroyed by the earthquakes.

The *Share an Idea* campaign was organised around four key themes: move (transportation), market (business), space (public place and recreation) and life (mixed uses). Over a six-week period, the campaign drew together more than 100,000 ideas. Subsequently, these were used to broadly develop a shared vision for Christchurch and inform the development of the Draft Central City Plan (DCCP) (Nicholson & Wykes, 2012). Arguably, public consultation and community engagement should be an iterative process resulting in an ongoing discussion as plans are developed. When the CCDU was established in 2011 to lead the recovery of the central city, the outputs of the *Share an Idea* campaign were absorbed by a design team, appointed by the government via its agent CERA, and merged with technical expertise in land economics, design, commercial, financial, social science and policy makers. Input from stakeholders was later added and the CCRP and the Blueprint Plan were created. This process was done in 100 days and required significant trade-offs to be made between the varying perspectives of stakeholders, and the result from this agglomeration of thinking was a CCRP that aimed to create a more compact, green, vibrant and prosperous city (CERA, 2012a; Bennett et al., 2012; Bennett et al., 2014). The three core aspects originally identified in the DCCP and the Share and Idea campaign, however, remained: a compact, green and accessible city (Christchurch City Council, 2011). A discussion about each of the three key aspects of the DCCP are drawn out and together in the sections below. The discussion will touch on each of the themes identified in the Central City Momentum Review, and key observations will be made by drawing on specific examples from within the programme of anchor projects that were identified in the CCRP.

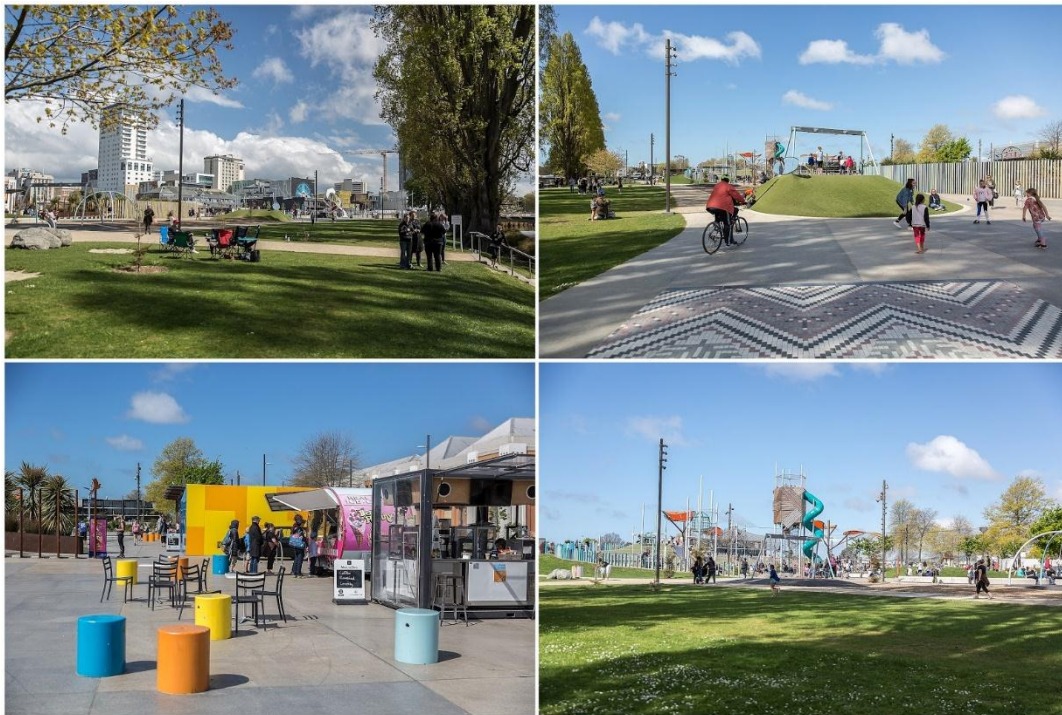
#### *4.1 Theme 1: Compact and Low-rise City*

Both the original DCCP, under development at the time of the earthquake, and the CCRP were developed on the premise of prioritising a more mixed-use compact low-rise city core and the desire to increase inner city resident numbers. The central city was grouped into precincts, with key "anchor" projects to be delivered and seed funded by government. These included an innovation precinct, a performing arts precinct, a retail precinct, a new central library and convention centre, a sports stadium, a metro sports hub, and a bus exchange. These were designed to be connected by a multi-modal accessibility programme, creating a network of transport options and public spaces. In particular, the CCRP adopted an interventionist approach to recovery by establishing a "green frame" for the city. This reinstated the green belt originally proposed in 1850 (Bowring, 2014) and required the compulsory acquisition of land surrounding the core of the city.

The success of this strategy requires reflection and debate due to the long delays, in some cases, of delivering the anchor projects and the slow return on investment made in creating a low-rise compact

city. The East Frame, for example, was intended as a residential frame for the city, with a significant amount of public space amenity as well. A contract was enacted to deliver more than 900 apartments in this zone of the city with a north-south linear park, approximately 30 metres wide, to be delivered through the centre. Now eight years on, only a small percentage of this development is complete and there have been notable difficulties in selling the housing stock that has been delivered. A contributing factor to this was the lack of a clear housing strategy that developed an evidence-base for identifying future demand and appropriate tenure and typology options at appropriate price points (Allen & O'Donnell, 2019).

While the housing has not been delivered in the way originally envisaged in the Blueprint, a significant public realm initiative was delivered in the form of a playground at the northern end of the East Frame. This project was funded by the Crown and the local council and has been a notable success. It is frequently activated and used by all ages and particularly by families with young children, pre and early teens (see Figure 6). Side by side, the housing and playground projects exemplify the varied nature of success in Christchurch, with some projects being successfully delivered and others not yet being realised.



**Figure 6. Images of Margaret Mahy Family Playground Named after New Zealand's Famous Children's Writer (Supplied by the authors)**

In addition to issues experienced in the East Frame, the extent of the South Frame became less than originally envisaged in the Blueprint. This area was designated as a low-rise campus-style mixed use precinct to redesignate this edge of the city as an area for young businesses and creatives to thrive. The

reduction in size and scope of this project was in large part due to increasing land costs and resistance from landowners in the area to the acquiring of their land holdings. However, a network of public laneways have been created, and much of the innovation precinct that abuts the southern laneways has been completed. The health precinct at the opposing end however has been slow to eventuate, with a complex group of stakeholders contributing to the challenges for the precinct. Public funding was not allocated to specific projects in the South Precinct, other than for public realm and open space development. Government organisations and educational institutes have also not engaged as they would have needed to in order to deliver on the vision set out in the Blueprint. Eight years after the earthquake and, while there are now several private developments that have been completed within the precinct area, the lack of a comprehensive health precinct is indicative of areas in which the compact core goal has been underachieved.

The Spatial Frames surrounding the central city projects have not been successful in containing the Core. Significant development has occurred outside the core, in particular along Victoria Street (a main arterial outside of the core). As a result, improved economic density across the city has not yet been achieved and Christchurch remains a sparsely populated city.

An example of the compact city approach which has been more successful than others in Christchurch is the Justice Precinct. This area co-located Justice, Police, Corrections, Fire Service, St John Ambulance and national and local Civil Defence agencies in to one area of the city. This has resulted in public service efficiencies due to reduced property and administration costs. The sharing of a communications and emergency operations centre, for example, in turn facilitates a more easily coordinated emergency response across sectors.

In terms of the height restriction and the desire to create a low-rise city, as well as a compact one, there are a few aspects to note. In the immediate aftermath of the earthquake, when much of the planning took place, a strong public resistance to tall buildings emerged in response to the highly visible building failures and the ever-present urban search and rescue activity. The result was a reduction in height limits to 28 metres or seven storeys (the same height as Washington DC) (See Figure 7). This height was identified to ensure a level of development that is human-scale.

In addition to the issues of public perception, the economic impact studies undertaken, identified that the geotechnical conditions in central Christchurch did not lend themselves favourably to building six- to eight-storeys, without requiring a more expensive structural system. This made six- to eight-storeys the optimal return on construction investment choice (Regenerate Christchurch, 2018). In addition, it was also thought that the demand for office space in central Christchurch could be accommodated with an even spread of 28 metre buildings across the central business district or in a small number of towers. In the 2018 Central City Momentum Review the discrepancy between the amount of office space that had been tenanted and the projected office demand study that had informed the plan indicated that 20.4% of stock was still vacant (Regenerate Christchurch, 2018). This resulted in low rental returns

(approximately \$300/m<sup>2</sup> for A grade space) and created feasibility issues for delivering any further office space in line with the Blueprint (Regenerate Christchurch, 2018).



**Figure 7. Proposed Low-Rise City in Draft Central City Plan (Christchurch City Council, 2011)**

Probably the most significant private sector investment to date has been in the Retail Precinct. This cluster of retail development was delivered by the private market but was in keeping with the minimum land area requirements set out in Outline Development Plans (a mechanism to deliver the Blueprint). The intention was to ensure comprehensive development across Precincts instead of a piecemeal approach where individual sites could be developed in isolation. The regulatory requirement to have a minimum area within an Outline Development Plan was perhaps one of the most successful design-led interventions. Instead of taking the delivery lead and funding the replacement of retail infrastructure, as was the approach with many of the other projects (the Convention Centre, Performing Arts Precinct, Metro Sports Facility and Stadium), this planning mechanism gave some certainty of outcome and enabled participation in the rebuild by the private sector. The completed Retail Precinct has struggled to draw shoppers back to the central city after eight years of retail dominance by suburban malls which were largely unaffected by the earthquake. What this demonstrates is that the provision of the right size and scale of infrastructure alone cannot ensure a compact core. While low-rise can be guaranteed, the presence of people (both workers and residents) is essential to achieve desired design-led outcomes of a compact core.

One initiative that was successful in attracting people back to the city included the facilitation of fifteen government agencies and 1,700 staff to relocate into four CBD buildings as part of the Christchurch Integrated Government Accommodation Programme (Regenerate Christchurch, 2018). The government offices are located in close proximity to the Retail Precinct, the bus interchange and other central city facilities. Guaranteed government tenancies ensured the feasibility of rebuilding these buildings by the private sector.

These examples raise questions about the role that design-led approaches to recovery have in altering the economic geography of cities alongside the spatial changes being made to the physical built-form. In turn, social geographies also become fluid and are directly influenced by design led approaches and outcomes. The DCCP adopted an integrated approach to recovery which incorporated a wide range of

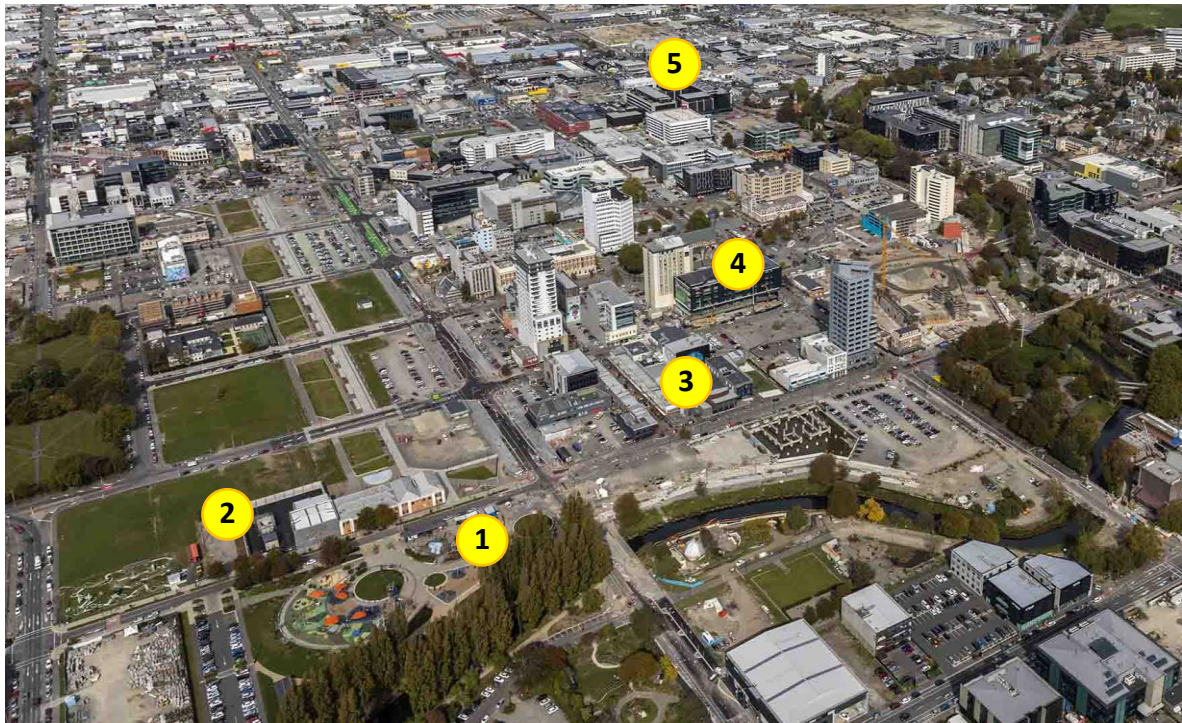


projects and implementation tools. The vision balanced incentives and regulations to deliver major catalyst and public space projects, alongside housing, arts and transport projects. The CCRP focused more deliberately on national government priorities and providing a regulated vision for rebuilding critical public and economic infrastructure, such as the hospital and convention centre. Both planning documents have positives and the rationale behind the various design-led interventions is clear; to catalyse private sector investment and create a shift from low-wage to high-wage economy. Why then is the central city not thriving economically? Is it because a design-led approach, premised on fulfilling the ambitions of government and Council, cannot succeed unless there is also buy-in from the private sector and, most importantly, residents?

The impact of not delivering the core social infrastructure assets such as the Metro Sports Facility, Multi Use Arena and the Convention Centre within the timeframes originally projected by the CCRP has undermined both the economic benefits and “social participation” anticipated by the CCRP. Delays to these publicly funded projects have also created follow-on uncertainty among the private sector and wider community as to the ongoing commitment of the public sector to the recovery and regeneration. The recent progress in relation to the Metro Sports Facility, Convention Centre and Multi Use Arena are important in providing confidence that the public sector will follow through on the commitments set out in the CCRP in 2012 (Regenerate Christchurch, 2018). However, there is still some way to go before the compact core is the thriving economic metropolis of the South Island, as was envisaged by the various plans (See Figures 8 and 9).



**Figure 8. Christchurch Central Business District Demolition (2013) and Redevelopment (2018)**  
(Source: National Business Review)



- 1) Margaret Mahy Playground
- 2) East Frame (residential precinct)
- 3) Performing Arts Precinct
- 4) Library
- 5) Justice Precinct

**Figure 9. Christchurch Central Business District Demolition (2013) and Redevelopment (2018)**  
(Source: Christchurch City Council)

These examples and the figures above point to the idea that, despite the intent of the CCRP, Christchurch remains a dispersed city without a sufficiently dense urban core. There is a significant lack of central city residents, and without people living in the central city, the desire for a compact core will not be achieved (Christchurch City Council, 2019).

#### *4.2 Theme 2: Green City*

The CCRP was aspirational in terms of improving environmental performance for the central city. The intention was to lift environmental performance across a broad range of areas including:

- the amount of green spaces
- the quality of the river
- energy use, and
- production and transport (Christchurch City Council, 2011).

However, initiatives to deliver on these aspirations have been limited. Evidence-based measures to track performance were not established and largely remain unavailable for the central city. A coherent multimodal mobility strategy to network green spaces is lacking. There has been no incentive nor



regulation to drive open-space upgrades and green building approaches, resulting in low take-up across the board.

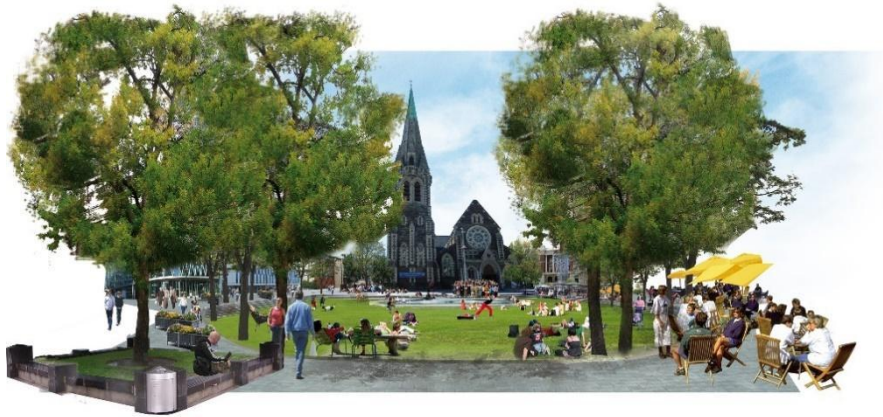
It was anticipated that Christchurch would become a greener city, with several opportunities emerging in the new plans, including an enhanced network of green open spaces, delivered through improved urban design outcomes. These were designed to be largely anchored by the Ōtākaro Avon River and Cathedral Square. The third major greening project was the public realm within the South and East Frames. The Spatial Frame works in the city are now nearing completion. The East Frame Public Realm is complete (the aforementioned Margaert Mahy playground), close to 80% of the planned works in the South Frame have been completed and the Avon River Precinct is on schedule to be finished by the end of the year (Regenerate Christchurch, 2018).

The Avon River creates an ecological and flood corridor between nearby development and the natural environment and is intended to form the spine of the central city. It meanders through the eastern suburbs of Christchurch to the sea. From a space that was originally lined with car parks, which the city turned its back on, the Ōtākaro Avon River has been recast as the primary public space in the city (See Figure 10). Significant improvements have been made with the new design, in partnership with local iwi (indigenous tribe) Ngāi Tahu, including the establishment of a river promenade, and extensive native riparian habitats.



**Figure 10. A Redeveloped Ōtākaro Avon River from the Draft Central City Plan (Christchurch City Council, 2011)**

Alongside the Avon River Precinct, the intention was that the greening of Cathedral Square would further improve the appeal of the city; however, this is still in the planning stages. A largely hard surfaced area, the Square remains only peppered with trees. Although feedback from the *Share an Idea* campaign was strongly in favour of creating a greener space in the centre of the city, there is still little evidence of a greener environment at the heart of the city (See Figure 11).



**Figure 11. A greener Cathedral Square from the Draft Central City Plan (Christchurch City Council, 2011)**

Another significant step that was achieved, however, was the implementation of a design manual that was created as part of the Christchurch Central Streets and Spaces Design Guide by the CCDU, that provided for completed streetscapes and additional laneways and pocket parks that are creating greener and thus more appealing central city spaces (Christchurch City Council, 2015) (See Figure 12).



**Figure 12. Greening of central city streets from Christchurch Central Streets and Spaces Design Guide 2015 (CERA, 2015)**

Despite the limited moves to embed improved environmental practices into the planning system and development planning processes, the opportunities presented by the green economy are substantial. Significant shifts in public policy and private sector behaviours have occurred since the CCRP, with environmental policies a key focus both at local and central government levels.

Therefore, achieving a green city was redefined in the Central City Momentum Review as a central city that:

- embraces a new environmental footprint and responding to current social, cultural economic and environmental challenges and opportunities,
- demonstrates integration of the green economy by the public and private sector in choosing their development paths in the central city
- embraces the river with a high amenity space and restored habitat and new and improved existing green space as well as relative accessibility by residents and visitors (Regenerate Christchurch, 2018).

As the garden city continues to embrace its green spaces, it will be a test of the next phase of regeneration to see whether the adoption of “greening initiatives” can extend past the inclusion of physical green space to a city that truly responds to the challenges of future growth and embraces green economies.

#### *4.3 Theme 3: Accessible City*

The CCRP always intended to enhance the accessibility of the city, with “accessible” being one of the key themes of the Plan. This concept was defined as a city that is easy to get around for all age groups, has excellent walking and cycling paths and high quality public transport (CERA, 2012a). It was acknowledged in the Plan that if Christchurch was to benefit fully from a revitalized central city it needed modern, efficient connections between people, businesses and civic facilities (CERA, 2012a). Connections are physical (footpaths, cycleways, public transport, public spaces such as laneways, and virtual (ultra-speed broadband and social networks). The CCRP included substantial commitment to improving the walking and cycling access by providing paths through each of the East and South Frames and providing an alternative cycling and walking network linking Ōtākaro Avon River and Hagley Park, however there is little evidence of the virtual connectedness.

The Accessible City chapter was added to the CCRP as an addendum and it included a range of tangible actions to improve the quality of central city streets, including slowing traffic to 30 km/h and improving pedestrian and cycling facilities. As part of these works there has been a focus on replacing more than 500 on-street car parks with wider footpaths, street trees and rain gardens (Regenerate Christchurch, 2018). Specifically, it sought to implement an accessible city programme that prioritised active transport modes such as cycling and walking, as well as bus lanes in the central city. The new central Bus Interchange was one of the first anchor projects completed.

Opportunities to enable the easy connection for people of all ages and abilities to the central city are being put in place. However, the desired outcomes from the design of an accessible city have not yet been realised; that is, it has not attracted people back in sufficient numbers. Christchurch will have achieved a truly accessible city when there is a range of ages, cultures and abilities regularly using the city.

## 5. Overview Discussion

The purpose of creating the Blueprint Plan was to demonstrate leadership in delivering a coordinated planning effort for the future city, to establish a vision that both private, public and community could use to guide future planning. It intended to provide certainty that would in turn catalyse private sector investment and influence the behaviour of individuals and organisations in the public, private and community sectors. The desired outcome was a change to the economic geography of the entire city system, not just the physical environment. It sought to achieve this by adopting three key design moves; a compact, green and accessible city.

In summary, the CCRP was an appropriate urban design response for the recovery phase. The Blueprint Plan influenced historically referenced new urban form by reinstating parks framing spaces for the river and the CBD, inserting urban lanes into new block configurations rendering street networks more permeable, building denser new neighbourhoods as infill, and improving sustainable movement infrastructures citywide. The public sector invested in a significant horizontal infrastructure and capital works programme which has delivered new facilities including the Bus Interchange, Hagley Cricket Oval, Margaret Mahy Family Playground, an Earthquake Memorial, and public carparks. These were supported by further investment by local government and trusts in community driven permanent and transitional activities, such as:

- the Re:START Mall that has provided a central pop-up shopping area involving more than 40 retailers (at its peak) (Bennett et al, 2012)
- the refurbishment of the Isaac Theatre Royal and the Arts Centre
- the construction of Cardboard Cathedral
- the EPIC innovation hub for hi-tech companies displaced by the earthquakes.
- Multiple community led transitional public space projects such as dance-o-mat, the pallet pavillion, the commons or annual FESTA events

While this catalysed some private investment, this has not yet reached the level anticipated in the recovery planning stages and the economic comeback has failed to fully materialise. The lack of a coherent framework for delivering the Blueprint Plan that all stakeholders bought into has meant that there has been fragmented and/or a lack of appropriate mechanisms to consider a “best for city” rather than a “best for project” approach. Eight years on there are varying opinions about how successful the design and implementation of the Blueprint Plan has been. As the city emerges from the rebuild and recovery phase into the regeneration phase of the post-earthquake journey, it is an opportune time to consider the impact of a design-led response and how it has shaped the city fabric that exists today, and to reflect on the fact, that while the Blueprint Plan was the dominant element of the planning that was intended to be the “road-map” that all would follow, there was in fact an entire statutory document—the CCRP—with a regulatory planning framework and significant economic, commercial and financial analysis that underpinned it. There were also many supporting and contradictory policies and strategies, of both regional and national significance that existed, and were subsequently created that had to be

considered and influenced the ability to deliver a compact, green and accessible city. This resulted in a confusion between public sector organisations and a lack of cohesion between the public, private, not for profit sectors and broader community about which vision and strategies or plans should be followed. The lack of a single clear framework also makes measuring the success, or otherwise, of the Blueprint Plan and CCRP difficult.

The primary driver behind having a low-rise compact city was to mitigate the risk attached to the public perception that the city was not safe, and to change the economic geography of the city. Before the earthquakes, activity in the city was dwindling. Consequently, in the aftermath of the earthquakes it was plainly evident that if the city was to be an ongoing success, the underlying economy of Christchurch would need to be protected and rejuvenated, transforming it into a high-wage economy. The Current State Assessment confirms that Christchurch has made significant progress when assessed against the levels of activity in the period immediately after the Canterbury Earthquakes. Overall functionality has been restored to the city, the business community is returning to the central city and a new spatial framework (defined by a low-rise/compact, green and accessible city within the four avenues) is starting to emerge. However, the objectives of the CCRP were not just intended to restore what was lost. It also sought to take the opportunity to create a new city form that would, in turn, be a key driver in creating a step change towards stronger social and economic growth for the region and country. In that respect, the Current State Assessment also reveals that, despite the progress that has been made, the central city is still well short of those aspirations across most metrics assessed within the five regeneration themes identified through this assessment framework (Regenerate Christchurch, 2018).

As a result, the benefit from the combined investment across the public, private and community sectors in making the city a more compact, green and accessible city, has not yet been fully realised. While over \$1.8 billion of private construction projects have restored functionality and activity to the central city across all key areas—office, retail, hospitality and accommodation sectors—this has been delivered by a private-sector investment cycle that has led, rather than lagged, the expected public investment in social infrastructure assets (Regenerate Christchurch, 2018). In other words, the number of anchor projects and precincts contributing towards the new built form that exists is much less than was anticipated to be delivered eight years on, with only six of the initial 16 projects—the Cricket Oval, the Bus Interchange, Justice Precinct, Playground, Central Library and Memorial—being complete at the time of publication. In addition to the lack of pace in delivery, there was a significant reduction to the scope of many of the anchor projects from that envisaged in the original CCRP and Blueprint Plan. For example, the major urban design projects (Avon River Precinct, and the South and East Frames, and Convention Centre Precinct have also been significantly de-scoped and delivered behind schedule. The latter was intended to be a fully integrated development including retail, hospitality and a hotel. What is currently being constructed is just the core convention centre itself, and on a much smaller scale than was originally recommended in the Blueprint Plan. The Performing Arts Precinct is another example of a project that has suffered from a significantly reduced scope. Some projects, such as the Cultural Centre, that had been

identified in the Blueprint, have not progressed at all, while the planning for the Sports Stadium and Cathedral Square has been glacially slow.

The primary reasons for the delayed timeframes and reduced scope can be directly linked to a lack of alignment between central and local government, the private sector and the community. While a vision for the city was outlined in the CCRP, it was an exercise that was completed in 100 days largely behind closed doors, due to the commercial impact of the proposed land zoning decisions. As a result, the amount of consultation undertaken with the private sector and community in respect to the CCRP itself was not optimal. This lack of engagement initially, combined with the physical cordoning off of the central city, that remained at least in part until, 2013, meant that the wider community, local authority and iwi felt the recovery of Christchurch was being done after the authorities' adoption of a top-down approach (Bennett et al., 2012), and that the CCRP was the central government's plan, that had not sufficiently set out a clear pathway for delivering on the aspirations of the public as identified in the *Share an Idea* campaign (Bennett et al., 2012).

It also became evident that there was a lack of alignment about the roles and responsibilities of the various organisations contributing to the recovery phase. As well as the lack of clarity about the governance and decision making processes, there was no single assessment or monitoring framework established to go along with the Blueprint Plan and the CCRP that outlined how success would be defined, how progress would be monitored or the achievement of objectives measured, and therefore what the outcomes of the intervention were. Despite the absence of universally agreed and well-communicated assessment and monitoring framework, there was a generic desire for the high level objectives compact, green and accessible city as the context for anchor projects as was established in the share an idea consultation exercise.

The anchor projects have been publicly criticised, with the general sentiment being that investment into the delivery of residential homes should have been prioritised over social infrastructure assets. However there is solid evidence captured in the Programme Business Case supporting the Blueprint, that the array of projects and breadth of initiatives did appropriately scaffold the CCRP objectives and community aspirations and would, if delivered as a programme, result in better urban design outcomes, and achieve the broader social and economic objectives. This document, referred to as the 'Financial Blueprint' while in draft form at the time the Blueprint Plan was gazetted, was completed in the years following and captured the rationale behind the decisions demonstrated in the physical Blueprint Plan. It was this rationale that formed the basis for justifying the extensive government intervention proposed and substantial capital committed through the publication of the CCRP. The research and analysis underpinning the Blueprint Plan supported the case made in the design, that contracting the core and restoring key publicly funded social infrastructure assets would encourage private sector investment to return and contribute to the process of recovery by delivering the commercially viable residential, retail, hospitality and commercial offerings of an internationally significant 21st century city. This, supposedly, would firstly change the city's economic geography and trigger the strong social recovery that was

expected, and secondly, deliver on the sustainability goals outlined while preserving the city's unique culture and heritage.

## 6. Conclusions

Christchurch was a shrinking city before the earthquakes occurred and the urban design interventions adopted after 2011 were already being contemplated in draft planning regulations. While government investment would have not been as significant had the earthquakes not happened, it is likely that there would still have been initiatives to compress the city, enhance its green attributes and improve access given these were included in the original design principles.

The Recovery Plan has achieved worthwhile contributions in the recovery phase. However, the long-term regeneration and the benefits expected from the CCRP are ongoing with many yet to be achieved. Despite the plan's intent, Christchurch remains a dispersed city beyond its core, and greening and accessibility are works in progress. The timing of this assessment and discussion "post-recovery/rebuild" is appropriate because it marks the boundary between the emergency state and the ongoing development state. Indeed, international literature demonstrates that recovery is not a fixed state, but an ongoing process. Christchurch is emerging from its post-disaster recovery and rebuild and moving into the long-term regeneration process that is necessary for all shrinking cities.

What becomes clear when looking at all three of the major themes is that, despite the best of intentions and a strong design vision (captured by the Blueprint Plan in the CCRP), without strong leadership and a coherent strategy having clear roles, responsibilities, implementation mechanisms, accurate assessment of commercial viability, and most importantly stakeholder buy-in and community support, achieving the objectives and outcomes sought in the CCRP and the Blueprint Plan will continue to be challenging.

Looking at the Central City Momentum report, when it began to monitor the transition from recovery to regeneration, there are four recommendations which are also applicable to the findings discussed in this paper.

It is now time to *recommit* (Regenerate Christchurch 2018) to the vision for Christchurch and the regeneration agency needs to facilitate buy-in across all the delivery agents and stakeholder groups who are contributing to the ongoing regeneration efforts. In turn, the objectives for the central city need to be *refreshed and realigned* (Regenerate Christchurch 2018) in partnership between Crown, Council, iwi, and the community to "demonstrate an increased degree of strategic alignment in pursuing best for city outcomes" (Regenerate Christchurch 2018).

This needs to be in line with an agreed toolkit of strategies that help "inform future decisions and ensure a recommitment to the projects the public sector has said it will deliver" (Regenerate Christchurch 2018). This will underpin a renewed confidence in the ongoing regeneration process and increase certainty about delivery.

These strategies can be captured in a *Regeneration Framework* (Regenerate Christchurch 2018) which maps out how an integrated approach across all the delivery agents (the entities that will deliver the

ongoing regeneration programme) will be achieved. A Regeneration Framework would also capture how **Leadership and Leverage** by the regeneration agency could “provide more effective mechanisms in which the private sector and community groups can test new ideas and present development options to a better organised public-sector client” (Regenerate Christchurch 2018).

If we ask what urban design can do about these issues, the answer is, only so much. Urban design needs to be synchronised with the community development and commercial workstreams which also underpin recovery and regeneration city-making processes. Similarly, building buildings alone did not rebuild the city of Christchurch and all the social infrastructure that the city has. It is time to take a more integrated and strategic approach where design is a critical part of the equation but where a Regeneration Framework going forward represents the parts that everyone must play in helping the city of Christchurch and its people to thrive.

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**Note**

Best practice was a term frequently used across the national and local government policies and strategies in Christchurch. A specific explanation of how this was interpreted does not appear in the documents available, however, it can be understood to mean the methodology developed for rebuilding Christchurch that represented an agglomeration of international examples and processes that had reliably lead to optimal results elsewhere and which *could be tested in the Christchurch context*.