



Greening the Rubble in Christchurch: civic ecological reclamation efforts during a crisis event

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Abstract

Within four weeks of the September 4 2010 Canterbury Earthquake a new, loosely-knit community group appeared in Christchurch under the banner of “Greening the Rubble.” The general aim of those who attended the first few meetings was to do something to help plug the holes that had already appeared or were likely to appear over the coming weeks in the city fabric with some temporary landscaping and planting projects. This article charts the first eighteen months of Greening the Rubble and places the initiative in a broader context to argue that although seismic events in Christchurch acted as a “call to palms,” so to speak, the city was already in need of some remedial greening. It concludes with a reflection on lessons learned to date by GTR and commentary on the likely issues ahead for this new mini-social-environmental movement in the context of a quake-affected and still quake-prone major New Zealand city. One of the key lessons for GTR and all of those involved in Christchurch recovery activities to date is that the city is still very much in the middle of the event and is to some extent a laboratory for seismic and agency management studies alike.

Keywords: *ecological reclamation; temporary use; greyfields; earthquakes; rubblescapes; community initiatives*

Introduction

Within four weeks of the September 4 2010 Canterbury Earthquake a new, loosely-knit community group appeared in Christchurch under the banner of “Greening the Rubble.” The general aim of those who attended the first few meetings was to do something to help plug the holes that had already appeared or were likely to appear over the coming weeks in the city fabric with some temporary landscaping and planting projects. A group called “Gap Filler” was already mobilising to fill some new vacant city spaces with cultural life and diversity. Greening the Rubble (GTR) sought to bring more biodiversity into the city. The two groups soon became close allies and at the present time they are widely seen as twinned initiatives (hence the references to Gap Filler in this commentary). This article charts the first eighteen months of Greening the Rubble and places the initiative in a broader context to argue that although seismic events in Christchurch acted as a “call to palms,” so to speak, the city was already in need of some remedial greening. It concludes with a reflection on lessons learned to date by GTR and commentary on the likely issues ahead for this new mini-social-environmental movement in the context of a quake-affected and still quake-prone major New Zealand city. Readers will note the frequent inclusion of details regarding aftershocks, local and central government authorities and land zoning decisions. Those who do not live in Christchurch may query the significance or necessity of such references in terms of urban planting projects. One of the key lessons for GTR and all of those involved in Christchurch recovery activities to date is that the city is still very much in the middle of the event and is to some extent a laboratory for

seismic and agency management studies alike. GTR has found that every major aftershock is likely to retard or inhibit those recovery efforts in some way.

Overseas antecedents for urban ecological reclamation¹

The idea of making better and/or more environmentally friendly use of neglected or poorly designed urban space goes back decades. It can be linked, in conceptual terms at least, to the garden city movement of the late nineteenth and early twentieth centuries which sought to combine the best qualities of town and country living in the face of uncontrolled urbanisation and industrialisation.² A number of pioneering practitioners in previous centuries had concentrated on “ruderal” or rubble plants that colonised the built environment such as stone walls and abandoned ruins. The garden city movement looked back to the past in historical terms while others concentrated on physical processes over time but the common link was the acceptance of nature as part of the city fabric. The fledgling science of urban ecology that emerged throughout the twentieth century was given a significant boost by the devastation wrought during the Second World War. Vast city areas were destroyed and reconstruction was delayed by several years allowing plants and animals to recolonise a number of sites. This was the first “rubble ecology.”

A more ecologically specific and indigenous species-based “retrogreening” philosophy and practice seems to have emerged in the 1960s and 70s when the effects of urban decay and ecological thinking converged. This came partly as a result of grass-roots political activism in the late 1960s and the hippie movement in a number of western countries. Many urban communards were inspired by the revolutionary acts of Gerrard Winstanley and the “True Levellers” in England, who took over commons and vacant land in 1649 to grow food. The latter-day hippie “Diggers” re-appropriated land and parks for food distribution and various festivities.³ This was particularly noticeable in San Francisco and New York where Digger groups handed out free food and opened free stores although they did not actually carry out farming in urban spaces. “People’s parks” also emerged, the most controversial of which was established in Berkeley, California.⁴ However, the most famous popular “takeover” of city land for cultivation and the one most associated with the ensuing “green guerrilla” movement was a plot in Manhattan on the corner of Houston Street and the Bowery in 1973. Now known as the Liz Christy Garden, after its founder, the Bowery Houston Community Farm Garden has remained in operation for nearly four decades and community gardens and pocket parks have now become common-place in urban areas.⁵

¹ I use the term “reclamation” rather than restoration or rehabilitation because such terms already have particular connotations in ecology. Reclamation acknowledges that land is often in a state of being claimed and reclaimed in terms of physical use and human ownership or custodianship.

² See Howard, Ebenezer. *Garden Cities of Tomorrow*. London: S. Sonnenschein & Co., Ltd, 1902.

³ See <http://www.diggers.org/overview.htm>

⁴ The land in question was a partially-cleared former residential parcel owned by the University of California which had been left undeveloped for several years. Plans released in 1967 for student parking and a playing field failed to proceed. The site became even more unsightly and local merchants and community workers made plans in Spring of 1969 to clear it and make it into a park. Confrontation with the university and the National Guard followed shortly afterwards and during the stand-off that resulted the plot was dubbed “People’s Park.” It is now an official park but it is less welcoming and “free” than its initiators would have hoped due to the high numbers of homeless people who occupy it.

⁵ Christchurch, for example, had twelve community gardens in 2005 according to CCC information but the present number is likely to be closer to 20 such has been the rush to set these up over the past five years, partly assisted by the so-called “global financial crisis” and concerns about self-sufficiency in communities and households. See <http://resources.ccc.govt.nz/files/christchurchcommunitygardenscontactlist-volunteerinyourpark.pdf>.

“Guerrilla Gardening,” the new millennium variant on this theme, revolves less around the claiming of particular spaces for parks, gardens or ecological habitat on a permanent basis. Instead, it focuses more on anonymous insurgent activities that involve night-time or covert planting by individuals or groups on public or private land perceived to be neglected or under-utilised. The new movement was made famous in the mid-2000s by London-based Richard Reynolds and his interventions around Perronet House, the ten-storey tower block in Elephant and Castle in which he lived at the time. The paramount rule of guerrilla gardening is that permission to plant should not be sought first. If plantings survive long enough to be noticed then the legitimisation and protection negotiations or battles may ensue. However, the main effort is to demonstrate the virtue of thinking about horticultural amenity in any given urban space, not just formally designated parks or gardens. In the past five years guerrilla gardening has become something of an underground global franchise and despite its ethos of covert operations it now boasts various websites, YouTube clips and several publications.⁶

In a slightly more academic tone, Richard Register’s *Ecocity Berkeley* focussed more upon the importance of restoring or maintaining native or indigenous biodiversity. Published in 1987 it was one of the first concept books for greening underutilised spaces and reclaiming existing urban land.⁷ Although a little primitive and dated in terms of graphic design, Register’s book foreshadowed countless present-day local authority practices such as local street-narrowing and calming through native plantings and exposing buried or piped urban water courses to restore riparian habitats. Such projects, whether fully designed and led by local authorities or conceived and managed in partnership with local communities and restoration groups, are now too numerous to mention. Often they involve formalised and long-term commitments between agencies and volunteers and are often accompanied by the formation of a dedicated trust body or incorporated society.

Australasian initiatives in ecological reclamation

Some of the trends that have emerged during the past several decades overseas are mirrored in Australia and New Zealand. Interestingly, the direct and technically unlawful occupation of land, or “re-occupation” as activists would prefer to see it, has tended to revolve around indigenous peoples’ sovereignty claims. There are many instances in New Zealand, for example, of Maori land protests at strategic sites such as Bastion Point in Auckland and Moutua Gardens in Whanganui. The main course of action for those concerned more with ecology and sustainability than with particular historic sites has often been to lobby for the purchase or gifting of occasionally available urban parcels of land by local governments for such things as community gardens or native plant reserves. At the same time there have been concerted efforts over the past twenty years to influence public and private development through appeals to professional urban design and landscape planning principles. Individual practitioners, particularly those in the Landscape Architecture profession, have sought to embed urban greening in design projects at both small and large scales here and in other cities across Australia and New Zealand.

⁶ See <http://www.guerrillagardening.org/>. Two key publications are: Reynolds, Richard. *On Guerrilla Gardening: a handbook for gardening without boundaries*. London: Bloomsbury, 2008; Tracey, David. *Guerrilla Gardening: A manual*. Vancouver: New Society, 2007.

⁷ Register, Richard. *Ecocity Berkeley*. Berkeley: North Atlantic Books, 1987.

Christie Walk in Adelaide⁸ and Earthsong Eco-Village in Waitakere, Auckland⁹, provide good examples of an inner city housing redevelopment where ecological principles have been successfully married to urban planning requirements. In Christchurch there are more than a dozen community gardens, some dating back to the 1990s. Most are affiliated to the Canterbury Community Gardens Association and their projects are generally recognised and supported by Christchurch City Council as a permanent part of the city's social and environmental fabric. In recent years an Urban Design Panel and a local chapter of the Urban Design Forum have operated in Christchurch to provide advice and expertise for new urban developments. Furthermore, and in keeping with international grass roots initiatives, ecologically-driven citizen groups and incorporated societies such as the Canterbury chapter of Living Streets Aotearoa¹⁰ and Sustainable Otautahi Christchurch¹¹ have become established since the late 1990s.

These developments notwithstanding, the greening of urban spaces in New Zealand has followed a relatively polite and non-controversial path in terms of questioning the civic pride and ecological sustainability responsibilities of private property owners. As has been the case overseas most initiatives tend to be piecemeal and reformist rather than revolutionary. Until its absorption into the Auckland (Super) City Council in 2010 Waitakere City Council stood out as one of the most proactive of local authorities in terms of an "eco-city" agenda.¹² In a more confined sense Christchurch City Council made substantial gains in the 1990s in the rehabilitation of local waterways through the Waterway Enhancement Programme overseen by the Waterways Service Unit.¹³ By and large, then, the New Zealand model for urban ecology has tended to be relatively conservative. Projects tend to focus on the rehabilitation of former bush sites or habitats within cities with an aim of full and permanent ecological restoration of native species. Sometimes they involve the conversion of vacant sites into standardised public amenity parks with large grassed areas which may or may not include locally eco-sourced or locally appropriate native plantings. With very few exceptions the idea of reintroducing wildness into urban areas in New Zealand as relatively low-maintenance and untended experimental regrowth sites with the potential for messy, hybrid and unplanned for outcomes has been too much for local authority greenspace staff and conventional ecological restorationists alike to countenance. The term "Garden City," therefore, when used in relation to Christchurch errs very strongly on the side of visible "order," making even the "messy ecosystems, orderly frames" and "cues to care" strategy of hiding wildness behind picket fences espoused by Nassauer, for example, seem a bridge too far for most citizens.¹⁴

Greening the greyfields of Christchurch

Whatever current perceptions there may be of a devastated and hollowed out Christchurch central business district since the seismic events of late 2010 and throughout 2011 the truth is that vacant or underutilised sites have existed since the late 1980s. The stock market and property development bubble of the mid-1980s and the subsequent bust in 1987, compounded

⁸ See <http://www.urbanecology.org.au/eco-cities/christie-walk/>

⁹ See <http://www.earthsong.org.nz/>

¹⁰ See <http://www.livingstreets.org.nz/>

¹¹ See <http://www.sustainablechristchurch.org.nz/home/>

¹² Although Waitakere City Council no longer exists a legacy website currently remains on-line and the environmental sustainability orientation of the former council can be gauged easily by examining the "quick A-Z" index. See <http://www.waitakere.govt.nz/Qjika-Z/a-z.asp>

¹³ See, for example, <http://www1.ccc.govt.nz/parks/Publications/images/Environmental/NottinghamStream.PDF>

¹⁴ Nassauer, Joan. "Messy ecosystems, orderly frames". *Landscape Ecology*. 14:2, Fall 1995, pp. 161-169.

by later mini-booms, have left their mark on the city. In a broad sense it has meant an oversupply of office and commercial space punctuated by vacant lots that were intended for rapid redevelopment but which have never quite progressed from the status of daytime open parking sites. The old Horticultural Society Hall and the former Jewish Synagogue sites on the corner of Cambridge Terrace and Gloucester Street are notable examples. In other cases old buildings situated on what by past standards would have been regarded as prime central city sites have been left vacant for so long that their later removal has amounted to demolition by neglect and they too have been replaced only by car-parking franchise operations as evidenced by the Tivoli/Westend movie theatre site in Cathedral Square. The three aforementioned sites are currently leased to Wilson Parking.¹⁵

Although something of a minority voice in urban planning policies a few ecologists have recognised these interludes in the property development market as an opportunity to further the cause of native biodiversity conservation by advocating for temporary plantings or regeneration on such sites and other abandoned tracts of land in the greater metropolitan area.¹⁶ However, this notion has generally fallen outside the sphere of interest of local authorities. They would be well-placed to act as brokers and information sources between project proponents and site owners. Yet presumably any official sanction might be seen as an admission that the economics of the downtown area are not as prosperous as everyone would like to think. This is reflected in the way that Christchurch City Council has until now recorded and reported upon the annual stocks of vacant residential, industrial and commercial land in relatively incommensurable terms. Residential and industrial land are measured in hectares while commercial land is measured in square metre floor space with no qualitative assessment to indicate the age of the site or structures and whether there have been any constructive interim uses over time.¹⁷ A single database which charts the flows of public and private land in and out of conventional development usage would be of great value to those interested in optimising vacant land use in creative ways.

The September 4, 2010, 7.1 Magnitude Canterbury Earthquake

The first major earthquake to hit the Canterbury region in decades may not have changed everyone's thinking about urban land use policy and practice. However, it did help to quickly catalyse action and crystallise thought around a key issue amongst a number of town and city inhabitants. Within days of the event, and with the relative comfort of knowing that although some extensive property damage had occurred no lives had been lost, a few people started putting pen to paper in the local media. The first comment was that provided by the Canterbury Regional Biodiversity Co-ordinator Dr Wayne McCallum. In a letter to the Editor of *The Press* in late September he coined the phrase "greening the rubble." McCallum used these words to describe both the symbolic and material redemption of damaged sites by the temporary installation of native plants and/or cultural events. Other narratives saying more or less the same thing appeared very shortly afterwards in the media and a specifically cultural and arts

¹⁵ Wilson Parking is a company in the Australasian parking, security and security technologies conglomerate known as the Wilson Group. Prior to and since the earthquake and aftershocks the company has been the dominant private parking provider in Christchurch and has become inextricably linked with the "car-park city" label used by many commentators when pondering the future of the Central Business District.

¹⁶ See Greenep, Helen. "Urban Ecology in Christchurch: a reconciliation ecology approach to enhancing native biodiversity on urban greyfields". Unpublished PhD thesis. Lincoln University. 2009.

¹⁷ See <http://www.ccc.govt.nz/cityleisure/statsfacts/statistics/builtenvironment.aspx>.

focussed group called Gap Filler sprang into life at virtually the same moment.¹⁸ Days later McCallum made a web and email-based call to attract potential willing helpers to make at least one project happen. The first Greening the Rubble “expressions of interest” meeting took place on 6 October 2010. Encouragingly, local Members of Parliament voiced their support for the idea and perhaps most crucially the idea found favour amongst councillors and relevant staff at Christchurch City Council (CCC). A more formal meeting took place on October 12 from which a steering group of approximately ten members was formed and over the next several weeks both the day-to-day project-focussed steering group and a longer-term strategy group met to discuss how to get things moving quickly.

Within weeks a pilot project, brokered principally by members of the Canterbury-Westland branch of the New Zealand Institute of Landscape Architects, had been identified on a prominent site on the corner of Salisbury and Victoria Streets. Commonly referred to as the “Askö site” (after the design store that had been located in the recently demolished building) clearing and foundation work began in earnest in November.¹⁹ With assistance given more or less as required from CCC and generous donations of materials and labour from various private and commercial sources (including a surprise \$3000 contribution from the principal site owner Andy McFarlane) “Victoria Green” was soft-launched on December 19, 2010 and was targeted for a full launch-cum-celebration on March 4, 2011.

As part of this process issues such as the need for incorporated society or legal entity status, whether to enter into license to occupy agreements with site owners and public liability insurance were addressed. It was decided to use Living Streets Aotearoa as a hosting trust body for the time being in part because some key national executive officers of that organisation had been involved in Greening the Rubble from its inception.²⁰ Crucially, CCC resolved to provide part-time project worker funding for a few months in the coming year for both Gap Filler and GTR which allowed Coralie Winn and Rhys Taylor, respectively, to dedicate time and energy to the projects at hand and deal with publicity and promotion requirements and requests. Other projects were mooted or conceived at this time and some of these moved further into planning stages over the next few weeks and months and it was encouraging to see the participation of high school and tertiary students in meetings and site activities, notably pupils from Unlimited Paenga Tawhiti, an inner city high school, and Landscape Architecture students from Lincoln University.

For those already involved in Greening the Rubble the main aim was not simply to cheer up damaged sites as a bit of civic-spirited rallying behaviour, although the approaching Ellerslie Flower Show in March 2011 and the scheduled Rugby World Cup games of October of the same year were clear milestones for having something presentable in place. Most understood that the long-term aim was better utilisation of any neglected vacant urban site and the earthquakes had opened up some uncertain but promising new territory. They were aware that, although slightly

¹⁸ See <http://www.gapfiller.org.nz/>

¹⁹ The first potential site identified was in Manchester Street, known as the Para Rubber site, which CCC had purchased in 2008 in a controversial \$17 million 5-property buy-back package with a local developer who was experiencing financial difficulties. CCC bought these sites because of their size and strategic importance. The reason given for not allowing use of this site was the need to be fiscally responsible in light of such controversy and ensure some return on ratepayer investment. To that end CCC has signed a public car park leasing arrangement with Wilson Parking.

²⁰ *Pro bono* legal advice and “license to occupy” drafting work was generously provided by Cavell Leitch Law at the formative stages of Greening the Rubble.

daunting, the sudden windfall of new urban sites was still going to be a relatively temporary affair lasting within the range of six months to two years. It was assumed that the majority of property owners would be fully insured and their intentions would be to get new buildings up as soon as they could. Also, the total stock of new vacant sites was estimated to be less than 100 across the city and outlying towns which meant that the “greening the rubble” volunteers might be lucky to get a dozen suitable and practicable sites on which to work. The minutes of GTR sub-group meeting on October 19, 2010 record the modest aim of two or three functioning sites in Christchurch and/or Kaiapoi by the end of June 2011 and a dozen or so by the end of the year.²¹ It was felt that a handful of strategically located greened quake sites could usefully act both as signs of recovery and as focal points for the larger challenge of what to do with urban greyfields.

It was realised that GTR site and planning activities would inevitably wind down a little over the Christmas and New Year holiday period but that momentum would pick up quickly from the middle of January. Several meetings took place prior to Christmas and by this point the number of actual or anticipated projects had expanded to around seven. The need for a longer-term forward-planning project was minuted before the holiday break, partly to keep momentum going, but more importantly to give strategic direction to the group. Most members were very conscious of trying to find and maintain symmetry across the city so that GTR did not get bogged down working only on highly designed trophy sites in the CBD. To that end a quake-site mapping and photographing exercise was begun with the assistance of a student from Lincoln University who was funded for several weeks over summer to carry out this work via a special Faculty of Environment, Society and Design “aftershock” research grant. The goal was to create a GIS or similar map and database that could chart the development of both GTR and Gap Filler projects and also set reference points for vacant land in the city in general.

While one might assume that a comprehensive mapping and data gathering exercise would have been triggered in any case via the local authority it quickly became clear that the way in which CCC was collecting and managing information was not particularly helpful to GTR. In the first place CCC was preoccupied with immediate safety issues around buildings in the CBD and a politically-driven need to show that the city was going to “get back to normal” as soon as possible. Secondly, the types of maps they produced, although laden with information about the state of buildings in some cases, were not coded for suitability for alternative uses nor did they give site area measurements or information about ownership – matters of vital interest to GTR and Gap Filler. Furthermore, where the council was doing its own appraisals for possible pocket parks or green spaces this was not for public consumption since it raised potentially sensitive issues. For example, some would balk at the use of ratepayer money for park-making at the expense of spending on basic infrastructure repair or more direct assistance to affected businesses.

The quake mapping exercise began in earnest in early December 2010 with the brief that any useful intelligence gathered would be made available equally to Gap Filler and GTR for project consideration. Conversely, GF and GTR fieldworkers could feed site information to the student researcher. A number of sorties were carried out and records show that most of the photographic work was carried out between 9-13 January and 16-17 February 2011. A site

²¹ Kaiapoi falls within the jurisdiction of another territorial local authority (TLA), Waimakariri District Council. The effects of the earthquakes and aftershocks have ranged across three TLAs. Land, structures and infrastructure within the Selwyn District Council territory was affected principally by the September 2010 earthquake but not by subsequent aftershocks which have occurred closer to Christchurch and the Port Hills.

evaluation checklist for GTR and Gap Filler workers was circulated on February 18, 2011 and it was hoped that the first annotated map would be available in March. Three days earlier Rhys Taylor had produced his first official report of GTR activities in the January-February period in which it was confirmed that seven projects were either underway or in draft stages. Despite the odd aftershock, including a 4.9 magnitude shake on Boxing Day 2010 which caused further damage to unreinforced brick and masonry buildings in the CBD in particular, it seems fair to say in hindsight that most rubblebers believed that the worst was behind them.

The February 22, 2011, 6.3 Magnitude Christchurch Aftershock

On the afternoon of February 22 gravel was due to be delivered to a site very close to Victoria Green for the making of a temporary petanque court and a handful of Gap Filler and GTR volunteers were due to work there later in the day. Things changed radically on a number of fronts for Greening the Rubble when a very severe aftershock struck the centre of Christchurch and its eastern suburbs at 12:51pm. Firstly, the aftershock caused 181 fatalities and severe injuries in the CBD and outlying areas. Secondly, the impacts of liquefaction and subsidence on large swathes of the eastern suburbs, and shattering of houses and rockfalls in the hill suburbs, immediately raised the prospect of large-scale abandonment of sections of the city. Against this some peregrinations over the better use of this or that 500m² plot of land seemed trite if not downright insensitive. Instantly a number of GTR volunteers found themselves temporarily or permanently displaced from their own homes or workplaces. All of the meeting places hitherto used by GTR were now off-limits. A State of National Emergency was declared on February 23 and CCC resources were immediately stretched as every employee was seconded to emergency and crisis management roles. Under emergency regulations the city was sectorised and locked down as international Urban Search and Rescue (USAR) teams and military personnel combed streets and buildings searching for victims. The pilot GTR project in the central city was rendered off-limits as Victoria Green fell within the emergency cordon. Media presence was substantial. Conversely, tens of thousands of people left the city for days, weeks or even months. Perhaps most dauntingly it became clear very quickly that the number of rubble sites might grow by at least an order of magnitude to well over 1000.

The GTR Steering Group reconvened for the first time after the February 22 event on March 13 and began to recommence existing plans or re-plan where possible. By this stage it was clear that the rebuild and recovery process for Christchurch was going to be so major that special legislation and a new central government agency were inevitable. These moves took place shortly afterwards, during late March and early April 2011, with the appointment of a Minister for Earthquake Recovery and the establishment of the Canterbury Earthquake Recovery Authority (CERA). The effect of this on GTR was to make it difficult to know who had real power and authority and whether the management of quake-affected land in Christchurch would be left to local authorities at all. At this time also insurance companies began placing many quake-damaged business property owners into a state of limbo and many existing rebuild plans were effectively frozen while new cases were similarly stalled.

Matters were further complicated by the jurisdictional boundaries set by CERA. For example, CERA legislation required that CCC produce a recovery plan for the CBD by the end of December 2011 and CERA allowed it to pursue a number of suburban recovery programmes centred on shopping and business precincts. Other parts of the city remained under a cloud as it was now apparent that some land was beyond repair in the short-to-medium term and total abandonment of parts of suburban Christchurch, Kaiapoi, Pines Beach and Brooklands was a real

prospect. Another 6.3 magnitude aftershock on June 13, apart from causing much more damage in the CBD and further alarming rockfall in the hill suburbs, tipped the balance in regard to the low-lying liquefaction and lateral spreading-prone eastern lands. The announcement on June 23 by CERA of the classification of land into red, orange, white and green zones in Christchurch and the intention to acquire at 2007 rating value any property located in the red zone sent another type of shockwave throughout the city. This instantly set thousands of residents to worrying almost entirely about their own circumstances and such waves have continued as reclassifications and subclassifications take place.²² For GTR to push vociferously for renewed private and public commitment to any “civic ecology” at this time would have been inappropriate.²³

The current seismic and political situation and the present *modus operandi* of GTR

From June the severity of the seismic aftershocks appeared to have lessened. Further major aftershocks of 5.8 and 6.0 magnitude on the afternoon of December 23, 2011, disabused local inhabitants of that notion. There is little complacency about the worst being over. Nevertheless, there is a reinforced sense that people need to see signs of regrowth in the city. GTR and Gap Filler projects, although not greatly expanded in number, have been consolidated and a relatively busy schedule, often involving the shuttling of materials between existing and nascent sites, has been established. Once again a critical element of support for both organisations has come in the form of CCC funding, this time in the form of an Annual Plan allocation of \$100,000 for the July 2011 to June 2012 financial period (the amount was evenly divided between the two groups). The Victoria Green site has been largely deconstructed and many relocatable elements have been moved to other sites including a “pop-up” container dairy and coffee hut site in the devastated Sydenham CBD to the south of the central city and the former Piko Wholefoods site in the northeast quadrant of the “four avenues.”

Lessons learned to date include the need to make design elements more fully modular (e.g., how to get the signature brick fragment gabion baskets from one place to another without having to empty them each time). Also, the Victoria Green project was relatively “hi-spec” despite its simple appearance and a proxy price estimate would give something in the order of \$20,000 if all materials and services had been paid for upfront. If GTR is to up its output without overexploiting its volunteers or donors it will have to streamline, if not more consciously “lo-spec,” its activities in future. One of the ironies of GTR sticking absolutely to previously agreed exit dates with site owners is that it is difficult to extend the lifespan of a project. Delays are often experienced by owners over their redevelopment plans, especially from consent and insurance cover angles. By then GTR has made an alternate commitment to other sites and has begun to plan for transfer of materials and work elsewhere.

On the positive side the willingness of people to “muck in” has been remarkable. As more projects evolve people seem quite happy to lend their labours without necessarily

²² The latest rounds of zone changing have brought some relief where unfettered green zoning has been declared as was the case with some of the hill suburbs which went from white to green on September 5 2011. Elsewhere more complex and potentially disadvantageous green zoning was created on October 28 and this has placed liquefaction and lateral spreading-prone land in grey, yellow and blue subclasses requiring expensive remedial foundation work for rebuilding and repair of properties in the blue-green zones, for example.

²³ The term “civic ecology” has been advocated by Marianne Krasny and Keith Tidball based in the Department of Natural Resources at Cornell University. See, for example, Tidball, Keith; Krasny, Marianne. “From Risk to Resilience: What Role for Community Greening and Civic Ecology in Cities” in Wals, Arjen (editor) *Social Learning Towards a more Sustainable World*, Wageningen: Academic Publishers, 2007, pp.149-164.

understanding the full vision for a particular site or for GTR in general. GTR has benefitted from word of mouth, the use of web-based communication and social media such as Facebook. News media coverage has been consistently positive so far. A highlight was a special audience with *Grand Designs* television presenter and sustainable architecture and urban design advocate Kevin McCloud on October 25 during his first flying visit to Christchurch. The most recent fillip for GTR's work has been the announcement of a Christchurch Civic Trust Award on November 16. These awards typically recognise significant contributions to civic life by individuals over a long period of time but in 2011 they were specially calibrated to earthquake recovery initiatives, individual and collective. Furthermore, one of the initial aims of GTR was to act as a conduit for independent but like-minded grass roots initiatives and this now appears to be bearing fruit with the emergence of such projects as Greening Spaces and Silty Bricks.²⁴ It is also worth noting that many of the people driving GTR have a long history in environmental advocacy and project work and GTR has provided an opportunity to deal with new constituencies, both public and private.

Conclusion: Where to for urban ecology in Christchurch and where to for GTR?

From an urban ecology perspective it seems fair to say that thanks to GTR there is more ecological activity in Christchurch since the earthquakes than there would have been otherwise. People who might not otherwise have got their hands dirty on projects have participated on sites near their residences or workplaces. Offers of sites, donations of plants and construction materials, volunteer labour, paid labour and sponsorship by corporate bodies continue to accumulate. It is highly unlikely that a purely local authority-driven initiative would have unlocked such goodwill and resources. In the short term at least, and barring further crippling aftershocks within the next 1-2 years, the road ahead for GTR should be relatively manageable if it stays with its original brief of a dozen projects in any given year. Very recently a policy decision was made that GTR should attempt to register for stand-alone charitable trust status and this is currently underway.

Perhaps the t-shirts will follow but, more seriously, the most daunting prospect for GTR in the longer term will be whether or not it becomes an establishment entity, so to speak. The official government estimate given in September 2011 put the expected demolitions in the CBD over the next twelve months at 1227 or roughly 50% of the total buildings there.²⁵ In essence these properties are merely the more high profile and often highly capitalised cases. When one considers the number of badly damaged and already demolished commercial and industrial buildings in outlying parts of the metropolitan areas of Christchurch and Kaiapoi it raises the prospect of an eventual tally of cleared sites that could fall somewhere between an alarming figure of 2500 to 3000.

From a rubble-greening and urban ecology perspective this is all rather mind-boggling. Although GTR has seen literally hundreds of helpers in its activities, to date it relies on a floating constituency with no formal membership as such. A generous estimate of around fifty permanent volunteers suggests that the capacity to produce or reproduce constantly the types of interventions made so far will remain limited. Vast expanses of asphalt, compacted and sprayed gravel or otherwise unmaintained spaces may appear over the next year in Christchurch despite the best efforts of GTR. Even the joke about car-park city seems far-fetched as in some

²⁴ See <http://greeningtherubble.org.nz/wp/?p=224> and <http://greeningtherubble.org.nz/wp/?p=128> respectively.

²⁵ See <http://www.rebuildchristchurch.co.nz/blog/2011/9/cera-update-from-roger-sutton--chief-executive--26-september-2011>.

areas there may simply be nothing to park for. The other major urban ecology issue relates to the 5,500 (and climbing by the month) vacant residential sections identified by CERA in Christchurch, Kaiapoi and Brooklands which fall into a “nether estate” of some 330 hectares if based on a conservative average of 600m² per site for a residential section. In local terms this means two Hagley Parks worth of potential nothingness since to date CERA has not released its plans for the future of this land which it believes to be presently uninhabitable. One could argue that all GTR efforts should be redirected to this other greyspace since more meaningful ecological work could be done on aggregated sites.

GTR now faces some of the issues faced by the green guerrillas of the 1960s and 1970s. Should it work entirely within the establishment and, indeed, become part of the establishment, or should it retain the ability to cut and run, so to speak, and to fold in an instant if so desired? Where should it focus its activities? Should it prioritise business recovery and, if so, should it privilege corporate entities or sole traders? Should it aim to have a visible presence in every suburban Master Plan that is being produced by CCC as part of the recovery process? Should GTR be content with shifting camp from one site to another over the next few years? Should GTR produce its own Master Plan or engage in a co-ordinated public consultation-based design process such as that initiated in late 2010 by the New Zealand Institute of Landscape Architects under the rubric “Before After – Let’s Build a Better Canterbury”?²⁶ Should it demand environmental dividends or financial contributions or both from the businesses it supports? Should it attempt to gain permanent status for some sites rather than assume that every intervention will be part of some nomadic journey? Should a strict methodology for site design and construction be adopted? Should native plants be given precedence or guaranteed inclusion in each and every design? Who should design any given space?

These questions will need to be addressed over the course of the next year. Several broad alternatives will need to be considered. Firstly, and most politely and conventionally, GTR could lobby or campaign for the relevant local authority to take over a substantial part of the process and create a “quakespace” section within its own organisation on a par with its “greenspace” unit. Conversely, CCC could subcontract GTR to carry out greening work. Another tack would be for GTR to seek large-scale donations from public and private sources. More co-operatively, CCC and GTR could jointly scale-up their operations so that GTR had a special section of the existing greenspace section of Council upon which it would have first call. Alternatively, GTR might find itself fading from the picture as more radical and insurgent guerrilla greening initiatives are created, particularly in the Government red-zone lands where the impatience and frustration of inhabitants has begun to peak. GTR could align itself more with those wishing to work in the new Christchurch “netherworld” of the east and leave the CBD to its fate as planned by the CCC Central City Plan, currently before CERA for approval.

At present the interim solution is to continue independently as a voluntary group working on a project-by-project basis. GTR still deals with proposals as they come to hand in a more or less informal sense. GTR does not have a set list of preferred plants and landscape designs and does not have an “agenda” as such. The Strategic Plan has yet to be drafted. At present GTR still sees itself primarily as a conduit for community action. Yet GTR can only maintain this ambiguous position for so long. In the coming year some key structural and policy decisions will need to be made.

²⁶ See <http://www.beforeafter.co.nz/>