CANTERBURY EARTHQUAKES

CHRISTCHURCH REBUILD

The Canterbury earthquakes are likely to rank globally as the fourth most costly for insurers since 1970 and the reconstruction of Christchurch and surrounding towns will take decades. Is the construction industry up to it?

By Alistair Mackenzie, Freelance Writer, Christchurch

EQC estimates its Canterbury earthquakes liability is $7.1 billion. By 1 September, they had received more than 388,000 claims for all the earthquakes, one of the highest numbers in the world to be handled by a single insurer.

With a disaster of this magnitude, it’s hard to get a handle on the scale of the damage Christchurch has suffered or how long the rebuild is likely to take. To replace as many as 900 commercial buildings in the CBD within a decade, a new building would have to be completed every 4 days. This calculation doesn’t factor in the commercial buildings that need to be repaired or the 12,000 homes that may have to be abandoned. Nor does it take into account the resources required for the $3 billion repair of the city’s infrastructure.

While demolition crews will be busy cleaning up the CBD for at least 9 months, builders in the city have mostly got past the emergency repair stage and are now awaiting the start of the rebuild proper. Similarly, the city’s architects are winding down their damage assessment work, and some are now engaged with rehousing commercial clients in the suburbs.

Uncertainty above and below ground

But rebuilding is not simply a question of getting on with it. For Cantabrians, everything has changed, and many are still weighing their options. Now that water, electricity and sewerage services have been restored, people are thinking hard about housing, business and employment. Post-earthquake demographics have seen educational and recreational opportunities for their children narrow or disappear. If residential sales are any indication, people are only now starting to make decisions.

The greatest uncertainty lies in the ground itself. Since the initial magnitude 7.1 Darfield earthquake on 4 September 2010, there has been the 6.3 quake on 22 February, the 6.4 quake on 13 June plus seemingly endless aftershocks. After 13 June, Fletcher Construction put the rebuild on hold until the aftershocks taper off.

The response from the insurance industry has created more uncertainty. Claims arising from the first earthquake have been paid, but some later claims appear stuck. Demolition has sometimes been stalled in the CBD by wrangling over liabilities between insurance companies, reinsurers and government. Homeowners trying to move on have found it difficult or impossible to secure new insurance, even on undamaged properties in the safe green zone. Most insurers have refused to take on new customers.

In June, the government announced 5,100 quake-damaged properties were located in the red zone – the land is considered unsuitable for residential occupation so the government will buy the property. Homeowners have the option of accepting a payout from the government and insurers. The number of properties in the red zone grows as work continues to reclassify the 10,500 households in the orange zone and others in the white zone.

Residential rebuilding not expected until 2012

Earthquake-related housing work is expected to get under way in the new calendar year, contingent on payments from the government buy-out and insurers flowing through, the design process and new home consents.

Because areas of the city can’t be rebuilt on, the shape of Christchurch will change as new subdivisions emerge on the city’s periphery. Kaiapoi, where one-fifth of the town will have to be abandoned, will also be a very different place. Christchurch Mayor Bob Parker says there are potentially 20,000 sections in and around the city. His council will be talking to the Canterbury Earthquake Recovery Authority (CERA) about the need for new housing policy.

A brick house lies in ruins in the St Martins/Opawa area. Photo: The Press.
possibly speeding up the authorisation of land for housing development.

According to the Real Estate Institute, Christchurch house sales increased markedly after the buy-out announcement, but sales to mid-July were still patchy. In late July, about 15,000 people attended a 2-day housing options expo. Fraemohs Homes project manager Tom Foster says sales inquiries rose steadily since the September quake and more than doubled in the 3 weeks before the expo, but this interest had yet to convert into sales.

Nimble planning process needed

New Zealanders love consultation. The policies that guide urban development emerge from a process that provides for wide community input, is legally contestable and often requires resolution by the Environment Court. Pre-earthquake, getting sections to market had taken some Canterbury subdivision developers more than 10 years.

Jennifer Dixon is professor of planning and dean of the National Institute of Creative Arts and Industries, Auckland University. She believes what’s required is a robust but nimble new process that has buy-in from key stakeholders, including developers who complain the current system impedes innovation and is too slow.

But at present, New Zealand doesn’t have an institutional mechanism capable of project-managing a rebuild of this complexity. With CERA due to expire in 2016, a new model is required – a body with the mandate and capacity to manage and coordinate the various responsibilities of public agencies and the extent and timing of investment by the private sector. A specially created development agency with the power to direct and manage the reconstruction including the power to acquire land is one possibility.

Whatever the model adopted, it will be important not to reinvent the wheel and plan the city afresh. Strategic planning already undertaken in Christchurch around urban development should be adapted to the new realities, Dixon says.

A new vibrant, sustainable city

Central Christchurch was considered to be in decline before the earthquakes. Like many cities, retail outlets had moved to the malls. Although promoted as a tourist destination, most visitors didn’t stay overnight.

The earthquakes are widely seen as an opportunity to reverse this downward trend. The public response to the Christchurch City Council’s invitation to submit ideas of how to rebuild the city attracted over 106,000 suggestions. The people of Christchurch want to create a world-beating, vibrant, sustainable and highly liveable city.

Warren and Mahoney principal and executive director Graeme Finlay says that to bring this about requires a strategic framework that gives the rebuild direction. The strategy needs to clearly identify the reasons why people want to live, work, visit or invest in the city and build upon these. ‘Once this has been established, it becomes easy to design a new vision for the city,’ he says.

The draft central city plan recently released by the Christchurch City Council is an excellent start. But it needs to be. There is no room for complacency because central Christchurch is in competition, not only with its own suburbs but also with the rest of the country and the world. Finlay says ‘a successful rebuild requires a vision which can successfully compete with other cities to make Christchurch the most desirable city in the region’.

Smart models of inner city development

Finlay believes we have the opportunity to increase the density of the city while making
it much more liveable and interesting and with no increase in building height.

There are many smart models of inner city development that have never been trialled on a commercial basis in Christchurch, he says. One of them would see city blocks redeveloped as an integrated whole by groups of developers and investors, rather than piecemeal by individuals. Blocks opened up and rebuilt with shared central courtyards would be more functional and liveable. The value added to properties would be a win-win for the city and the property owners.

Collective investment would be required, along with some outside stimulus and intervention: stimulus to encourage developers to get projects under way and ‘carrot and stick’ intervention to ensure a good mixture of businesses are attracted back into the CBD. Overseas, some inner city developments are contingent on the developers offering a cross-subsidised mix of high and low-rental properties.

Finlay sees the rebuild as an opportunity to develop a modern sustainable city and, in the process, develop new products and knowledge that could be exported for the long-term benefit of the whole economy.

More research needed into affordability

But although the idea of a vibrant central city with a mix of business and living spaces is an attractive one, is it really how Christchurch residents want to live? John McDonagh, associate professor of property studies at Lincoln University, says that, when Kiwis think inner city, they still think slums. He suggests that the research hasn’t been done and questions the affordability of new housing to be built on the outskirts of Christchurch.

Answers may come from the government’s new Productivity Commission, which is currently looking into the productivity of the construction sector. Some builders suggest the extra costs associated with tougher new earthquake standards may make new homes unaffordable.

Details of stronger foundations have been announced by the Department of Building and Housing for Christchurch city but more changes are expected to follow. Total building costs are expected to rise, with estimates ranging from 2–10%, but until the details are released, the real impact is unclear.

Timber the material of choice, but can demand be met?

Both the concrete and steel sectors are reportedly unhappy about the financial backing and political support timber has received as the material of choice for the rebuild, specifically for commercial buildings. Alistair Fussell of Steel Construction New Zealand says politicians shouldn’t be picking winners.

Resilient, locally grown, job-creating eco-friendly timber may be first choice, but parts of the timber industry may not be able to meet demand. The National Distribution Workers Union said earlier this year the wood processing industry was in crisis, after 1,129 job losses since 2008, and is worried more sawmills may fail before demand for timber from the Christchurch (and Japanese) rebuilds takes off.
Could we see carbon miles on timber framing?

Recent strong global log prices have made it more attractive to ship logs out of New Zealand than to process them here, a factor leading to the downturn of the local processing industry. (In 2010, log export volume increased by 23.5% to 10.9 million cubic metres.) A slump in new housing starts has also contributed.

If log prices continue to increase as forecasts indicate, domestic sawmillers will lose their competitive advantage against imported timber or building substitutes like steel and concrete. Locally grown logs could be exported, milled and then reimported as building materials! New Zealand-grown Chinese-milled timber is likely to help with the Japanese rebuild.

Some would argue the log-processing industry is of strategic importance to the domestic economy and should be future-proofed. Chile, a major timber exporter, was able to use its own resources to rebuild after its major earthquake last year, but it withdrew from some of its export markets to do so.
Australia beckons
While some Christchurch builders say they are busy without taking on earthquake-related work, others may be just hanging on. If the rebuild doesn’t happen soon, small trade companies may fail and their workforces will be dispersed.

Australia beckons strongly. Fletchers have set an hourly rate of $45 for tradespeople. This is far lower than Australian rates, and many contractors’ sense of grievance has been compounded by delays in payment for emergency quake repairs by the Earthquake Commission (EQC).

Workload projected to double once rebuild starts
But the rebuild will come. On current estimates, the building and construction industry will face nearly a doubling of its present workload from today’s value of nearly $8 billion a year. There will be a huge demand for specialist trades to support such an increase in an industry that, at present, employs about 77,000 people.

Industry projections (still being refined) indicate demand will encompass thousands more electricians, carpenters and builders, builders’ labourers, painters, tilers and floorers, plumbers and drainlayers, plasterers, bricklayers, glaziers and concreters. The numbers vary between 3,000 and 4,000 in each category.
Can sufficient numbers be trained and equipped with the right skills to meet the demand as it builds? There are already shortages of painters in Christchurch. Industry taskforces, government planners, educationalists and research organi-
sations are scrambling to ensure there are sufficient skilled tradespeople on hand.

There are already 15,000 new constructions in the country each year. The pressure will be on with up to 80,000 leaky homes needing significant work plus 60,000 residential and 1,200 commercial buildings in Christchurch. Industry leaders have stressed to the government that rising demand for tradespeople should not be allowed to lead to a lowering of qualifications.

**Christchurch could again lead the field**

In the 1950s and 60s, a combination of money, architectural talent, open-mindedness and a requirement for infrastructure saw buildings of remarkable style, daring and quality created. Christchurch led the field. Today, much of that architectural heritage has been lost. But given a similar combination of factors, it could be created again, newer and stronger (and faster) than before.

The Press building being demolished in Cathedral Square. Photo: The Press.