The Port Hills fire and the rhetoric of lessons learned

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Abstract

Since the Port Hills fire of February 2017, several reviews and promises of improvement have been generated from local government up to central government level. The incident was the final trigger for a government-commissioned investigation which recommended the biggest overhaul of New Zealand's civil defence arrangements since 2002. Change is clearly required, and it has been openly acknowledged by some agencies that their response was deficient in certain respects. Through documentary analysis of reviews, reports, newspaper or media articles and social media sources, this article asks: What has changed? It questions the rhetoric of lessons learned that has accompanied such reviews especially in relation to how these two words are defined in the lessons management literature. It is argued that no integrated, shared-responsibility-focussed review, free from any pre-emptive terms of reference, has been conducted to date. Rather, government and agencies have exhibited a form of elite panic, coined by Chess and others, which has been manifested as review panic in this particular instance. The article also draws attention to the fact that the Port Hills fire was not a natural disaster. At least one fire was deliberately lit if not both. It was in effect a $30m crime which involved the loss of human life. This reality appears to have been overlooked by organisations that appear too keen to treat fire events as simply another dimension of natural hazards management rather than taking a finer-grained risk management approach. An alternative approach is signalled, especially in light of a central government policy signal released in August 2018 to introduce fly-in teams during major incidents, which could extend into creating a situational awareness group made up of local and external expertise. Opportunities and initiatives are identified for better engagement with local communities such as funding for community response plans and paying closer attention to community social media outlets.

Keywords: *lessons learned; lessons management; learning legacy; elite panic; situational awareness; social media; enabling communities.*

At the time of publishing this special issue, around two years will have elapsed since the 2017 Port Hills fire. Depending upon one's point of view, whether as a researcher, policymaker or community member, this may be either too late or too early to talk substantively about what many refer to as *lessons learned*. Those that live in Canterbury could argue that they still are learning some hard lessons from t he earthquakes of nearly a decade ago. Yet pressures at public and political levels, especially when there appears to have been a run of adverse events with similar attributes, tend to compress the review horizon; people want quick answers. The Port Hills fire has been no exception. There have been several reviews already. The most prominent among these are a Fire and Emergency New Zealand commissioned review of operational firefighting activities (Australasian Fire and Emergency Services Authorities Council Limited, 2017) and a Department of Prime Minister and Cabinet commissioned review of the civil defence response across a number of recent disaster events but precipitated by the severity of the 2017 Port Hills fire (Technical Advisory Group, 2017). Also, there has been at least one explicit lessons learned report to date by local government (Christchurch City Council, 2017a) and two post-fire Recovery Plans (Christchurch City Council, 2017b; Selwyn District Council, 2017).

The current paper does not question why such reviews were conducted. Public interest and political concern at high levels, especially in regard to a collective sense of *déjà vu* about yet another disaster has no doubt driven efforts to conduct internal and external operational reviews. Also, it is important to acknowledge that a human life was lost in the Port Hills fire. This was not a near-miss event involving only property and

possessions. However, it is also important to consider the possibility that a plethora of separate reviews around one event or across a number of unconnected events can actually compound the situation rather than resolve it. Also, the appetite for reviews, particularly if conducted hastily, may reflect underlying organisational insecurities, rather than an openness to change.

Instead of asking why, this paper attempts to step back from a customary interrogation of, for example, the interoperability and co-ordination of institutional responses. Instead, it questions the use of the term lessons learned around this event, particularly in light of the literature on lessons management. Both conceptually and in terms of overall approach, the current paper aims to bring greater focus upon the building blocks of lessons management theory (i.e., observations, insights and lessons identified) as it applies to the 2017 Port Hills fire. The conceptual aim of the current paper is to show or at least qualify the currently ill-defined usage of the term *learned*. The main research method used is analysis of official reviews and reports, newspaper and on-line media articles and social media sources - where the latter are often regarded as peripheral to the content of lessons from incidents. It should also be noted that, at the time of publication, the author had accrued fourteen years of service as a volunteer firefighter in urban, rural and rural-urban interface settings.

In terms of other key observations or insights, the current paper suggests firstly that *elite panic*, or a tendency to make pre-emptive statements and insist on rapid investigations, has obscured a larger issue: That this was not necessarily a natural hazard event. It appears to have been an act of premeditated arson at one, and most likely both, of the ignition points. This highlights how fire risk reduction is not simply a matter of reducing fuel loadings but also of policing criminal behaviour and identifying and providing psychological treatment for serial arsonists. A second suggestion is for the creation of a more independent situational awareness group at any incident. This is unlikely to be addressed by the current roll-out of the fire service re-structure or by the proposed restructuring of the Ministry of Civil Defence and Emergency Management. A third suggestion is for more subtle two-way community engagement by agencies before, during and after events. The paper concludes with suggestions for future priorities for wildfire-related research.

Disaster events and elite panic

The Port Hills fire met the conditions of an “extreme fire event” (Australasian Fire and Emergency Services Authorities Council Limited, 2017, p.43). It was the largest vegetation and property fire in recent New Zealand history and was instrumental in triggering a Technical Advisory Group investigation into how New Zealand agencies have handled a number of major disasters over the past three years (Technical Advisory Group, 2017). From a local perspective, however, the fire could be seen as just another shock in an ongoing series of shocks, both literal and metaphorical, that began in late 2010. The Canterbury Earthquakes of 2010 and 2011 caused catastrophic harm and produced more than 12,000 aftershocks in the three years that followed. There were major flooding events in Christchurch in August 2012, June 2013 and March 2014. The Shands Road fire of January 2014, on the south-western edge of the city, destroyed several houses and the Islington fire of February 2015, again on the south-western edge of the city, also damaged private dwellings. The Kaikoura earthquake of November 2016 triggered tsunami evacuations in Christchurch and Cyclone Cook and Cyclone Debbie, which struck the country in April 2017 and July 2017 respectively, had major impacts in the Canterbury region. The Mayors of Christchurch City and Selwyn District declared a local state of emergency during the latter event. More recently, Cyclone Gita, which caused widespread destruction in New Zealand in February 2018, again prompted the declaration of local states of emergency in both Christchurch City and Selwyn District.

There is no question that New Zealanders expect authorities to act on our behalf during a crisis. In New Zealand, the Ministry of Civil Defence and Emergency Management (MCDEM) is the most clearly defined embodiment of that expectation. New Zealand Police, Fire and Emergency New Zealand (FENZ), the New Zealand Defence Force and local and regional councils also routinely occupy disaster management roles. We do not expect these authorities to panic themselves or to cause or exacerbate public panic in disasters. However, there is a growing body of literature that points to a fundamental paradox in many disaster settings: Rather than victims, bystanders or the general public, it can be the organisations responsible for managing the disaster that panic and sometimes cause unnecessary harm or hinder recovery. This paradox is articulated in Rebecca

Solnit's (2009) *A Paradise Built in Hell* where she reviews government responses to a number of disaster events in different countries. Solnit argues that the hell of a disaster event is often compounded by officialdom while, when left to themselves, local people almost always make the best of a difficult situation.

The term elite panic was coined by Caron Chess and Lee Clarke (2008), to describe a multi-layered phenomenon where authorities not only fear public panic in an anticipatory sense, they often fuel public panic and in some cases panic internally. The 2005 Hurricane Katrina event in New Orleans has been identified by a number of authors as a prime example of this unfortunate phenomenon (Solnit, 2009; Tierney, Bevc, & Kuligowski, 2006). Solnit herself went so far as to say that panic and interference by powerful elites (i.e. governments) in most countries is the norm rather than the exception. Other researchers have demonstrated the pronounced absence of public panic in disasters and the ways in which improvisation and quick thinking by directly affected populations make important differences, rather than efforts to establish real or hypothetical command and control structures (Kendra & Wachtendorf, 2003; Quarantelli, 1988; Tierney et al., 2006). The use of the word *elite* is not entirely helpful since it can carry connotations of a private response from a wealthy few. However, here it is used to describe those in authority operating within particular agencies (Solnit, 2009).

In the case of the 2017 Port Hills fire, it is clear that the authorities did not panic to the extent seen in New Orleans, where state and federal authorities, fuelled by hysterical media commentary, manufactured imagery of a looting free-for-all or war-zone which overshadowed the event itself and hampered some of the rescue operations (Tierney et al., 2006). However, in what could be interpreted as anticipation of public panic, one senior police official was quick to suppress any speculation about arson as a cause of the Marley Hill fire - even when the Prime Minister commented that this could be the case. On the fourth day of the fire, Canterbury District Commander Superintendent John Price was quoted as saying "Just like any fire, we are working together to determine the cause, but it is definitely not suspicious at this stage" (Fletcher, 2017, para. 5).

Nine months later, that position had changed - due principally to the published findings of the FENZ fire investigation team (Still, 2017a, 2017b). The conclusions reached by FENZ investigators were independent from the NZ Police investigation, which is still ongoing at the time of publishing the current special issue. The authors of the FENZ investigations believed both fires had been deliberately lit. A New Zealand Police representative was subsequently quoted as follows:

> "Detective Inspector Greg Murton said a person was seen at the Marleys Hill site and the fire was considered to have been a criminal act. The cause of the Early Valley Road fire was looked at by specialist fire investigators and thought to be 'undetermined', with the various causes considered… That being the case, the Police investigation into the Early Valley Road fire also remains open."
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> (Van Beynen, 2017a, paras. 6-9).

Similarly, less than two weeks after the fire started and in reply to both property-owner and government official frustration at the adequacy and coherence of the response, the fire itself was described as exceptionally rare. Northcott (2017) reported that this was the first time a fire tornado or *firenado* had been observed. It could be argued that such claims helped to deflect criticism that the authorities had not performed as well as was expected. The mention of a firenado also invites comparison with the one scientifically documented instance to date of such an occurrence: the Australian Capital Territory/Canberra fires of January 2003. These fires were attributed to lightning strikes and weather conditions, consumed some 160,000 hectares, claimed four lives and destroyed around 500 homes (McLeod, 2003, p. 47). It took researchers nearly a decade to prove that what they called a true *pyro-tornadogenesis*, or fire tornado, event had occurred (McRae, Sharples, Wilkes, & Walker, 2013)

Even if this eventually proves to be the case - that a true fire tornado occurred with the Port Hills fire - the early mega-fire claim may have helped to obscure a reality that this was not, in contrast to other events referred to in the preceding paragraphs, a natural disaster. This fire was probably the result of criminal acts of arson, one of the most expensive in New Zealand's history. Firefighting costs were estimated at NZD $7,947,317 (Hayward, 2017, para. 29). Of that sum, the Department of Conservation (DoC) (2017) estimated that it cost approximately NZD $4.5 million to fight the fire, made up of NZD $3.5 million in operational costs and $1 million in staff and internal costs - even though no public conservation land was involved in the fire. This department's total firefighting budget for 2016 was NZD $8.3 million. The firefighting costs incurred by Selwyn

District Council (SDC) almost matched those of DoC, at nearly NZD $4 million (Hayward, 2017, para. 2). Prior to this event, SDC's most expensive fire had been NZD $250,000 (Hayward, 2017, para. 9). Both agencies were covered by insurance but paid excesses of NZD $195,000 and NZD $175,000 respectively (Hayward, 2017, para. 12). Christchurch City Council Civil Defence costs were NZD $69,600 and estimated staff costs were approximately NZD $500,000 (Hayward, 2017, para. 15).

Private insurance claims amounted to NZD $17.7 million, according to the Insurance Council of New Zealand (Martin, 2017). It is also important to note that the loss of a human life, that of helicopter pilot Steve Askin, carried a social cost as well. According to the Ministry of Transport (2017), the average social cost or value of a life is NZD $4.14 million. At a conservative estimate the fire has cost NZD $30 million to date. The environmental costs, if factored in, would drive this figure much higher. To date there has been little discussion in public about the costs of what appears to have been a criminal act, not a natural disaster.

Why should this matter? The fire *happened*, so to speak, and it had to be managed and extinguished as if it was a natural disaster. The difference is evident when one thinks beyond the emergency response dimension of the so-called *4 R's* of disaster risk reduction: reduction, readiness, response and recovery. As part of their background work, the authors of the FENZ fire investigation report also considered suspicious fires that were lit in the month before the main event and noted that there had been at least nine minor events in the Hoon Hay and Halswell area including one vegetation fire (Still, 2017a). This suggests suspicious activity in the area, perhaps involving pyromania and associated pathology.

To date there has been no public messaging about what to watch out for in case such an event occurs again. Furthermore, a perpetrator appears to be still at large and there are going to be very dry and dangerous fire seasons on the hills and plains in future. The 2018 summer fire season was once again classified as dry and dangerous with at least one major suspicious rural fire at Amberley, not far from Christchurch (Nutbrown, Leask, & Dangerfield, 2018). The moment for *mob panic* or vigilante action about the Port Hills fire has passed so there is good reason for authorities to give more encouragement to people to be vigilant and report suspicious behaviour when fire or weather conditions are extreme. In Canterbury, this has yet to be addressed through public education and information releases. Local residents are only being informed that a police investigation of the 2017 Port Hills fire remains open.

Formal reviews following disasters in New Zealand: Are they learning exercises or panicked busy work?

Prior to the 2017 Port Hills fire, other disaster events in Christchurch had been the focus of a number of MCDEM and other agency and local authority performance reviews. This included a Royal Commission of Inquiry concerning the 2010-2011 Canterbury Earthquakes (Canterbury Earthquakes Royal Commission, 2012). The most comprehensive review was commissioned by the Department of Prime Minister and Cabinet (DPMC) and authored by (McLean, Oughton, Ellis, Wakelin, & Rubin, 2012). A key recommendation was the relocation of MCDEM from the Department of Internal Affairs to the DPMC. The Corrective Action Plan (CAP) that followed from central government recommended not to relocate MCDEM while endorsing a number of other recommendations (Ministry of Civil Defence and Emergency Management, 2012). In April 2014, MCDEM was nonetheless moved to the DPMC with little public discussion.

More recently, MCDEM conducted its own review of responses to the Kaikoura earthquake and tsunami, which triggered the declaration of a national state of emergency and caused disruptions far beyond Kaikoura itself (Ministry of Civil Defence and Emergency Management, 2017). This review identified four key areas for improvement: staff resourcing; warning and communications expectations; National Crisis Management Centre (NCMC) vulnerability; and NCMC design and information management. No specific CAP was created but it can be assumed that the implementation of the review recommendations has been ongoing.

Then there were the reviews precipitated directly by the 2017 Port Hills fire. The first and most prominent of these was the external review commissioned by what was then known as the New Zealand Fire Service (Australasian Fire and Emergency Services Authorities Council Limited, 2017). This review has resulted in a subsequent CAP which has a two-year time horizon for implementing the most critical findings (Fire and Emergency New Zealand, 2017). The next most widely

publicised review of MCDEM's handling of a series of recent disaster events by central government was carried out via the DPMC's appointment of a Technical Advisory Group (TAG). The disasters within this TAG's remit were: the August 2016 Hawke's Bay gastroenteritis outbreak; the September 2016 East Cape earthquake and tsunami; the November 2016 Kaikoura Earthquake and Tsunami, and; the February 2017 Port Hills fire.

After being commissioned in mid-2017, the TAG delivered its findings to government in mid-November of that year (Technical Advisory Group, 2017). The recommendations in the report are not listed together nor are they numbered, making them difficult to comprehend. However, the eight action areas or chapters give a good sense of the review's emphasis: national level (functions and structure); regional structure; declarations; role of iwi; capability and capacity; authority; intelligence, and; information and communication. These headings are consistent with standard top-down reviews. The TAG advocated for very fundamental changes to MCDEM, including its restructuring into the National Emergency Management Agency (NEMA), and more direct intervention by this new agency during local or regional events through the use of *fly-in* teams of experts, a recommendation that was previously made by the McLean et al. (2012) review. The overall tone of the TAG (2017) report is that central government needs to be more directive and hands-on in the management of large-scale incidents, focussing on lines of responsibility, accountability and greater professionalisation of staff. The words *lessons* or *learning* are absent from the main body of the report.

A change in government at the end of 2017 deferred the release of the TAG report until January 2018, at which time the new Minister of Civil Defence appeared to play down notions of fundamental or radical change, instead opting for an emphasis on the recruitment of volunteers (Sachdeva, 2017). The Minister later distanced himself from these remarks and made it clear he would spend time consulting stakeholders around the country before making any announcements. After some delay, the Government's (MCDEM, 2018) response to the TAG report was released in August 2018. As previously mooted, while endorsing many of the recommendations in principle, the government appears to have backed away from a radical reorganisation of the MCDEM. A name change seems highly likely, as is the introduction of fly-in teams to support, but not take control of, the local arrangements put in place during a major emergency. Again, there is no mention of *lessons* in this response although *learning* appears twice, concerning the training of Controllers (Ministry of Civil Defence and Emergency Management, 2018, p. 27)

As mentioned in the current introduction and partly due to changes in the Civil Defence and Emergency Management Act (CDEMA) 2002 (NZ) in 2016, Port Hills fire Recovery Plans were launched in 2017 by both the Christchurch City Council (CCC) and SDC (Christchurch City Council, 2017b; SDC, 2017). Recovery planning was instigated by the regional CDEM Group and the initial terms of reference show that this was to be a joint exercise between CCC and SDC, even though two functionally independent plans had been created.

Both plans share similar content. For example, the Indicators of Success outlined by CCC are very similar to those of SDC and both agencies, although using different headings and slightly different wording, identify a total of 73 issues and associated actions. There is no explanation of how the plans are meant to relate to each other and how SDC will learn from CCC and vice-versa nor how, precisely, any ongoing agency or community learning will be sought or measured. Indeed, the words *lessons* and *learnt* or *learned* do not feature a lot in either plan. The SDC identifies a single issue around community preparedness where the terms are used (SDC, 2017, p.23). CCC mentions *lessons* more often in the main body of the plan but only two of its proposed actions relate to lessons learned again around education and community preparedness (Christchurch City Council, 2017b, p.22). Here, lessons learned appears to mean information dissemination to the public rather than ongoing learning being sought by either organisation.

As also mentioned in the current introduction, the CCC has produced its own *Lessons Learnt* review. Although completed in 2017, it was not publicised until early February 2018, a few days before the first anniversary of the fire. This was done by way of a publicity release only and did not make the news in the conventional sense (Christchurch City Council, 2018a). Arguably, this was one of the more constructive and direct reflections on agency performance during the fire. Of the twenty-eight separate lessons learnt, the key lessons were around better communications with affected residents (6 lessons), Emergency Operations Centre management (6 lessons) and others related to early evacuation warnings and liaison between agencies.

Lessons learned in the context of lessons management

The formal reviews discussed above, with one exception, appear to pay lip service to the concept of lessons learned. None of these reviews make any connections with the growing body of work on lessons management. A key reference for this emerging area of research and practice is the *Australian Disaster Resilience Handbook 8: Lessons Management*, by the (Australian Institute for Disaster Resilience (2013). As signalled in the Introduction to the current paper, there is a need to exercise caution about terminology. The authors of the Handbook make the following point:

> Lessons learned embodies two interrelated concepts: the identification of the lesson, and the learning or change that results. Identifying a lesson does not automatically mean it will be learned. In some models, the term "lesson", "lesson identified" and "lesson learned" are used interchangeably.
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> (Australian Institute for Disaster Resilience, 2013, p.6)

The Handbook then provides a useful taxonomy of terms that are related to lessons but which in themselves do not guarantee learning: observation, insight, lesson identified, finding, and recommendation (Australian Institute for Disaster Resilience, 2013). Findings, recommendations, and action plans characterise the reviews discussed above in relation to the Port Hills fire with scant mention of lessons and no mention of lessons identified.

Based on my reading of other disaster responses and reviews, the Port Hills fire provides a standard example of fundamental problems with the way disaster event reviews are conducted generally. Firstly, there are multiple reviews with varying terms of reference and varying terminologies. Secondly, there is very little consideration given to learning from the events themselves and how that learning is to be measured, instead of merely reacting to those events. Thirdly, although review recommendations or agencies' promised response actions are typically couched in terms of short-term, medium-term and long-term goals or milestones, the timeframes tend to be compressed so that the long-term rarely extends beyond ten years. Fourthly, and perhaps reflecting the constraints of dramatic and highly politicised post-disaster contexts, there is little day-to-day focus on lessons being learned in the normal course of events.

The authors of the Handbook offer a nuanced framework for organisational learning from events, based on information collection and analysis, implementation of actions and reviewing those actions. This pathway is not in itself new. It follows a rational policy design approach, but the difference lies firstly in the culture of data collection and overall organisational culture which avoids investigation, inspection or assessment as terms or tools (Australian Institute for Disaster Resilience, 2013). Secondly, and as often shown by a flow chart, attached to monitoring and review is an explicit search for changed behaviour which, if positive, can then be packaged into a lessons learned module for recirculation as an observation (Australian Institute for Disaster Resilience, 2013). In principle, this approach can apply to business as usual, near misses and situations where events have gone very successfully. A major question is whether the Handbook, in part or in whole, is actually used by disaster management agencies.

In other sectors, there has been a move to create learning legacy platforms in order to avoid the risk of *death by reporting*, or excessive time and effort being spent on documentation rather than implementation. For example, when particular project management or construction sector projects are regarded as successful, it has become increasingly common to see learning legacy sites and resources established in order to more efficiently provide lessons for the future. A prominent example concerns the London 2012 Summer Olympics. The Olympic Development Authority (ODA) (2011b) produced a Learning Legacy Report and continues to maintain a learning legacy website which is curated by Archives UK (Olympic Delivery Authority, 2011a). In Christchurch, there is an earthquake-related example created by the cross-sector consortium, Stronger Christchurch Infrastructure Rebuild Team (SCIRT). The SCIRT Learning Legacy site was initiated in mid-2014 in partnership with the University of Canterbury and is maintained principally through the University's Quake Centre (University of Canterbury Quake Centre, n.d.). It is of course easier to set up and promote these best practice legacy sites when things appear to have gone well rather than badly. It would be good to know whether they are changing practice in other contexts.

Getting beyond lessons identified still seems to be a major challenge for the emergency management sector. A recent article on fire incident inquiries or reviews in Australia over the past ten years urges greater use of a lessons management agency approach because of the

commonality of themes and recommendations (Cole, Dovers, Gough & Eburn, 2018). The authors analysed 55 inquiries and derived 32 themes and recommendations where there is some overlap (Cole et al., 2018). Ironically, the fact that there are such commonalities over a ten-year period suggests that lessons are largely not being learned. In other words, a recommendation made ten years ago, if learned, should disappear from later recommendations rather than recur.

In addition, the nature of the themes outlined suggests that agencies or commissions were preoccupied with tightening command and control and disseminating learnings in a top-down or interagency sense. Reviews of the Port Hills fires did not include recommendations for more profound organisational learning and the only reference to learning from the bottom up is a relatively lowly-placed theme of Incorporate Local Knowledge. Furthermore, many of the themes are related to mechanistic risk reduction such as Hazard Reduction Burns and Pre-Fire Season Preparation. However, given that very few fires, even in Australia, do not involve human agency (i.e. few are natural events), there seems to be no attention to learning more about human psychology around fire-starting. Policing is the only theme that gets mentioned in relations to arson. Therefore, while there may be good grounds for taking a more conscious lessons management approach, several reviews and the Cole et al. (2018) review of reviews suggest that the learning is still assumed to flow mainly from the top down or from agency to agency. The remainder of the current paper attempts to offer some observations that may broaden the scope of how to learn from fire events.

Observations on the bigger picture: The need for non-partisan situational awareness

Even if some of the changes already implemented or currently mooted do produce more efficient responses in the future, a number of matters seems to have been overlooked while reviewing the Port Hills fire. The first has to do with preoccupations about jurisdiction and the failure to comprehend larger potential threats at the outset. The fact that the first fire began only 30 metres outside the boundary of a large metropolitan local authority and less than two kilometres from an established suburban residential subdivision (Kennedy's Bush) should have been a trigger for immediately scaling up both in terms of firefighting capacity and evacuation preparations. Likewise, the second fire appears to have been started in a high-use urban recreation zone, not on farming or conservation land.

These issues have not been discussed in detail, nor has the larger issue of the expanding rural-urban interface. This is where much of the higher risk now purportedly resides as traditional farming advocates and some researchers connect the recent influx of lifestyle plot residents with increased vegetation fires - although there is not as yet any empirical evidence documented in support of these claims. In any case, it is no longer simply a question of rural or urban fires. While the restructuring of FENZ to standardise urban and rural brigades promises to reduce the uncertainty about response and jurisdiction in this third space, there has been no evidence to date of other cross-agency collaboration for dealing with the risks and hazards in the rural-urban interface. This is even though the same issue has become a clear preoccupation for Australian and North American agencies, for example.

Equally alarming was the unchallenged decision to locate the Incident Management Team (IMT) at Rolleston, 20 kilometres or 30 minutes by road from the incident. Even if the fire had been confined to Selwyn District, it made sense to use a base of operations that was closer at hand, whether within SDC or CCC boundaries. There were plenty of options available. Unlike the logic used for designating a National Crisis Management Centre at a single *bunker*, or secure underground location (a policy which is likely to change as a result of the Kaikoura Earthquake in November 2016 and the MCDEM 2016 TAG 2017 reviews), there was no technical or logistical reason why an IMT could not have been set up closer to the event. Other than fear of disturbance from the public, it is hard to see why this standard operating procedure was not overridden in the circumstances, particularly since the biggest threat was not to rural populations but to residents of New Zealand's second largest city. Similarly, having two separate emergency operation centres (EOC's), one for each local authority (at Rolleston and Christchurch City Council Civic Offices), was unfortunate. Again, a combined EOC could have been located closer to the incident, with a much closer connections to welfare centres, evacuees and public information outlets. The same is true for any Incident Control Point (ICP) and their connections to EOC's and the IMT. During response to the 2017 Port Hills fire, they needed to be physically closer to one another.

Similarly, the choice of welfare centres and information centres seemed arbitrary or unnecessarily territorial. The most sensibly-located welfare centre was established at Te Hapua Halswell Aquatic Centre, Library and Community Facility. This was a CCC-owned asset, some 7.3 kilometres or 10 minutes from the incident by motor vehicle. The other welfare centres were at the Selwyn Events Centre in Lincoln, owned by SDC, some 11 kilometres from the incident, with no obvious connection to local evacuees, most of whom were Christchurch City residents. The third centre was established at Nga Hau E Wha National Marae in the east of the city, some 20 kilometres and 30 minutes away from the incident. In retrospect, it would have made more sense to locate the IMT, EOC's, welfare centres and other information hubs regarding cordons and evacuations at large facilities nearer to the incident. Christchurch City Council's Pioneer Stadium, for example, would have been closer and more familiar to many displaced or concerned residents.

By contrast, and as a positive lesson in terms of choosing a good localised centre of operations and information, the Governors Bay community was relatively well-served by the authorities. The settlement came close to losing houses during the event and evacuations were carried out as a precautionary measure. Fortunately, fire behaviour and the actions of helicopter crews meant that no properties were lost although substantial damage was done to private conservation land. The venue chosen for public meetings and information sharing was the local volunteer fire station. The fire station was in the middle of the community and provided a good monitoring and surveillance site for the fire. The public meeting there on the 15th of February, with officials from many agencies, was judged a success and features prominently in a commemorative publication produced by Governors Bay Volunteer Brigade members (Brown & Fogarty, 2017).

A similar experience occurred in Lyttelton during the earthquakes of 2010 and 2011. The fire station was a beacon in the local community and this was recorded in a commemorative book by Suren (2012). In Christchurch City or any large New Zealand city, the opportunity to use fire stations as community hubs is limited since almost all are paid staff stations in more or less arbitrary locations and they hardly count as community assets. The point here, however, is that authorities should look more closely at nearby trusted and familiar facilities for some of their incident management activities. Ideally, this scoping would be carried out by a situational awareness team, comprised of fly-in experts and community members with expert local knowledge. This scoping could be carried out from the moment authorities have been notified of an incident which has the potential to escalate. Some might argue that those who live in the rural-urban interface, often referred to pejoratively as *life-stylers* or *hobby farmers* are less community-minded than traditional urban or rural dwellers, making them harder to engage with and making it harder to identify appropriate sites for evacuation centre, welfare centres or information hubs. However, this is belied by how local residents often react to emergencies. In the case of the Port Hills fire, there was at least one instance where apparently well informed, *fire smart*, valley-dwellers felt that their preparedness to stay and defend properties as a fire party was rebuffed by authorities (Cooke & Redmond, 2017).

Enabling communities

The above point raises an issue concerning how local authorities and FENZ are doing to engage with communities in order to reduce the risk of future fires in the rural-urban interface. The Recovery Plans for Selwyn and Christchurch talk in detail about working directly alongside affected residents to help them rebuild and restore their properties, to make them less vulnerable to future fires. Some of those directly affected were still unhappy with the flow of information and explanations a year after the event (Wright, 2018). Furthermore, there is little sign of community engagement in the burnt-over valleys with those who did not lose property but were still affected by the fire. The FENZ website makes no obvious reference to the fire nor does it seem to have given any extra attention to the rural-urban interface and these growing communities. Instead, all information still appears to be generically aimed at individual property owners (Fire and Emergency New Zealand, n.d.).

Perhaps the greatest sign of encouragement is a little-publicised initiative from the Christchurch CDEM team working at the CCC. In March 2018 they launched the Neighbourhood Action Fund, which allows community groups to bid for up to NZD $5,000 to prepare community response plans (Christchurch City Council, 2018b). Although not targeted specifically at the Port Hills communities, they currently provide an opportunity for community response planning. The CCC also provides guidance and encouragement through their Community Resilience Planning Programme (Christchurch City Council, n.d.). There is also a recent example of three

Port Hills neighbourhoods with common interests, characteristics and exposure to natural hazards (Sumner, Redcliffs and Mt Pleasant) combining forces to produce a community booklet which covers community responses to disasters (Arnold, 2018). Twenty-two of the 38 pages in the booklet are concerned with what to do a variety of emergencies, including vegetation fires, and evacuation zones for tsunamis.

While agencies may still struggle to make their own social media outlets focal places for disaster response or preparedness information, there are indications that emergency planning or warnings are being taken seriously on a number of community-based social media sites. Interestingly, in the case of Christchurch, the best examples appear to be in Sumner and Governors Bay, two communities where volunteer fire brigades are very active. There are frequent cross-overs of emergency warnings or updates between the Facebook pages of the local brigade and the community residents' association, especially during a major incident. In Sumner the Sumner Hub page (Sumner Community Residents' Association, n.d.) often connects with the Sumner Volunteer Fire Brigade page (Sumner Volunteer Fire Brigade, n.d.). In the case of Governors Bay, a "Governors Bay Community" page overlaps at times with that of the local brigade (Governors Bay Community, n.d.; Governors Bay Volunteer Fire Brigade, n.d.). People often turn to these sources and the wider news media in local emergencies, rather than official websites and social media sites. Agencies nonetheless appear to still operate under often outdated and inflexible command and control structures.

Conclusion

The 2017 Port Hills fire, as is commonly the case with major disaster events that involve the loss of life or property, has generated multiple reviews and promises of better performance in the future. In certain respects, these local lessons seem like useful learnings for emergency managers in general and would resonate with members of the public, not just affected residents. However, it is not clear how far these findings will reach and how they will link to larger reforms promised by the Minister of Civil Defence. This points to a larger potential problem: Reviews for review's sake or to satisfy political expectations. It is possible that all these reviews actually get in the way of an integrated and more synoptic review of how to achieve better responses. This would require time, resources and a collaborative approach, with a less restrictive brief than is often issued at ministerial or departmental level.

At the time of writing, we are left with promises of more central government reform and a reassurance that the reorganisation of the New Zealand Fire Service as FENZ, which began with a review first initiated in 2012 but which was only passed into law in July 2017, will eliminate many of the problems experienced with the 2017 Port Hills firefighting operation (Van Beynen, 2017b).

It still seems, however, that these promises and other review implications fall far short of lessons learned or lessons management, in a comprehensive sense. The emphasis is still on managing public perceptions rather than acting as learning organisations. It remains to be seen whether the redesignation of the Ministry of Civil Defence and Emergency Management to either the Ministry of Emergency Management or the National Emergency Management Agency is anything but a symbolic gesture. Some lessons appear to have been learned at the local level. Mayors appear more comfortable with declaring local states of emergency in an anticipatory manner rather than waiting for events to escalate. Local authorities are trying to support local communities in response planning. Local communities are networking to share common experiences and risks. However, at a number of levels, issues concerning the 2017 Port Hills fire remain unresolved.

The probable arsonist or arsonists are still at large. The event has yet to be acknowledged and fully registered as the Port Hills Arson rather than just a severe wildfire event. Although tsunami and flooding evacuation zones have been mapped and promulgated for Christchurch and the bays of Banks Peninsula, we have yet to see progress on wildfire evacuation zones. This is even though vegetation fires have become an annual risk. Ideally, the fly-in support teams promised in August 2018 by central government would take the form of situational awareness and outside-the-box advice during and after the events. For now, we have yet to see evidence of a more integrated, joined-up and bottom-up approach to learning from the Port Hills fire.

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