

# Post-disaster Landscapes

JACKY BOWRING

Disasters are a critical topic for practitioners of landscape architecture. A fundamental role of the profession is disaster prevention or mitigation through practitioners having a thorough understanding of known threats. Once we reach the 'other side' of a disaster – the aftermath – landscape architecture plays a central response in dealing with its consequences, rebuilding of settlements and infrastructure and gaining an enhanced understanding of the causes of any failures. Landscape architecture must respond not only to the physical dimensions of disaster landscapes but also to the social, psychological and spiritual aspects. Landscape's experiential potency is heightened in disasters in ways that may challenge and extend the spectrum of emotions. Identity is rooted in landscape, and massive transformation through the impact of a disaster can lead to ongoing psychological devastation. Memory and landscape are tightly intertwined as part of individual and collective identities, as connections to place and time. The ruptures caused by disasters present a challenge to remembering the lives lost and the prior condition of the landscape, the intimate attachments to places now gone and even the event itself.

This issue of *Landscape Review* considers a range of disaster landscapes. It discusses the practical and physical aspects of immediate response to disaster-struck communities and the ongoing monitoring of landscapes experiencing recurrent disasters. Experience and memory are also traced in settings as diverse as the Australian bushfire landscape and a memorial in Berlin. The articles all serve to amplify landscape architecture's potential as part of broader disciplinary and professional frameworks and through the critical and intellectual exploration of the impact of disasters on the human condition.

The 'post-disaster landscapes' theme was initiated in response to the earthquakes that have occurred in Christchurch, New Zealand, beginning in September 2010 and ongoing. The most damaging earthquake was experienced on 22 February 2011. It was a shallow magnitude 6.3 shake centred close to the city and resulted in 185 deaths, thousands of injuries and devastation to the city centre and large swathes of surrounding suburbs. The continuing nature of the earthquakes, with over 13,000 aftershocks (and still counting), defies the notion of a discrete disaster event. That the most devastating quake was not the first in the sequence undermined the idea of a logical progression from an event to recovery. Even after the 22 February aftershock, many more damaging shakes continued to rip the city apart and destabilise any feelings of recovery. Landscape architecture has featured in the post-disaster response in many ways in Christchurch, from

*Jacky Bowring is an Associate Professor of Landscape Architecture. School of Landscape Architecture, Faculty of Environment, Society and Design, PO Box 84, Lincoln University, Lincoln 7647, Christchurch, Aotearoa New Zealand.*  
*Telephone: +64-3-325-3838, extn 8439*  
*Fax: +64-3-325-3857*  
*Email: jacky.bowring@lincoln.ac.nz*

## KEY WORDS

*Disaster response*  
*Visual site analysis*  
*Counter-mapping*  
*Memorials*  
*Identity*  
*Earthquakes*  
*Tsunamis*  
*Landslides*  
*Mudslides*  
*Hurricanes*  
*Genocide*  
*Bushfires*

## EDITORIAL

the design and build of temporary parks on sites left vacant by collapse and demolition through to taking a lead role in the 'blueprint' developed for the central city's rebuild. The coalescing layers of hydrology, geology and built form have been scrutinised carefully, manifesting the desire to answer the 'why' questions and avoid a return of such an event. While the 'givens' of the biophysical world are immutable, our decisions on how and where to live can be transformative in terms of disaster avoidance.

Beginning with the practicalities of post-disaster response, James Wescoat and Shun Kanda describe the challenges involved in engaging with an immediate post-event landscape. In their article, 'Rapid Visual Site Analysis for Post-disaster Landscape Planning: Expanding the Range of Choice in a Tsunami-affected Town in Japan', they capture the daunting experience of entering into a landscape devastated by a natural disaster. Undertaking an action–research project that combined the post-disaster planning approach of field-based site analysis with visual methods for assessing seismic and tsunami hazards, the authors and teams of students sought to identify potential sites for new community centres. While it can be tempting to jump to conclusions about the ideal location of a community centre, several factors need to be taken into account, with the first challenge being consideration of broad rather than limited possibilities. Using approaches such as transect mapping and slope analysis, the teams carried out a comprehensive fieldwork study. This pilot study identified factors needing further work to maximise the effectiveness of rapid analysis in a post-disaster situation. One of these factors is to develop a package of materials for use by local community-based teams to allow for a response that can cover a landscape where there are numerous sites needing investigation.

Community involvement is also identified as a priority in helping to understand disasters. Paula Villagra and Eduardo Jaramillo demonstrate in their article on the eruption of the Puyehue-Cordón Caulle volcanic complex in southern Chile that providing information about a disaster heightens community awareness and helps people to comprehend what has occurred. Villagra and Jaramillo explain how opportunities to convey information to the public about eruption events were often not realised in the media, which led to misunderstandings about what was happening. Careful documentation of the subtle changes in the landscape following the eruption helped with the community's apprehension of process, and through a public exhibition it was possible for people to become familiar with how these changes were manifested. A story-telling approach was used and multiple senses were employed to narrate the effects of the eruption on the landscape. An interdisciplinary approach helped to provide a robust understanding of the event and prevent people from being influenced by incorrect information. It also allowed for material that might otherwise have been confined to the academic discourse to be shared with the community.

Many natural disasters are recurrent events, and this presents challenges for the landscape response. The landslides discussed by Shenglin Elijah Chang and Pochun Huang in their article on Shenmu village in Taiwan have occurred repeatedly over the past 16 years, highlighting the challenges the community faces by these continual threats. In contrast to the widespread devastation experienced in the March 2011 Japanese tsunami, the Shenmu village event is

small in the geographical scale of impact but broad in terms of the temporal dimension, with at least 18 landslides and mudslides occurring between 1994 and 2012. Paradoxically, despite the ever-present prospect of disaster, the residents have elected not to abandon their village. Through their ongoing work in the village since 1998, Chang and Huang reveal how residents negotiate risk and counter the central and local governments' advice to move. Reluctant to leave their homes – the core of their culture and identity – the Shenmu villagers of the Hakka community have instead developed a practice of dwelling in two places: they can retreat when necessary and then return. They have established a sense of resilience from developing their own rescue procedures combined with the ability to relocate to alternative dwellings. Over time, it may be possible for the villagers to transfer attachment to new dwellings but, for now, they maintain a sense of flexibility and community-based recovery that allows for ideas of home to persist even in the face of inevitable disaster.

Community involvement in disaster response can amplify the political dimensions of planning and management in hazard-prone areas. Joern Langhorst, in his article 'Recovering Place: On the Agency of Post-disaster Landscapes', discusses work undertaken in New Orleans following hurricane Katrina and illustrates how politics can influence who is most at the mercy of disasters and the capacity of groups to respond to crises. In an area of New Orleans already disempowered by political processes, the disaster of hurricane Katrina served to reveal embedded inequalities that led to poor communities being worst hit by the event. Langhorst and his colleagues and students actively worked with the community, realising that 'landscape architecture as a field would need to find ways to better respond to the challenges of disaster and post-disaster landscapes'. A series of design studios and seminars provided an armature on which to construct a response, impelled by the notion of 'counter-mapping' – a subversion of the usual power biases that underpin the act of mapping. Community involvement was vital to the counter-mapping and led ultimately to the construction of a landscape intervention – a platform that allowed for a positive heightening of the connection to the wetlands close by. Volunteers constructed the platform, a structure that has symbolic power far beyond its mere form, sitting as it does on the levee that is the borderland between the human-ordered landscape and un-orderable processes of nature beyond. The platform is also a kind of suture, stitching the community back into the landscape and affording its viability, where, as in the Taiwanese Shenmu village, there is an enduring need to stay attached to the place of home.

The two final articles in this issue confront the existential dimensions of disaster experience and response. The construction of memorials is one of the most explicit design-based post-disaster actions. As complex sites of emotion and experience, memorials are also shaped and interpreted socially and politically. Karen Wilson Baptist views one of the twenty-first century's most potent and controversial memorials – Peter Eisenman's Memorial to the Murdered Jews of Europe – through the lens of the sublime. Baptist's engagement with the memorial prompts a reflection on the sublime and its evocation of sites of disaster or sites of remembering. The two are not necessarily the same thing, and the knowledge of the relationship between a memorial's focus and a site's history can unleash

the sublime. This is particularly powerful in Baptist's unexpected experience at the site of the 9/11 memorial in New York, where she was suddenly struck by the resonance between the water falling from the fountains and the victims who fell from the buildings. The impossibility of memorials to perform remembrance on our behalf places upon each of us our own responsibility to remember. As at the Memorial to the Murdered Jews of Europe no answers are given, no script is provided and each visitor must carry out their own work of remembering. Here, in this place of memory for an entirely human-induced disaster, the visitor must take up this responsibility, and this underscores why memorials matter. As Baptist writes, 'we still erect memorials so we can commemorate the dead, ease the soul of the witnesses, acknowledge the grief of survivors and repair the tears in the flesh of the world'.

Stewart Williams, in 'Rendering the Untimely Event of Disaster Ever Present', points to the dilemma of, on the one hand, a need for some degree of certainty about the scale and nature of disaster events and, on the other, their absolute unknowability. The landscape Williams explores is one where fire is always an imminent presence but one that hovers outside the bounds of graspability, echoing Baptist's recounting of the sublime. Following Tom Griffiths, Williams provocatively suggests that returning to a landscape of known threat is an experiment, a sense of constantly testing the possibility of living in a bushfire landscape. In his own poetic exploration of such a landscape, Williams takes the notion of experimentation into the realm of time and experience, an excursion of embodied experience through a place that manifests both permanence and constant flux.

Williams delivers us to the necessary confrontation and encounter that arises from disasters. After all, it is well established that disasters are never 'natural' – either because they are acts of humans against humans, as in the case of genocide, or a result of humans being in the way of natural processes. Earthquakes, tsunamis, floods, landslides, volcanic eruptions – all of these frightening and damaging events are only disasters when they affect communities. The ultimate challenge therefore is how we respond and react to disasters, in physical terms through design and in metaphysical ways through how we process and even poeticise the events. Nature and culture, art and science, thinking and dwelling continue to drive the investigation of post-disaster landscapes, with this issue of *Landscape Review* offering insight into current research and reflection.