



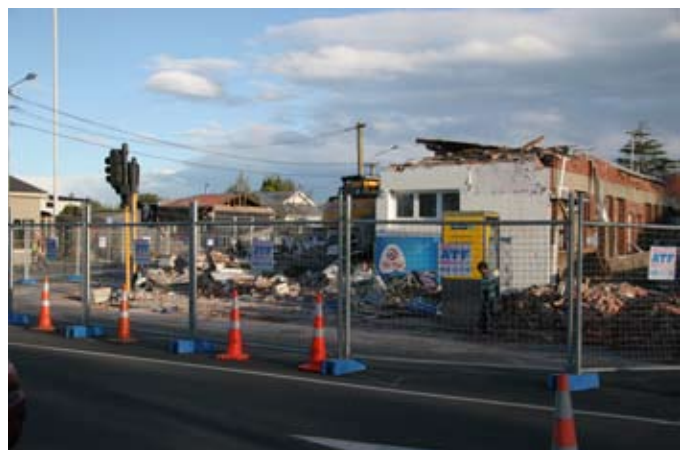
From the City that Rocks, Observations from Post-Earthquake Christchurch, New Zealand

Neil Challenger

At 4.35 a.m. on the 4th of September 2010 Christchurch residents were shaken awake by a magnitude 7.1 earthquake, the largest earthquake to hit urban New Zealand for nearly 80 years. It was a large earthquake. On average the world only has 17 earthquakes a year larger than magnitude seven. Haiti's earthquake in January 2010 was magnitude 7.1 and Chile's earthquake in February was magnitude 8.8. Although it was a big quake, Christchurch was lucky. In Haiti's earthquake over 230,000 people were killed and in Chile 40,000 homes were destroyed.

Happily this was not the situation in Christchurch, however the earthquake has caused considerable damage. The challenge for the Landscape Architecture community is to contribute to the city's reconstruction in ways that will not only fix the problems of housing, and the city's urban, suburban and neighbourhood fabric but that will do so in ways that will help solve the landscape problems that dogged the city before the earthquake struck.

The impact of the earthquake varies. In places, the broader landscape has been rearranged. The previously unknown fault that caused the earthquake



Edgware Barbadoes Shops Demolished – Local shops on the corner of Edgware Road and Barbadoes Streets are demolished.



produced a 25-kilometer rip across Christchurch's hinterland, displacing farm paddocks and roads by as much as 4 metres. A river found a new course across paddocks after fields dropped a meter and a half and diggers were used to force it back to its old channel. However hedgerows, fences, road alignments and one small river aside, generally the damage to the broader landscape has been minimal.



Relocation Sign, Cranford Shops – Sign advising customers where Chris's Clothing Services have relocated.

It is at the landscape's human and experiential scale that its impact has been much more significant, severe and for those most affected malign. No-one was killed and only two people were seriously hurt, but over 90,000 insurance claims have been lodged, over 150 km of sewers and water mains have been destroyed, tens of thousand of buildings have been damaged, and over 1000 homes are irreparable - their previous occupants living in temporary accommodation and in some cases caravans and motor homes. Because of liquefaction damaged parts of some suburbs will have to be abandoned and throughout the city corner stores and shopping strips have been destroyed, church steeples and belfries have become piles of rubble and a number of community halls have been condemned. In the central city a number of heritage late Victorian gothic and Edwardian buildings have been damaged beyond repair and a part of the city that already had too many empty sites now has more empty lots. The impact is broad, if not as severe as in the other centers rocked by earthquakes this year.

Repairing Christchurch has to be seen in the city's bio-physical and socio-economic context. Christchurch is built on a large alluvial plain and on the toe of the adjacent Port Hills, and has a population of around 400,000 most of whom live in single story bungalows in suburbs that sprawl out across the flatlands. The older suburbs have traditionally been serviced by clusters of local shops and community infrastructure. But many of the newer suburbs, created in the age of private motor vehicles, lack these neighbourhood-defining amenities chiefly because of the competition from large multi-story shopping malls built at strategic intervals throughout the city over the last 30 years. In common with overseas experience these malls have contributed significantly to the decline of local and suburban shopping centres and to the 'hollowing out' of the central city; albeit that downtown Christchurch is still comparatively buoyant by many standards.

From a landscape architectural perspective the damage caused by the earthquake can be broadly fitted into three areas. Parts of suburban Christchurch won't be rebuilt because of ground instability caused by liquefaction. The people who used to live in these districts will need to be re-housed and alternate uses will have to be found for the areas where they used to live – which will require design and planning. At the neighbourhood level many of the corner shops destroyed in the earthquake looked uneconomic before they were felled and it is hard to imagine them being rebuilt. However, these shops marked their communities, giving them focus, identity and ease; and the small hap-



Manchester Street Shops – Badly damaged shops in central Christchurch



Manchester Worcester Street Corner – Shops are demolished in central Christchurch

penstance pleasure of bumping into your neighbor when you buy the paper that they allow won't happen when you drive to the mall. For designers of this neglected space, the challenge will be how design can help to rebuild community identity, amenity and ease. Finally, in the central city, despite significant damage to a large number of buildings it appears that only 20 or 30 were damaged beyond repair; sadly most of them heritage buildings that contributed significantly to the city's character. This isn't ruinous, but the central city was vulnerable before the earthquake struck. Despite significant investment in its landscape over the last eight years there was more office space than tenants, shops struggled to compete with the malls, there wasn't enough foot traffic and there were already too many car parks occupying empty lots. The earthquake will exacerbate this, forcing some businesses to move out, creating more empty lots and almost certainly adding more grim parking lots to the city's streetscapes. The landscape challenge is not simply to fill these empty spaces but to rethink the central city and what it might be.

Seen globally these effects are not catastrophic, but for Christchurch they ought to be catalytic. While the earthquake has caused some major

problems, as is probably always the case, behind the immediately visible damage to buildings and infrastructure it is the pre-existing weaknesses and problems that will dog their repair. In this case sprawl, poor planning decisions that have allowed building to occur where it shouldn't, economic viability and neighbourhood and central city vitality; problems that existed well before the earthquake.

The normal response to disaster has been to rebuild on the old footprint, not to rethink the footprint itself and it is not clear which will happen in Christchurch. The response from the landscape architectural community has been to acknowledge the existing footprint and its repair through proposals for temporary landscapes on vacant sites. But its real challenge is to help ensure that the city's reconstruction maximizes opportunities; which it is attempting to do through exploratory charettes, design and planning forums and wider engagements with the design and political community. However, as appears to have been the case with both the Haitian and the Chilean earthquakes, to date the focus on the immediate issues of buildings and pipes has wrongly painted this as being largely an architectural and an engineering problem. This has so far overshadowed issues of landscape urbanism, economic fabric, community character, and the provision of open space and amenity, and it is these that will be instrumental in helping to bring the city back to life through overcoming the underlying issues that the earthquake has highlighted.

It is to be hoped that the result of the earthquake will be a better, more robust and more resilient city, but it will take time, commitment and interdisciplinary, inter-sector thinking which in our current post-earthquake world will be a challenge.

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