

From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch

Steve Matthewman

University of Auckland | Waipapa Taumata Rau

Abstract

The Canterbury Earthquake Sequence (2010, 2011) devastated central Christchurch, necessitating wholesale urban renewal. But national government's ensuing recovery efforts were castigated for exemplifying global worst practice, providing a textbook case in how not to undertake recovery. Alliteratively, I argue that the issues underpinning this failure to build back better cluster around questions of complexity, control and coherence. The government's blueprint, the Christchurch Central Recovery Plan, illuminates several fantasies of mastery associated with the technocratic mindset: that a central authority can dictate local interests, that community is homogenous, that their wishes can be proscribed from the top down, and that a fixed recovery plan can deal with emergent complexities. For, while we can formulate blueprints, design buildings and even mandate precincts, we cannot engineer urban life. Having identified problems, we can look to community activities in Ōtautahi to recommend three best-practice solutions: enacting co-governance (between Crown and iwi – Māori kinship group, tribe, nation), undertaking meaningful collaboration (between authorities and affected communities) and harnessing *communitas* (the distinctive social energy that emerges after disaster). All three elements often combine as social infrastructure.

Key words

Build Back Better, *communitas*, complexity, disaster recovery, Māori, social infrastructure

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

Introduction

The Canterbury Earthquake Sequence (2010-11) killed over 185 people, injured 7000 and displaced a further 8000 households. Horizontal infrastructure was hugely impacted: more than one and a half million square kilometres of roading required repair, as did over six hundred and fifty kilometres of sewer pipes and seventy kilometres of water mains.

Christchurch's CBD effectively had to be rebuilt, inaugurating the biggest urban recovery in New Zealand's history. While some saw the opportunity to build the first city of the twenty first century, many lamented the fact that, instead, the last city of the twentieth was built instead. Indeed, it is often taken to be an example of worst-practice recovery (Matthewman & Byrd, 2022). This article offers reasons why the Christchurch rebuild was so poorly regarded, and why failure to build back better after disaster is so routine. To do so, I centre issues relating to questions of complexity, control and coherence. Yet there are resources for hope, drawn from the impacted communities themselves. They furnish us with models for post-disaster flourishing. Taking inspiration from them, I conclude with some suggestions as to what best-practice recovery looks like.

Why Don't We Build Back Better?

Surveys of recovery literatures show that communities routinely fail to build back better following disaster, although the metrics that are employed to determine this and their suitability for doing so remain highly contested (Cheek & Chmutina, 2022). There is a tendency to default to simple "countable" measures, like the number of buildings restored. But rebuilding a city also entails rebuilding lives, neighbourhoods, affective communities, social relations, occupations and aspirations. Suffice it to say that recovery is deeply complex, and that it also entails recovering a sense of purpose and a means to prosper within the new terrain.

Yet all too frequently, expertise is vested in centralised authorities, highly political issues are rendered technical (on this see Barry, 2001), diverse (and differently impacted) communities are homogenised, and elite interests prevail. As Lawrence Vale and Thomas Campanella

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

(2005: 7) note in *The Resilient City*: ‘We can observe who is in power—and who is not—by examining closely what gets built’. As a senior figure in the Christchurch rebuild told us:

I’d cynically say that consultation can also mean that the rich will organise, just get what they want. So, for example, one of the biggest Christchurch City Council projects that has been done so far, was starting the Art Gallery, because the Art Gallery had this incredibly well organised group, the stakeholders, who said: “Unless we have the Art Gallery really super strong, base-isolated, the Rembrandts and Picasso’s will never come back”. [P]eople who have got their shit together, they’ll get what they want.

He continued:

While all that was happening; well, there wasn’t anywhere for the poor people of the Eastern suburbs to go and play rugby league, they didn’t have a field operating for a long time in those Eastern suburbs, while all those sorts of discussions were going on. So, that’s the thing about these environments, the leaders get busy, but the well-resourced leaders can continue to operate and lobby, and kind of get what they want. (Anonymous, 2018).

Initially, citizens had reasons for hope. Christchurch City Council was lauded for its “Share an Idea” process of public ‘conversations’ which anticipated the central city’s future. This solicited 106,000 ideas from 60,000 citizens. The local mandate was clear: they wanted a green, compact, walkable city, which would be fit to face the environmental challenges of the twenty first century. Alas, Share an Idea (colloquially known as “The People’s Plan”) was replaced by the national government’s own blueprint, the “Christchurch Central Recovery Plan”. This official, top-down, vision offered a grand plan with dedicated precincts and signature builds. At interview, one of the country’s most famous activists, John Minto (2019), said that ‘Share an Idea’ was ‘an outpouring of what is at the heart and soul of Christchurch’, one of the country’s most significant exercises in democracy, whereas the government’s Recovery Plan was simply ‘a corporate plan’ based on ‘private sector-led redevelopment, and it’s been an absolute disaster’.

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

In a similar vein, one interviewee asked of the government's plans:

Who is the target; what's their vision of the people that will live in Christchurch? I sometimes think that the vision that they have for the people who live in Christchurch are those tiny little people that they have on those architect's models that they have, right? You always look at those tiny little people and you think, "Do any of those little people look like me? There's no fat ginger tosser with a souvlaki spilt down their front; they're all businesspeople with suits".

I mean, who is their audience; who do they think is going to live in Christchurch? (Anon. 2019).

Complexity

Disasters are complex events within rapidly changing environments. Actors have to work with imperfect knowledge, governance structures can be compromised, and authorities are assailed by multiple competing resource claims. Efforts to build back better therefore take place in super politically charged domains.

Indeed, the city is the paradigmatic example of a complex system (Batty 2008: 769). Actions meet with reactions. Unintended consequences are rife. Small inputs can have large effects and vice versa. Tracking cause and effect in complex systems is difficult. Individual actions have multiple effects, which may be delayed, indirect and unwanted. Moreover, these effects extend temporally and spatially. Complex systems also display emergent properties which are not reducible to individual parts of the system, rather they develop through their interactions. This renders prediction and control of such systems all but impossible. No single person, group or authority understands how a city works. All of which suggests that it would be sensible to see the city as a process rather than a product, an ongoing series of experiments as opposed to a completed accomplishment.

The abovementioned points – complex environments, competing claims, differential impacts, and the power of elite interests – hold for all disasters, but Ōtautahi Christchurch also has Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

several unique challenges. First, the city is struggling because it is not dealing with *a* disaster, which would be challenging enough, but with multiple concatenating disasters. There have been tens of thousands of earthquakes. It has also had to contend with devastating flooding, much of it caused by the city's post-quakes subsidence (2014, 2019, 2021, 2022) and rural-urban interface wildfires in the Port Hills (2017). And now it is the site of the country's worst modern terrorist attacks, the shootings at the Al Noor Mosque and the Linwood Islamic Centre which killed 51 people (2019). The region is ground zero for the country's water politics, with freshwater pollution (linked to the region's intensive dairy farming) a significant issue, and the COVID-19 pandemic is causing huge difficulties for a city that considers itself the gateway to the South Island.

Second, the disasters have presented challenges that have never previously arisen, and therefore for which we have no template. Over 600 hectares of land was "red zoned", which is to say deemed too impractical to rebuild on because repair would take too long, be uneconomic or the new structures would be at risk from further events (like flooding). The Crown acquired over 8,000 properties via red zoning, the majority of them along the course of Avon-Ōtākaro River, from the centre of the city eastwards to the sea. This was a novel and challenging process, being the first time that Land Information New Zealand has had to remove streets from the map. And, adding to the challenges, we should note the scale of the issue: it is arguably the greatest area of managed retreat in an urban setting anywhere in the world (Christchurch City Council, 2021).

Third, while there are high levels of insurance in New Zealand, the coverage for earthquakes is provided by a mixture of state and private insurance for residential properties, the former via the Earthquake Commission (EQC). This led to what commentators have called 'the most complicated insurance settlement program experienced anywhere' (King *et al.*, 2014: 475), which in turn led to significant delays and serious stress for many households. A Public Enquiry into the Earthquake Commission published its largely negative findings in 2020.

Fourth, there is an obvious structural problem which prevents local authorities from leading their own recovery: they simply lack the resources to do so. Most council income is derived from tax on property. Central government monopolises public expenditure to an extent Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

almost unseen in other OECD countries, leaving local government a meagre 11% of GDP (Local Government NZ, 2023).

Control

In the abstract I noted that the government's blueprint, the Christchurch Central Recovery Plan, illuminates several fantasies of control associated with the technocratic mindset: that a central authority can dictate local interests, that community can be proscribed from the top down, and that a fixed recovery plan can deal with emergent complexities. For, while we can formulate plans, design buildings and even precincts, we cannot engineer urban life.

This flawed idea that humans can create a world of their own goes to the core of the modern project, as numerous scholars have noted (Rosa, 2020; Sloterdijk, 2020). It 'promises us a world in which things turn out as planned' (Sloterdijk, 2020: 2), but in actuality, control at all scales evades us. This will-to-order is always undone. Things do not turn out as anticipated. Sloterdijk (2020: 5) says that our actions always have unintended consequences, setting in motion things we neither consider nor desire, producing a "kinetic surplus" as he calls it. We should therefore stop apprehending the world as something to be dominated, and instead open ourselves up to the fleeting, contingent and unexpected.

Rosa and Sloterdijk have their limitations. The world is even harder to control than they suggest as agency is not a uniquely human quality. Not all actors are human. A range of material and biological vitalities are also in play (Mathewman, 2024), which is to say that things and life forms other than human also have effects. Buildings and infrastructure, for example, channel social action in particular ways, permitting some behaviours while making others far more difficult. And at various times, progress with the rebuild has been hampered by an unanticipated influx of animals: Canada Geese upsetting pedestrians in the newly developed Avon Loop (McDonald, 2020) and black billed gulls nesting in the former PWC tower on Armagh Street preventing construction (1News, 2019). For this reason, a recent book describes the post-disaster city as 'a theatre involving both a cast of multiple kinds of actors and a plethora of diverse but inter-related kinds of performances' (Cloke *et al.*, 2023: Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

181). As Adrian Franklin (2017: 202–203) puts it, a host of non-human others are necessarily also ‘incorporated into the life, subjectivities and structures of modern cities... where such things are so promiscuously exchanged, messed up and interpenetrated and with such momentous impact’. Not that all agents act equally. Indeed, ‘the impression that deep seated forces of the earth can leave on social worlds, is out of all proportion to the power of social actors to legislate over the lithosphere’ (Clark, 2011: xvi).

Clearly the most “momentous impact” was created by the quakes themselves. Tectonic forces have been the greatest actor, having the most significant effects. As Ivan Iafeta (2019), head of Regenerate Christchurch, told us: ‘Essentially, I have heard the experience that Christchurch went through in 2010 described as 50 to 100 years of climate change impact accelerated within 40 seconds; so within 40 seconds, the land stretched and moved sideways, and subsided’. This means that the quakes have undermined the project to build back better in profound senses, confounding local hopes for a compact, walkable, sustainable city. Red zoning of swathes of the city’s east pushed populations into satellite towns, entrenching urban sprawl and car dependence, and the quakes have made the place more susceptible to river flooding and sea-level rise. It therefore behoves us to pay attention to the natures ‘that both make ... and undermine’ the city (Franklin, 2017: 205).

Coherence

Recovery plans often belie a false sense of coherence. Society is not something whole, rather it is a collective composed of contingent connections. There is no such thing as Christchurch society per se, rather there are different individuals, groups, communities, commercial organisations, and official authorities (council, governmental and iwi [Māori nation]) with cross-cutting memberships and contesting notions of how the city should be recomposed. (And, as we have already noted, not all of the relevant actors in the story are human.) Authorities, then, are inevitably dealing with a fractured publics.

Historian Reinhart Koselleck (2018) provides us with a useful framework for thinking through these antagonisms. He argues that any major event will unfold, and should be examined through, three key oppositions. Koselleck calls them before and after, inside and Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

outside, and above and below. Before and after refers to generational differences. Inside and outside refers to the politics of difference, of in-group and out-group, friend and foe. It also speaks to notions of public and private, of what is secret and what is known, of how decisions are made and, crucially, by whom. Finally, above and below refers to the social hierarchies that define human existence. For, just as there is no coherent society, there is no truly equal one either.

Let us expand on Koselleck's point about before and after. A decade on, youth await their place. Younger inhabitants' memories do not extend beyond a city that is not broken. At the time of the earthquakes Mayor Bob Parker famously said that the Government's blueprint for the city would result in a "glossy rest home" (Dally, 2012). Compounding matters, Christchurch has an older demographic profile compared to other New Zealand cities. The head of one of the rebuild agencies observed that senior citizens also tend to have a disproportionate sense of stewardship over the central city. This cohort came of age prior to mass private vehicle ownership, suburbanisation and the subsequent "mallification" of Christchurch, when the urban centre also served as the centre of social gravity. It was the hub for transport, retail and recreation.

Aside from a skate park and a couple of Instagrammable swings, there is still precious little to entice young people back into the city or to tell them that it is their place too. As fifteen-year-old youth leader Dom Wilson (2019) wrote in the local newspaper: "Young people ... don't feel Christchurch is a place where it is actually truly their home".

Disasters as Generative Moments: Resources for Hope

As Thomas Homer-Dixon (2007: 23) notes, a disaster can,

shatter the forces standing in the way of change and the deeply entrenched and too-comfortable mindsets that keep people from seeing exciting possibilities for renewal. It can, in short, be a source of immense creativity – a shock that opens up political, social, and psychological space for fresh ideas, actions, institutions, and technologies that weren't possible before.

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

Physical and political structures were rendered precarious by the Canterbury Earthquake Sequence, as was the meaning of Christchurch itself. This produced a generative moment, literally creating spaces for new ways of being (Cretney, 2017: 179). Cloke *et al.* (2023: 8) write, ‘it can be argued that the collective outcome of a geo-event such as the sequence of events in and around Christchurch can also be to tear the fabric of normal practice in the world, and to foster new senses of life and place as well as provoking a desire to return to the status quo’. Latent networks were activated, others newly emerged.

Their book devotes a lot of attention to covering this ‘creative alterity’ (ibid.: 141) unleashed by the geo-event: increased forms of artistic expression, novel constellations of collective organisation, new modes of active citizenship. These developments tended to be more collaborative and experimental than what had existed pre-disaster: guerilla gardening, urban greening, community gardens, transitional urbanism projects, various voluntary organisations. Many of them – Gap Filler, Greening the Rubble, Life in Vacant Spaces, the Student Volunteer Army – have become global exemplars for community-driven recovery.

So, while it can certainly be said that a lot is lost to the city’s disasters – lives, wellbeing, much loved communities and treasured built heritage – importantly, a lot has also been gained – new forms of community organisation and mutual aid, popular new builds which serve broad constituencies, and ‘the expression of identities and interests not well served in the pre-earthquake city’ (Cloke *et al.*, 2023: 65).

Pre-quakes the city had been regarded as ‘the most conservative in a fairly conservative country’ (Anon., n.d.), and as the quintessential English colonial settlement. Local iwi [tribe, nation] Ngāi Tahu made history following the earthquakes, marking the first time globally that an Indigenous group has been an official party to recovery following major disaster. The settler city of Christchurch is transitioning into Ōtautahi. Ngāi Tahu’s then Kaiwhakahaere [Chair] said: ‘The earthquakes gave us a unique opportunity to design a cityscape that acknowledges our shared past with our colonisers, our shared experiences and our common future, which certainly wasn’t there beforehand’ (Solomon in Cloke *et al.*, 2023: 115).

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

Similarly, The Indigenous Urbanism podcast noted that the earthquakes provided ‘a chance to build, more or less from scratch, a post-colonial city, inclusive of everyone; and with a strong recognition of the mana whenua [people with customary authority] of local hapū [subtribe], Ngāi Tūāhuriri” (Kake, 2018).

Concluding Thoughts

Building back better is always going to be challenging as we are inevitably dealing with a large variety of agents, networks and ecosystems in all of their interactive complexity. In terms of how best-practice recovery should proceed, it should ideally be localised, small scale, inclusive, collaborative and open-ended, subject to revision in light of subsequent developments. In Maarten Hajer’s (2016: 59) words, ‘Smart urbanism is about constant learning, inspiration, measuring, analysing and readjusting. It is necessary to rethink how public administrations operate within increasingly complex untameable environments. The art of urban planning must become the process of facilitating the untamed intelligence of a given city’s citizens’.

So, if we look at standard plans to build back better we could say that they require more openness (to the range of actors involved), more time (to consider the dances of agencies between actors, and to understand both the temporalities of failure, and success, as regeneration can take decades), and more humility (as authorities control less than they think). Plans to build back better fail because they subscribe to a false belief that humanity has mastery over everything else, that it can blueprint its destiny alone. This is patently not the case.

Drawing on the Christchurch case we can make three alliterative suggestions as to what should be done post-disaster. We should foster co-governance, consultation and communitas.

Co-Governance: In settler societies all cities exist on unceded Indigenous lands. This must be the starting point of our deliberations and the guiding thread for subsequent actions. Recovery must therefore include those with customary authority in the land. Fittingly, Ngāi Tahu were an official party to the recovery. Their presence is being written into the city, helping to turn Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

this most English of colonial settlements into a genuinely post-colonial place. Indeed, thanks to their efforts central Christchurch is now a more recognisably Māori city than central Auckland, which styles itself the capital city of Polynesia.

Collaboration: The city council was rightly celebrated for its inclusive ‘Share an Idea’ consultative process. Central government usurped this with its own plan. Unsurprisingly this proved deeply unpopular. At one point, seventy five percent of those surveyed said that they felt the government’s recovery priorities were at odds with local needs (Allright, 2014). Te Mauri O Ōtautahi (the Pulse of Christchurch) is a research project that Research First runs annually throughout Greater Christchurch. Their research shows that those reporting the strongest sense of recovery are the people who feel that they have been heard (Davidson, personal communication, April 2021). Thus, consultation alone is never enough (Stolte, 2023). Meaningful action must follow. Citizens should feel that they are included in decision-making.

The 600 hectares of red zoned land cannot be privately owned and is subject to a unique co-governance arrangement between Council and Ngāi Tūāhuriri. Regenerate Christchurch undertook extensive public consultation in order to formulate the Ōtākaro Avon River Corridor Regeneration Plan (Department of Prime Minister and Cabinet, 2019). This provides an important example of accountability as it respects the public’s wishes for ecological restoration and a green spine running from city to sea. In so doing, it promises to become the counterpoint to the government’s much-derided blueprint: a “greenprint” that will be the “people’s anchor project”.

Communitas: Can be defined as the coming together of people to make a world in common. Disasters unleash a peculiar social energy, an outpouring of pro-social behaviour and improvisational mutual aid which arises from everyone being affected by something so profound. This has been observed for as long as there is a sociology of disaster (Matthewman and Uekusa, 2021). Oftentimes, these social organisations enacting mutual aid are not supported by officials. For example, both NZ Civil Defence and the NZ Police discouraged the Student Volunteer Army, who successfully mobilised to help fellow Cantabrians clean-up in the aftermath of the quakes. As one of their founders said: ‘If we listened to the rules after

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

the earthquakes SVA would never have existed' (Johnson, 2020). Wisely, the students ignored the authorities. They have been one of the disaster's true success stories. Unusually for a voluntary group they have also become a "repeat emergent" emergency response organisation (Carlton and Mills, 2017), also aiding after the Kaikōura earthquake (2016), the 2021 Canterbury flood, and with the current COVID-19 pandemic. They also now offer programmes for primary, secondary and tertiary level students across the country, and thus offer an inspirational model for youth leadership nationally.

Social infrastructure: Recoveries routinely privilege physical "lifeline" infrastructures, those hard technological systems that sustain life, like communication, energy and transportation systems, rather than social infrastructure. Christchurch was no different in this regard. Yet research suggests that it is social rather than physical infrastructure that is the ultimate driver of recovery and resilience (Klinenberg, 2018). Following Snelson and Collis (2021: 11), we can say that social infrastructure has spatial, organisational and associational components: i), physical places enable various individuals and communities to interact and congregate, ii) different organisations (including voluntary groups and social enterprises) support these activities, and iii) through physical and virtual means (e.g., community transport and online platforms), people get a sense of connection with each other. So, social infrastructure refers to facilities, spaces and services which support quality of life and community wellbeing, and which encourage social mixing of diverse populations. We might also think of it as the ground on which social capital develops.

Here we might want to reflect on post-quake builds that are unpopular and popular. Unpopular builds do not seem to speak to local needs. Take the government-mandated convention centre, Te Pae. Few people in the city see a pressing need for it. It is frequently referred to as a white elephant. There is no clear business case for it. The old convention centre was significantly smaller, and it could never realise a profit. Te Pae's scale is arresting. It cuts across Gloucester Street, blocking the former views and public access through the city. Some liken it to a Berlin Wall. Others see it as a powerful statement about who the central city is *really* for. One local planner quipped: 'It will be full of dentists from Nebraska and Alabama one day' (Lunday quoted in Smythe, 2016).

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

By contrast, the most popular post-quake builds have been those which are inclusive, accessible to all, that require no cost to enter and in which no one needs to explain their presence. Think, for example, of the places in a modern city where the homeless are welcome. These places include Tūranga, the central city library, the Margaret Mahy Family Playground, and The Avon River Precinct – Te Papa Ōtākaro. All are classic examples of social infrastructure, and all were realised only after significant consultation with key groups: mana whenua, children, members of the public. And, in their design, reflecting Ngāi Tūāhuriri values, narratives and hopes (Brankin, 2016), they could only exist in this very place. These preferred builds signpost the way to more fruitful disaster recoveries: radically local endeavours that adhere to principles of co-governance and collaboration, while harnessing communitas.

Ethics Approval

The University of Auckland Human Participants Ethics Committee granted ethics certification for this study (019995).

Funding

This research was supported by the Royal Society of New Zealand Marsden Fund (16-UOA-118).

References

- 1News (2019) World's Rarest Gulls Find Home in Ruins of Building Destroyed in Christchurch Earthquake. <https://www.tvnz.co.nz/one-news/new-zealand/world-s-rarest-gulls-find-home-in-ruins-building-destroyed-christchurch-earthquake>
- Allright.org (2014). *A Summary of the All Right? Campaign Research Findings*. http://allright.org.nz/media/uploads/AllRightResearchSummary_2_2.pdf
- Anon. (n.d.). Warren & Mahoney in Christchurch 1. Te Papa. <https://blog.tepapa.govt.nz/wp-content/uploads/2009/03/2008-07BlockDigital-WAMChchGuide1.pdf>
- Anon. (2019). *Interview: Former Christchurch Resident*. North Island 27 June.
- Anon. (2018). *Interview: Senior Rebuild Agency Administrator*. Christchurch 23 April.
- Barry, A. (2001). *Political Machines: Governing a Technological Society*. A&C Black.
- Batty, M. (2008). The Size, Scale, and Shape of Cities. *Science*, Vol. 319, No. 5864, 769-771
- Brankin, K.A. (2016). Toi Iho: Bringing Soul to the Rebuild. *Te Karaka*, 3 April. https://ngaitahu.iwi.nz/our_stories/toi-ihobringing-soul-to-the-rebuild/
- Carlton, S., & Mills, C. E. (2017). The Student Volunteer Army: A 'Repeat Emergent' Emergency Response Organisation. *Disasters*, Vol. 41, No. 4, 764–787.
- Cheek, W., & Chmutina, K. (2022). Measuring Resilience in the Assumed City. *International Journal of Disaster Risk Science*, Vol. 13, 317–329. <https://doi.org/10.1007/s13753-022-00410-9>
- Christchurch City Council (2021). *Sustainability Fund Decision Matrix*. https://christchurch.infocouncil.biz/Open/2021/12/SACRC_20211208_AGN_5473_AT_files/SACRC_20211208_AGN_5473_AT_Attachment_34782_2.PDF
- Clark, N. (2011). *Inhuman Nature: Sociable Life on a Dynamic Planet*, Sage.
- Cloke, P., Conradson, D., Pawson, E., & Perkins, H.C. (2023). *The Post-earthquake City: Disaster and Recovery in Christchurch, New Zealand*, Routledge.
- Cretney, R. (2017). *The Post-Disaster City: Crisis Politics and Social Change in Community Led Earthquake Recovery*. PhD Thesis, RMIT University.
- Dally, J. (2012). Christchurch a 'Glossy Rest Home'? *Stuff*, 10 December. <https://www.stuff.co.nz/editors-picks/8057234/Christchurch-a-glossy-rest-home>
- Davidson, C., (2021). *Director, Research First: Personal Communication*, 14 April.

Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

- Department of Prime Minister and Cabinet (2019). *Ōtākaro Avon River Corridor Regeneration Plan*. <https://www.dpmc.govt.nz/our-programmes/greater-christchurch-recovery-and-regeneration/recovery-and-regeneration-plans/otakaro-avon-river-corridor-regeneration-plan>
- Franklin, A. (2017). The More-Than-Human City. *The Sociological Review*, Vol. 65, No. 2, 202–217.
- Hajer, M.A. (2016). On Being Smart about Cities: Seven Considerations for a New Urban Planning and Design. In Allen, A., Lampis, A., Swilling, M. *Untamed Urbanisms* pp. 50-63. Routledge.
- Homer-Dixon, T.F. (2007). *The Upside of Down: Catastrophe, Creativity and the Renewal of Civilization*, Souvenir.
- Iafeta, I. (2019) *Interview: Head of Regenerate Christchurch*, 6 November.
- Johnson, S. (2020). Sam and a Vision for 2050. *The Tuesday Club*, 9 November. <https://www.facebook.com/tuesdayclubchch/videos/661224814585687/>
- Kake, J. (Host). (2018). Ōtautahi Revealed. *Indigenous Urbanism*. <https://player.fm/series/indigenous-urbanism/otautahi-revealed>
- King, A., Middleton, D., Brown, C., Johnston, D., & Johal, S. (2014). Insurance: Its role in recovery from the 2010–2011 Canterbury earthquake sequence. *Earthquake Spectra*, No. 30, Vol. (1), 475-491.
- Klinenberg, E. (2018). *Palaces for the People: How Social Infrastructure Can Help Fight Inequality, Polarization, and the Decline of Civic Life*, Crown.
- Koselleck, R. (2018). Historik and Hermeneutics. In Franzel, S. & Hoffmann, S. L. *Sediments of Time: On Possible Histories* pp. 41–59. Stanford University Press.
- Local Government New Zealand (2023). *Local Government Finance*. <https://www.lgnz.co.nz/local-government-in-nz/new-section-page/>
- Matthewman, S. (2024). We Have Never Built Back Better: Using STS to Account for the Many Failures of Disaster Recovery. In Franklin, A. *The Routledge International Handbook of More-Than-Human Studies* pp. 267-279. Routledge.
- Matthewman, S., & Byrd, H. (2022). Why Don't We "Build Back Better"? The Complexities of Re-constituting Urban Form. In Uekusa, S., Matthewman, S., & Glavovic B. *A Decade of Disaster Experiences in Ōtautahi Christchurch: Critical Disaster Studies Perspectives* pp. 277-298. Springer Nature.
- Mathewman: From Worst-Practice Disaster Recovery to Best: Lessons from Ōtautahi Christchurch.

- Matthewman, S. & Uekusa, S. (2021). Theorizing Disaster Communitas. *Theory and Society*, Vol. 50, 965–984.
- McDonald L (2020) Pedestrians left goose stepping on \$2 million ‘poop loop’. *Stuff*, 26 May. <https://www.stuff.co.nz/national/121631211/pedestrians-left-goose-stepping-on-2-million-poop-loop>
- Minto, J. (2019). *Interview: Activist and Mayoral Candidate*, 4 November.
- Public Enquiry into the Earthquake Commission* (2020). <https://www.dpmc.govt.nz/sites/default/files/2021-01/summary-of-feedback-from-the-inquirys-public-engagement.pdf>
- Rosa, H. (2020). *The Uncontrollability of the World*, Polity.
- Sloterdijk, P. (2020). *Infinite Mobilization*, Polity.
- Smythe, G. (2016). Are We Rebuilding the City Centre We Dreamed Of? *Frank Film*. <https://frankfilm.co.nz/web-series/chch-dilemmas-2016/central-city/>
- Snelson, S., & Collis, J. (2021). The Impacts of Social Infrastructure Investment: A Report for Local Trust. *Frontier Economics*. https://localtrust.org.uk/wp-content/uploads/2021/07/Frontier-Economics_the-impacts-of-social-infrastructure-investment.pdf
- Stolte, G. (2022) *Consultation* is the new C-word. *American Ethnologist*, Vol. 50, 431-438.
- Vale, L., & Campanella, T. J. (2005). *The Resilient City: How Modern Cities Recover from Disaster*. Oxford University Press.
- Wilson, D. (2019). Creating a City for Youth: ‘I Don’t Remember a Christchurch that wasn’t Broken’. *Stuff*, 7 September. <https://www.stuff.co.nz/the-press/news/115609987/creating-a-city-for-youth-i-dont-remember-a-christchurch-that-wasnt-broken>