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29 September 2011

Mark Zarifeh
Counsel Assisting
Canterbury Earthquakes Royal Commission
PO Box 14053
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CHRISTCHURCH

Dear Mr Zarifeh

Thank you for your letter dated 25 August 2011 in which you requested among other things a copy of the report commissioned by the Ministry into the response to the 4 September 2010 Canterbury earthquake. The review was not undertaken by Kestrel but a consortium of Richard Westlake of Westlake Consulting and David Middleton who is employed by the Kestrel Group. A copy of the report known now as the Westlake-Middleton report is enclosed.

You will note the Westlake-Middleton report is covered by a note from the Ministry to explain the status of the report as well as comments on the report provided by the Canterbury CDEM group and a report of the response from the perspective of the Canterbury District Health Board. These attachments were considered necessary to explain to readers that the review process was overtaken by the 22 February 2011 earthquake therefore a full review was not completed and the conclusions it reaches may not be valid due to some participants not being interviewed. On that basis the Westlake-Middleton report will not be progressed any further, however the report identified a number of themes that the Ministry considered were likely to also be factors in the response to the Christchurch earthquake. Those themes will be investigated further in the review of the 22 February earthquake response, which is about to commence.

In addition to the Westlake-Middleton report you have asked the Ministry to provide additional information on building assessment processes. We are working with the Christchurch City Council to understand the scope of their report to the Commission to minimise duplication. As indicated earlier, we are unlikely to be able to provide our report by the end of September but anticipate having the material available by 17 October 2011.

Yours sincerely

John Hamilton Director

Ministry of Civil Defence & Emergency Management

Independent Review of the Response to the Canterbury Earthquake, 4 September 2010

May 2011

Prepared by:

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27 September 2011

To Whom it may Concern

REVIEW OF RESPONSE TO THE 04 SEPTEMBER 2010 CANTERBURY EARTHQUAKE

The Ministry of Civil Defence & Emergency Management engaged Richard Westlake and David Middleton to undertake a review of the response to the 04 September 2010 Canterbury earthquake. Their work was underway when the 22 February 2011 earthquake struck Christchurch. To allow all efforts to be focussed on the response to the second earthquake and knowing that a second review would be required, the Director instructed the Westlake and Middleton to provide a report based on the interviews and observations completed. Their report was completed in May 2011.

The report is not based on all the interviews that could have been undertaken and some of the commentary and recommendations reached are therefore likely to be inaccurate. The Canterbury CDEM Group has provided comments on the completed report and a report by the Canterbury District Health Board who were not interviewed. These comments are to be attached to the review report and read in conjunction with the review to provide a fuller picture.

The Director has determined that the Westlake-Middleton report will not be taken any further on the basis that the focus will be on reviewing the response to the 2011 earthquake, and that many of the issues identified by the Westlake-Middleton report will be covered in the second review. The following themes and issues identified in the Westlake-Middleton report will be bought into the next review:

- a. How best to obtain and communicate rapid impact assessments.
- b. Identify initiatives that will achieve greater community involvement in local planning and readiness, and participation in the local response.
- c. Improving the building evaluation process.
- d. Improving the co-ordination and delivery of welfare services to affected communities.
- e. Improved guidance on the role of mayors, councillors, community board members and members of parliament in the response.
- f. The need for greater emphasis on business continuity in the private sector.

Copies of the Westlake-Middleton report are to be covered by this Memo to explain the status of the report and the way the report is to be treated.

John Hamilton Director



c/- PO Box 345 Christchurch

26 August 2011

Mr. John Hamilton
National Controller
Ministry of Civil Defence and Emergency Management
P O Box 5010
Wellington 6145



Dear John

Independent Review of Response to Canterbury Earthquake – 4th September 2010

Thank you for the opportunity to provide feedback on the Westlake/Middleton report on the September 2010 Earthquake.

We note that the subsequent earthquakes on Boxing Day 2010 and 22 February 2011 meant that some interviews planned did not take place. For instance, although a local State of Emergency was declared by both the Christchurch City Council and Waimakariri District Council, no staff from the Christchurch City Council and only one from the Waimakariri District Council were interviewed. In addition, the report is also deficient in its failure to address the health response.

In our view, the fact that the report was not completed as planned has resulted in some errors of fact and some significant deficiencies in process and as a consequence a number of conclusions that cannot be supported. We note that the report also contains some more useful conclusions. The attached tables list the errors of fact and the conclusions which we feel warrant comment. The attached appendix sets out the concerns of the Canterbury District Health Board.

While we support your view that the report should not be revisited, indeed we question whether or not the report should be withdrawn; we will await yours and your Minister's decision. If the report is to be released we request that this letter and the attachment be included with the report so that readers/recipients are fully aware of the context. It is particularly important if this report is to be used to inform future reviews that the points we make are included since without this information, readers or reviewers may be misled.

Yours sincerely

Mayor Janie Annear Chairperson

Canterbury CDEM Group Joint Committee GEN.MCDEM.0002

Bill Bayfield Chairperson

Coordinating Executive Group Canterbury CDEM Group





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26 August 2011

Mr Bill Bayfield Environment Canterbury (ECAN) P O Box 345 CHRISTCHURCH 8140

Dear Bill

Re: Canterbury Health System Response to the Independent Review of the Response to the Canterbury Earthquake, 4th September 2010.

Please find enclosed a copy of our response to the above report. We would be grateful if this could be included with the other CEG responses that are being sent to the Ministry of Civil Defence and Emergency Management

Yours sincerely

Murray Dickson

General Manager Corporate Services

Canterbury Health System Response to the Independent Review of the Response to the Canterbury Earthquake, 4th September 2010.

Introduction

Having reviewed the Independent Review of the Response to the Canterbury Earthquake, 4th September 2010 (the Review) commissioned by the Ministry of Civil Defence & Emergency Management it is appropriate for a response to be documented by the Canterbury Health System (CHS). It is important to note that due to the report being truncated having being disrupted by the earthquake of the 22nd February 2011, the response from the Canterbury Health System (CHS) is briefer than what would have been had a fuller report been completed.

The CHS includes the Canterbury District Health Board, Pegasus Health Ltd, Primary Health Organisations, other primary care organisations (General Practice), community pharmacies, community & district nursing, Private Hospitals, aged care sector and other NGO health providers, with strong links to the National Health Coordinating Centre.

Comments

- 1. First and foremost of serious concern is the omission of any health provider from the Review. It is unclear from the Review and its appendices whether it was intended to include health, however its publication without mention of health is a major oversight. The Civil Defence Emergency Management Act 2002 in Part 1, Section 4 'Interpretations', defines hospitals and health services as an emergency service.
- 2. The Review describes responses and issues faced by emergency services beginning on pp. 33 of the Review. As previously stated, health services are not included. It is important to note that the CHS activated its main Emergency Operations Centre (EOC), along with its subsidiary EOC's very early on the morning of the 4th September and initiated a region wide health response which was sustained for a number of weeks, and then transitioned into Recovery, which was ongoing at the time of the February 22nd earthquake.
- 3. In addition the Review states that "Fire (including USAR), Police and Defence services at both national and regional levels reported a largely normal business response. They had exercised extensively...", (pp. 33). The CHS is proud to report that our response was robust and effective. The earthquake caused significant disruption to health services, however our preparations for such an event served us well. Plans and response have been tested and modified on many occasions including the Influenza Pandemic in 2009.
- 4. The Report states "In all services, local personnel put their professional duties ahead of family and home needs. This level of commitment serves New Zealand well, but, if not managed appropriately, can create its own difficulties and longer term problems", (pp. 33). The personnel of the CHS also responded magnificently and without their commitment and dedication the continuity of health service provision may have been compromised. We also believe that we managed our staff well, providing time off, support, adequate nutrition and counselling services.

- 5. Health responses included, but were not limited to: -
 - Hospital services
 - General Practice, and support to affected practices.
 - Aged Care, and support to affected facilities
 - Community Pharmacy, and support to affected pharmacies
 - Support of the disability sector, and support to affected services
 - Provision public health messaging particularly in regard to liquefaction, sewerage and drinking water.
 - Water testing with and for all affected Territorial Authorities.
 - Participation in the Welfare Advisory Group
 - Support and advice at Welfare Centre's
 - Surveillance of communicable diseases as a result in the disruption to drinking and waste water.
- 6. Comments are made throughout the Review in regard to agencies acting in isolation, and there being multiple ECC/EOC's. It is the strong recommendation of the CHS that in events such as these, that there is <u>one</u> multi-agency ECC. We believe that this would improve communication and coordination. In addition there would be less of a drain on resources having to provide health representation to multiple EOC's.
- 7. Chapter 10 of the Review discusses management of information to the public. The CHS provided health information via different media, including traditional routes along with social media. Messages were in regard to services being provided at hospitals and the in the community, along with important public health messages. Although no formal evaluation has been undertaken on the effectiveness of our communication, the very low levels of gastrointestinal infection in relation to exposure to sewerage and contaminated drinking water would suggest that it was relatively successful.
- 8. The health response is deliberately one that is based on a 'whole system' approach without regard for public or private ownership, primary or secondary care or any other division. We have found this to be very successful, although not without some minor issues, but we continue to refine our plans and responses.

Conclusion

The CHS response to the events of the 4th September earthquake was both comprehensive and large scale. Events such as these put the health of our populations at immediate and ongoing risk. The health response is as important as that of other agencies and our relationships with those agencies

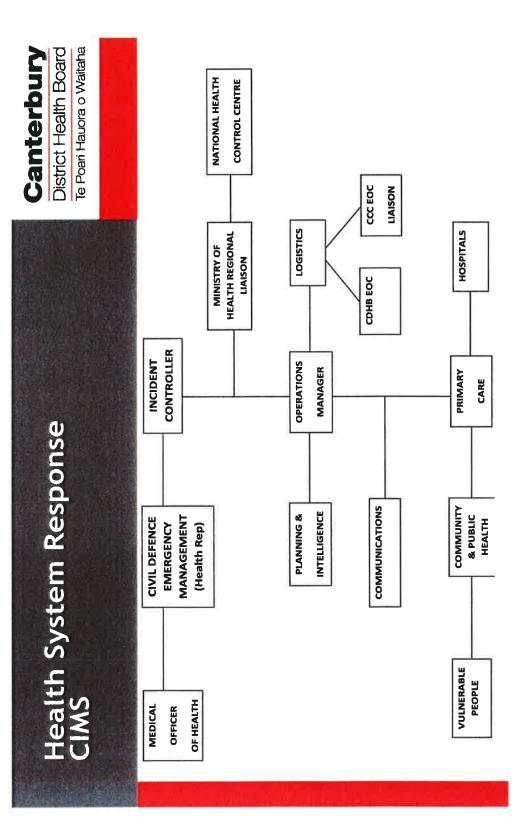
strengthen our response. As one of the largest employers in the region along with being responsible for the delivery of health care in the region, any review of the response that doesn't include health is largely incomplete.

We wish that our responses to the Review are recorded, and we would be keen to participate in any further reviews of the ongoing seismic events within the Canterbury region.

Yours sincerely

Murray Dickson

GENERAL MANAGER CORPORATE SREVICES



Appendix 1

INDEPENDENT REVIEW OF RESPONSE TO CANTERBURY EARTHQUAKE – 4TH SEPTEMBER 2010 **MINISTRY OF CIVIL DEFENCE AND EMERGENCY MANAGEMENT**

COMMENTS FROM CHRISTCHURCH CITY COUNCIL (CCC) SELWYN DISTRICT COUNCIL (SDC) WAIMAKARIRI DISTRICT COUNCIL (WDC)

ERRORS OF FACT

Page Reference	rence	S	Comments
Page 2	Suburban volunteer resources are run down.		 CCC suburban volunteer resources are far from run down. There are 494 active CDEM volunteers in the Council area with a further 135 CDEM volunteers classified as 'passive'. These volunteers meet on a monthly basis and participate in training and exercises. SDC makes significant use of its various community committees to provide information and assistance. The structure has been significantly enhanced and formalised since September and goes from strength to strength.
	 Unclear whether there is a clear understanding of emergency powers. 	J o	 Very clear for CCC, WDC and SDC with the relevant Mayor and Local Controllers working together.
	 B.S evaluations were carried out by personnel brought in from outside region and they did org. process 	orought s	 This is incorrect. Establishment of process and evaluations were undertaken by local (CCC/WDC and SDC) personnel. Obviously external personnel were brought in due to the size/scale of the event/s to support the local resource.
Page 10	 First interviews were with strategic staff and we worked down to ops level. 	a	 No CCC staff were interviewed at all.

Dage 10	•	The state of the s	L	
Page 21	•	Kadio telephones + should be supplied to every school. ECC felt lack of information being relayed was obstructing its co-ordination role – EMIS should alleviate.	Re la regular de	Re lack of information - SITREPs commenced on day 1 and were regularly sent to Group by all 3 TLA's. There was initial frustration with the TLA linkage into the Group due to there being no Group Controller available to liaise with. All 3 TLA's partook in regular conference calls. Lots of "Ifs" associated with EMIS and it won't on its own be the solution. CCC and WDC both have a very good system to handle service calls.
		Shortcomings of initial rapid reconnaissance.	revi revi mor mor leve com and expe	No substantial commentary on essential services therefore did reviewers understand how these were assessed, addressed, and monitored? (WDC – information came from a variety of sources and the reconnaissance was generally very effective – by midmorning on 4 September we had a fairly good indication of the level and extent of damage.) (SDC – we concur with WDC and CCC comments and add that considering all services (CD/Police/Fire and Health) staff resources all experienced their own personal experience from the quake, the timely initial assessments were exceptional.
Page 22		Local declarations are for a multi agency emergency.	■ Mos to b	Most emergencies are multi agency. A declaration doesn't need to be made before there is a multi-agency response.
Page 27	•	"Local Authorities" heading.	This May	This should read "Local Authorities (except CCC)" as only the Mayor was interviewed.
Page 27	•	And few understood the CEG's role	■ We Cani	We are not sure how that finding was formed. All CEs in Canterbury understand CEG's role.
Page 30		No system in place to use reports from building owners engineers.	Afte place proceed which place place place the feet place the feet place place the feet place pl	After the early stages of the emergency a process was put in place to consider reports from building owners' engineers. This process of receiving engineers' reports for commercial buildings which had received red/yellow placards was continuing until 22 February 2011. There seems to be little cognisance/weight placed on the size of the emergency we faced in this report and the fact that in reality it was not possible to do everything

		instantaneously
Page 34	 Separate declarations meant that it was left to individual services to assess relative priorities. 	**All EOCs have reps from emergency services and CCC always work with other services to assess priorities. SDC notes that the individual services were represented at the Group EOC, that these services took part in the daily teleconferences and that the information being provided by the individual service located in our EOC, were making comments about how there regional resources were being used. This gave us confidence that there was an integrated approach to the allocation of resources across all 3 TLA areas. The comment about the "under utilisation of Defence Force Helicopters" should be read for what it is. If we had been "under resourced with Defence Force Helicopters" then the situation would surely have been worse. In addition the main use of helicopters for "urgent" tasks occurred on the morning of the 4 th and had to be serviced by the private sector as there were no Defence Force helicopters based locally.
Page 37	 Group Welfare Manager resigned to avoid confusion. Observation that welfare activities and management seemed at first to be left solely to volunteers. 	 Should note this was pre September earthquake. This was not true for WDC – we had Welfare Centres established on the first day and, while volunteers had a huge contribution, there was definite WDC EOC leadership of welfare activities.
Page 38	■ Lifeline utilities.	 Glaring omission that nobody in CCC interviewed re water, wastewater, waste, roading. This heading should be "Electricity" The lifelines response of all utilities and roading teams was immediate, focused and ensured services were reinstated as promptly as possible. These efforts were greatly appreciated by the community. All councils had a very clear picture by 9am on 4th as to what our issues were and the priorities to fix. We had also received a very clear statement from Orion about their issues and how they were bringing their network up which allowed us to plan accordingly.
Page 39	 No planned system to manage spontaneous volunteers. 	 CCC had a system but there was a problem with scale. WDC was overwhelmed by the numbers – it is an area that needs more focus for large events in the future.

Page 43	 Building safety evaluations were organised by personnel from outside the region. 	 Establishment of process and evaluations were undertaken by CCC personnel. Obviously external personnel were brought in due to the size/scale of the event/s to support the local resource. WDC managed the process and collated results – assistance from other Councils was provided to undertake the evaluations.
Page 47	 3 separate emergencies caused confusion over who was in charge. 	 CCC, WDC and SDC were all very clear on roles and responsibilities – there was an issue raised about liaising with the Group about securing external assistance, but often that assistance was volunteered rather than sought.
Page 49	■ Little local involvement in Cabinet papers.	There was significant contact between local and national officials once CCC moved into the recovery phase (identifying areas where existing statutory provisions were not providing the powers necessary to support recovery). The OIC process worked but with a great deal of effort. CCC had very little input in the drafting of the Canterbury Earthquake Response and Recovery Act 2010. This raised concerns as the Council was to have a major role in putting the statute into effect. Input into the 2011 Act was more effective. We challenge the observation that any concerns CCC expressed at the time resulted from a "loss of perspective and focus due to tiredness and stress". By the time we were dealing with statutory/regulatory matters, staff were rested and able to deal with the issues the council faced. (WDC/SDC—the initial decisions relating to establishing CERC did not involve WDC/SDC, but all OICs and the legislative approach did involve consultation with WDC/SDC).
Page 60	 The CCC Building Recovery Office could have been more effective if set up under ECan. 	There is no information in the report to support this statement, also bearing in mind there was no discussion with CCC officers. By its nature such an office deals with the needs of local residents' needs. The information residents need to access would invariably only be available from each territorial authority. It is difficult to see what added value would be achieved by having such an office administered by ECan. Also each territorial authority would need to make its own judgment as to when the local need for such an

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			office has ended.
Page 56	Information on dealing with silttoilets was hard to	(=)	Information was constantly provided on these issues through a
	find		variety of media e.g. daily flyers, newspaper advertisements,
			websites, etc.
Page 58	"Regardless of how unrealistic this expectation was, it	•	WDC - this was definitely not the case in Waimakariri – there was
	was not effectively responded to or managed.		constant information provided and the residents have praised
			WDC on how they kept the community informed.
Page 73	■ After Actions Report		CEG requested this report be amended before being referred
			onto the Joint Committee. The Chair and the Deputy Chair
			advised it should be rewritten. This advice was declined. The
			report was received by the Joint Committee with no discussion.
			On this basis the report should not be considered for this review.

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CONCLUSIONS	SIONS		
Page Reference	rence		Comments
Page 3	•	Comms will be resolved by EMIS.	 Relationships are the key to making things work. Systems should support. EMIS will help but won't on its own resolve. (refer to comments above).
Page 5	w b	Special powers should be vested in the person who declared.	be made by a number of Councillors, it is impractical and potentially very damaging for this to happen. Powers should rest with the Controller. The appointment of an individual to a Controller (Alternate Controller) position is not one that a Local Authority takes lightly. Controllers are seen as individuals who have the appropriate skills and expertise to lead their community through a declared emergency. These individuals are more often than not the leaders in any adverse events that affect a district and therefore need to bring a wide range of people and technical skills to their role. The current system of the elected members being utilised as a community linkage or providing the public face in an emergency has been a tried and tested structure for many years. A community which is facing an emergency event is looking for reassurance from its politically elected representatives and not necessarily an appointed or statute individual. Accordingly, the Mayor (who is more often than not the political member who provides the assurance) needs to have the time available to undertake this important role of public communication and not have to be concerned with the technical or operational issues that need to be considered in running an event.
			Elected members, who become the individuals the powers have

		been executed to after a declaration, could be individuals who either:
		 do not wish those powers to be vested in them although we note that they may pass those powers onto another individual, or;
		 are totally inappropriate for undertaking the role.
	 We should copy the volunteering Australia model. 	NZ scale quite different – doubt whether Canterbury could cope. There needs to be more emphasis placed on this but it would be better if this was co-ordinated by the EOC. The experiences from the January/February 2011 Queensland floods highlighted the
		anticulties in managing large numbers of volunteers in emergency events, particularly those who spontaneously volunteer on the sour of the moment and then are not interested after the event
		has passed. It would be better to review the processes used in managing the Student Army and Farmy Army, and how they could
		be used in the future.
Page 17	Had the Group Controller or deputy been available	All 3 Councils considered that the local declaration was appropriate
	straight away, 1 declaration would have replaced 3.	group declaration had to name (in this situation) the three territorial
		local authorities' areas effected. This, we believe, added more
		confusion than whether there were 3 local states of emergency being
		declared in the three ILA areas. The local declarations gave a clear and concise understanding to residents where they stood. The need
		(in this example to use Canterbury on the declaration) only
		complicated the matter as others outside the affected areas could
		suddenly think that the declaration also included them as they lived
		in the Canterbury region. A resident of the 3 areas would not be
		interested in a group declaration. In reality they would not be aware
		that a "Group" existed. They would rightfully assume that their local
		council was working closely with central government to obtain the
		appropriate resources to resolve the problems that had arisen from

			the event. A key point not recognised in this report was that the size and ultimate cost of this event was one for which central government had a key role. Accordingly, the ability of local councils to work directly with central government was critical during the response and recovery phases of the event, instead of having to forward all issues via the "Group". Central government had the resources which allowed them to determine what the priorities were between the 3 TLAs. As an example, the MCDEM rep based at SDC on 4 th September could advise the Local Controller what issues were being faced by the other 2 TLAs and thus what resources would be available as a result or in short supply.
		Helicopter flights gave good information about ground and structure damage, but did not provide an appreciation of the extent of liquefaction	 From the air it was very easy to identify liquefied areas - ground water and silt were clearly visible from the air. SDC agreed with above and noted that we were able to land in the areas of interest and sought direct feedback from locals affected.
	•	There was a delay to response outside the CBD.	 It was quite appropriate to make decisions of priority – in this case, CBD was the priority.
Page 18	*	Suggestion that intelligence is not good.	 CCC received intelligence from contractors and RFS system – this was not mentioned. Clause 8a) point 3 in the Terms of Reference re information gathering was not covered adequately.
Page 24	•	Recommendation 3 0.	 We disagree with this recommendation. For instance, what if the elected representative chooses not to delegate; or having delegated decides to withdraw the delegation.
Page 25	•	Nothing to indicate problems caused be alternate Group Controller being same as EMO Manager.	 It did cause problems – with the first Alternate also being the Group EMO Manager, it was confusing as to which hat he was wearing.
Page 34	•	A single state of emergency declaration would have clarified matters for the Commander at Burnham.	 The declaration process would not have caused this to change. The role of the Group ECC was to arrange via NCMC any military resources.

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Page 42		Addition to recommendation 9.	Suggest separation of emergency accommodation responsibilities
Page 43	•	Early relief for locals.	I Issue is how long emergency will last.
	•	Frustration of particular communities.	 Response must always look at "Big Picture" and there will always be some communities who feel they should have a higher priority.
Page 64	:	Involve HNZ in more certain arrangements than providing "on the day".	National Plan already requires HNZ to do this.

Ministry of Civil Defence & Emergency Management

Independent Review of the Response to the Canterbury Earthquake, 4 September 2010

May 2011

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1. Executive Summary

A 7.1 magnitude earthquake caused damage and disruption in the Canterbury area on 4 September 2010, as bad as any experienced in New Zealand since the Hawke's Bay event of 1931. Civil Defence & Emergency Management (CDEM) mobilised in accordance with plans for both the national and local levels.

As part of its programme to ensure continuous improvement in the discharge of its responsibilities, MCDEM commissioned an independent external review of the response from the date of the earthquake until, officially, response became recovery on 23 September. This is the report from that review.

The early response to this event was, by most accounts, well conducted, even with unexpected circumstances like the absence of the first three choices for group controller, and the declaration of three separate states of emergency. Those with duties under Civil Defence (CD) arrangements turned out as required in national, group and local emergency centres.

Early intelligence about the disruption caused was hampered in some areas by inadequate early impact assessments. Other CDEM Groups have plans for these.

The earthquake exposed the inadequacy of suburban CD. Response Teams (RTs) are potentially a valuable community resource upon which to build a suburban revival of CD but they are currently under-developed and under-trained. Run down suburban CD volunteer resources exacerbated the inadequate intelligence flow from the affected communities to central authorities.

Emergencies were declared in three areas to enable statutory powers to be adopted; however, it is unclear whether there was a proper understanding of these powers among political leaders and some CD personnel, and what organisational hierarchy a declaration of emergency imposed.

The ongoing response to the emergency was good but showed shortcomings. Those personnel not usually involved in CD or emergency response were sometimes not well informed about the structures and processes. The use of alternatives to the laid down communications channels caused confusion and delay.

Building safety evaluations and the placarding of buildings to indicate if they were safe to enter was carried out largely by personnel brought in from outside the region, who also

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organised the process. There is evidence from both this event and the 22 February earthquake that the meaning of the placards is not well understood by the public and even some agencies, which was not helped by some authorities putting the placards to unexpected uses. A review of the process and the placards themselves is warranted.

The management and delivery of welfare services needs review, mainly to generate closer ties between the welfare sector and the rest of CDEM in the readiness and reduction activities (writing plans, listing responsibilities, setting up structures). This would help ensure that misunderstandings and confusion do not arise during the response.

Community resilience and volunteering are aspects of the response that were perhaps undervalued. They represent opportunities for cost-effective investment of time and money to improve our readiness and response to future disasters.

Problems in the response activities of CD, MCDEM and supporting agencies occurred through inadequate communications or a misunderstanding of roles, either established or ad hoc. Those individuals with either no role or only a limited one in the planning but who had a legitimate role after the disaster, took appropriate part in the response (or tried to), which indicates an area for review of planning.

Communications and information sharing difficulties are expected to be largely resolved by the introduction of the new Emergency Management Information System (EMIS) and its full utilisation in emergencies.

Greater utilisation of elected representatives and the resources they have in the community would have improved intelligence gathering and two-way communications with disaster-affected communities.

Techniques for coping with long shifts paired with short intervals can be taught. This should be investigated and implemented for appropriate staff. Another preparation measure is the capability to relieve immediately from outside those staff who are victims of the disaster, rather than expecting them to perform the initial shifts. This would not only have allowed local staff to attend to their pressing domestic situations but also be valuable conduits for relaying information and advice to and from the EOC.

Government agencies' performance in the response phase provided the support needed for informed government decision-making. However, as a new recovery model was

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adopted with new and inexperienced personnel taking over, the question of whether government decisions were as well-informed became cloudier.

The flagship for public communications was the web site www.canterburyearthquake.org.nz set up by ECan and Christchurch City Council. Conventional media like radio, newspaper and television were still relied upon but use of newer channels was noted. A way to utilise cell phones was not found.

The smaller communities utilised traditional ways like shop posters, flyers and bulletin boards to get information to their citizens.

Elected leaders took an important role in communications. This could be formalised and extended to local constituency or list MPs as well as mayors and councillors.

The public's desire for information was sometimes met through informal channels that led to inaccurate rumours. Community meetings were well supported and countered misinformation but they needed to consistently deliver on their undertakings to preserve their legitimacy.

Citizens gained representation by forming the community network CANCern. Plans for building such connections could be incorporated into CD preparations, unless the need is met through this report's recommendation to involve MPs and community boards.

At the NCMC, media facilities were make-shift and need improvement. Comment was made that the international media need special attention as they have a different viewpoint from local journalists.

The population's current sensitivity to natural disasters provides an opportunity to find innovative ways to encourage preparation.

The transition from response to recovery was dealt with either in accordance with the guidance in documents available to CDEM or simply as a practical change of emphasis. It also allowed an amelioration of the concentrated effort by TA staff since the earthquake. Government implementation of special legislation and structures to speed recovery after 4 September created some issues of governance, the place of existing structures and processes, and co-ordination of the new with the existing.

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2. Recommendations

- All CDEM Group Plans and the Guide to the National Civil Defence Emergency
 Management Plan address how to make and communicate the rapid assessment of a
 disaster's impacts. Plans should include means by which information can be obtained
 from the stricken communities themselves, including "Nil" reports, to distinguish these
 responses from the absence of a response caused by a failure of communications systems
 (see also Recommendation 12).
- 2. A policy for the rejuvenation of local CDEM throughout the country be developed by MCDEM to take advantage of current high level public awareness of the need; that this policy aim to encourage CDEM Groups to incentivise and promote this revival, and advises CDEM Groups to look to CERTs and community boards as means by which community involvement may be established.
- 3. The special powers that are conferred by a declaration of a state of emergency be vested in the person who declares that emergency, with those powers being executed through the controller. The elected representative who declares the emergency may delegate these powers to his/her controller.
- Any review of the CDEM Act include consideration of whether the structure, roles and responsibilities of CDEM Groups and their subordinate structures should be changed.
- CDEM Groups address the urgent information needs of executive staff and leaders
 involved in a civil defence response. As well as more traditional means like laminated
 cards, the opportunities offered by smart phones and tablet computers should be
 investigated.
- The Building Safety Evaluation Guidelines for Territorial Authorities be reviewed with a
 focus on the placarding system, its purpose, associated record keeping and clarity of
 wordings to a general reader; and consideration be given to mandating the guidelines as a
 national Standard.
- 7. MCDEM discuss with Volunteering NZ the possibility of the latter's taking on the capability to mobilise and support volunteer effort, including assistance with spontaneous volunteers, along the lines of the Volunteering Australia model.

- 8. The possibility of developing a unique addressing system for New Zealand, including urban addresses, be investigated.
- 9. The welfare function as part of CDEM plans and arrangements be reviewed, with attention paid to:
 - the relationship of welfare agencies with the CDEM Group
 - the interaction between welfare agencies and CD during response and recovery
 - the emergency response training available for welfare organisations
 - staffing requirements and management of volunteers for emergency operation of welfare agencies
 - the establishment of "one stop" facilities like "Right Service, right time" to ease access to welfare services.
- 10. Renewed (and innovative) efforts be made to get public action on preparedness and mitigation, based on research into community reaction after the September and February events.
- 11. Defined roles in emergency events for local and national politicians be developed by MCDEM and CDEM Groups, and that plans include early post event briefing on this role. To help elected representatives fill their roles effectively, that quick reference guides be produced setting out responsibilities, actions required, and relevant contact details (refer to Recommendation 5 about use of modern means like smart phone or tablet computer applications).
- 12. MPs' electorate offices and local government community boards be incorporated into CD response arrangements for the purposes of receiving and conveying information to and from local communities; and that the provision of special telephone access be investigated to ascertain whether agreed protocols for use could make this a practical tool.
- 13. The draft Canterbury CDEM Capability Assessment Report of August 2010 be finalised and its recommendations formally considered.
- 14. Relevant incoming Ministers be briefed on key roles and responsibilities in an emergency, and on how to access lessons and recommendations from previous disasters, to minimise the need for development of ad hoc processes in each event.

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- 15. CDEM Group plans incorporate arrangements for the immediate relief of staff who are themselves disaster victims, and training in recognised techniques for managing arduous working hours under high levels of personal stress.
- 16. Consideration be given to a national training programme or annual conference for CDEM personnel to provide opportunities for relationship building and discussion of case studies like the Canterbury earthquakes.
- 17. CDEM Group activity include a programme for reaching out to communities through established interest groups to build awareness and cohesion so that these groups may play a role in community resilience and response to emergencies.
- 18. CDEM plans extend beyond consideration of emergency accommodation only to longer term arrangements, for example, involving Housing NZ in more certain arrangements than providing "on the day"
- MCDEM investigate and promote means by which efficient and secure sharing of information in the interests of disaster response and recovery could be achieved.

3. Structure and Process of the Review

Background to Event

The 4 September 2010 Canterbury earthquake was the first heavily damaging seismic event to strike New Zealand since the Hawkes Bay earthquake of 1931. Its epicentre was thirty kilometres west of Christchurch and it affected most seriously the territorial authorities of Christchurch City Council, Waimakariri District Council and Selwyn District Council, which together have a population of around 400,000. It was felt from Invercargill to the central North Island.

All three territorial authorities are members of the Canterbury Civil Defence and Emergency Management (CDEM) Group. Each set up an Emergency Operations Centre and the Group set up an Emergency Co-ordinating Centre at the Environment Canterbury premises in Christchurch. The National Crisis Management Centre in Wellington was also activated.

There were no fatalities and few serious injuries. Nevertheless, damage and disruption were extensive. Features of the earthquake were:

- The large number of aftershocks, several causing more damage, and including the devastating aftershock on 22 February 2011.
- Extensive damage to unreinforced masonry buildings.
- Collapse of many brick chimneys, including a large number on houses.
- Widespread liquefaction and lateral spreading in areas close to streams, rivers and wetland (about 15% of the area of potential liquefiable soils in the district).

Although there was significant damage to lifelines, including rail and road networks, water supply and wastewater systems, power and telephones, most were reinstated to at least a workable level within days.

Farming areas, mostly in Selwyn District, also suffered damage, particularly where the earthquake caused ground rupture and movement.

The earthquake caused the largest CD emergency since the new Civil Defence and Emergency Act came into force in 2002.

Establishment of Review

A process of organisational debriefings within agencies at local, regional and national levels has reviewed operations, catalogued strengths and weaknesses, and identified issues to inform current plans and processes. The Director of Civil Defence & Emergency Management saw a need for a higher level review to report on management of the response and the transition to recovery, in order to inform continuing development of CDEM arrangements.

This review is in line with the Director's duties under the Civil Defence and Emergency Management Act to monitor the performance of CDEM Groups and persons who have responsibilities under the Act. As such the review must seek to:

- Enhance organisational learning;
- Ensure informed decision making;
- Support substantive accountability;
- Build capacity and capability.

The review was carried out by two independent consultants:

- Richard Westlake of Westlake Consulting Limited, and
- David Middleton ONZM of Kestrel Group Limited.

The consultants were appointed on 14 January with initial instructions to report by 30 April. Terms of Reference are at Appendix 1. The key themes were:

- The response to the event in the Community;
- The response to the event by local, regional and national agencies;
- The management of the event;
- Support to Government for timely decision-making;
- Management of information to the public;
- Establishment of recovery initiatives and recovery framework.

The review did not consider liability issues, and it reports on issues and processes rather than individual incidents and responses.

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The Terms of Reference require the review to consider only the period until 23 September, covering the initial response/recovery phase.

Approach Taken

The reviewers conducted interviews in Wellington, Trentham, Auckland, Christchurch, Rangiora and Rolleston. We also reviewed available reports, minutes and other documents including

- The Civil Defence and Emergency Management Act (2002);
- The Guide to the Civil Defence and Emergency Management Plan ("the Director's Guide");
- The Canterbury CDEM Plan; and
- National Crisis Management Centre (NCMC) Situation Reports¹.

Forty people from eighteen organisations were interviewed before the earthquake of 22 February. We targeted our first interviews with people we considered best able to provide a strategic perspective, and progressively worked down to the operational level. After 22 February, interviews were suspended for a month and then resumed where possible. Many potential interviewees were distracted by the 22 February earthquake and appointments were not pursued. This curtailment meant that some sectors were only moderately represented in the interviews but it vindicated an approach of pursuing the high level view first. Sectors where we have completed fewer interviews than we would have liked include utilities, welfare organisations and representatives of the local community (although we interviewed Members of Parliament and local government representatives both before and after 22 February).

Our interviews followed a semi-structured pattern which allowed interviewees a free rein to express their experiences and views, guiding them towards matters in the Terms of Reference where appropriate, or where we had specific questions. We adopted this open approach quite early in the process when we realised that almost all our interviewees were well prepared, co-operative and open.

 $^{^{1}}$ Refer Appendix 2 for the full list of interviewees and Appendix 3 for bibliography of documents consulted.

We have tried to indicate where the limitation imposed by the February event has affected the report. Statements that sectors were incompletely covered and equivocal language are indications of less comprehensive coverage.

Nevertheless, we consider this report provides valuable insights into what must now be considered (in light of the 22 February event) a disaster of second order proportions. Comparison of the response/recovery for both events will be instructive. We believe that the behaviours, imperatives, priorities and processes are necessarily different in a major national emergency involving heavy casualties from those in a regional event with few casualties, as studied in this report. The latter will be a more frequent type of event in New Zealand than the former, which may not happen again in our lifetimes.

This report is not intended to inform its principals on how the response/recovery to the 4 September earthquake could have been improved. Rather, it examines the processes, plans, systems and procedures enshrined in the Civil Defence & Emergency Management Act and interpreted by the Canterbury Civil Defence & Emergency Management Group.

Structure of Report

This report has been structured to reflect the requirements of the Terms of Reference, with specific recommendations. We gave assurance to interviewees that their responses would be anonymous while recognising that wording, style or context might identify a person.

4. Overview of the Event and Impacts²

At 4.35 a.m. local time on Saturday 4 September 2010, the rupture of a previously unrecognised strike-slip fault beneath the Canterbury Plains produced a magnitude 7.1 earthquake that caused widespread damage throughout the region. The epicentre was about ten kilometres southeast of the town of Darfield, with a focal depth of ten kilometres. The event produced a 28 kilometre long east-west surface rupture, mainly through the farmland of Selwyn District. During the month following this main event, there were eleven aftershocks of magnitude 5 or greater, some of which caused further damage to infrastructure in Christchurch and surrounding districts.

The Canterbury Plains are New Zealand's largest area of flat land. They are formed by the overlapping fans of several rivers that flow out of the Southern Alps. Christchurch is on the coast and adjacent to an extinct volcano complex that forms Banks Peninsula. The site of the city was largely swamp located behind beach sand dunes, with estuaries and lagoons that were drained. The Waimakariri River regularly flooded the city before stop bank construction and realignment in the 1850s. These factors are particularly relevant to the liquefaction and lateral spreading that occurred during the 4 September event (and the 22 February earthquake).

Modern buildings and houses generally responded well to the shaking, which was below New Zealand earthquake design levels for serviceability limit and ultimate limit states. The Christchurch Women's Hospital's base isolation system was activated. The major impacts were to unreinforced masonry buildings – mostly in the Christchurch and Kaiapoi business districts – and buildings (mainly houses) on soft soils. Housing performance featured chimney collapse, with some 26,000 chimneys reportedly damaged. Some interbuilding pounding occurred.

The Canterbury Engineering Lifelines Group has been addressing infrastructure vulnerability co-operatively since the 1990s. This attention can be credited for the high level of lifeline resilience. Power and telecommunications were restored within 24 hours. Water was mostly restored within five days but waste water services were a more intractable problem, and some had not been reconnected before 22 February.

² The reviewers acknowledge the New Zealand Society for Earthquake Engineering Bulletin Volume 43, number 4, and the Geotechnical Reconnaissance of the 2010 Darfield (New Zealand) Earthquake version 1, edited by Misko Cubrinovski of the University of Canterbury and Russell A. Green of Virginia Tech, Blacksburg, Virginia, USA, as sources for this section.

The science and engineering communities collaborated with government officials in a free exchange of information under the 'learning from earthquakes' banner, and extensive and detailed reports, such as those cited here, were produced within three months of the event. Virtual clearing houses and technical forums were still being utilised up until the 22 February, making the September earthquake one of the most intensively researched in the world.

As was reiterated to us regularly, the 4 September event was accompanied by elements of good fortune:

- Its occurrence in the early morning meant the streets of the business districts,
 where much of the potentially lethal damage occurred, were largely deserted;
- No big sporting or cultural event had taken place the previous night, so there was
 little reason for people to be in the city centre into the early hours;
- This, combined with poor weather during the evening, kept many potential revellers off the streets;
- The early hour of the day gave Urban Search and Rescue (USAR) and building evaluation teams a whole day of daylight in which to work.

It soon became evident that casualties were light, so USAR engineers could be put on building safety evaluation (placarding) duties.

There was also reasonably fine weather over the days following the earthquake, so the clean-up was unimpeded by rain or cold (apart from a brief period of wind and rain on 5/6 September).

However, luck should not colour conclusions about the success of the response; it would have taken only one major building collapse to alter the situation significantly, as was demonstrated tragically on 22 February.

5. National Response

GNS Science, through GeoNet³, notifies MCDEM of a serious event at the same time as it notifies its own staff. This ensures the earliest possible warning, although at the expense of accuracy and verification. The location of the earthquake was established in about seven minutes. For about an hour, the initial USGS estimate of magnitude 7.4 was used, even though early indications from GeoNet were 7.0.

The Duty Manager, Duty Officer and other members of the on-call team were notified by pager. They commenced the laid down procedure for alerting the National Controller and activating CD at the national level.

The Guide to the National Civil Defence Emergency Management Plan (the 'Guide') provides that MCDEM may issue a National Advisory notification through the National Warning System in the event of an earthquake. Agencies that meet the performance standards set out by MCDEM to ensure capability of receipt at any hour, must register with MCDEM to receive warnings and advisories. For earthquakes, GeoNet has a subscription list for notification of all felt events. Web service, RSS, Pager, SMS, email and fax are all employed. In the case of large events, GNS Science informs MCDEM by telephone.

For unpredictable events like earthquakes, where warning is not possible, the objective is to inform emergency response by providing assessments of the likely impact on any affected areas. A national advisory may be updated, cancelled or converted to a national warning if there is a threat to New Zealand. Media releases are issued in conjunction with advisories. National arrangements are in place for the broadcast of emergency announcements via radio and television networks. These are typically used for pre event warnings and were not utilised for the 4 September event.

A National Advisory was issued by MCDEM at 0525 4 September, less than sixty minutes after the earthquake. It was addressed to the CDEM Manager/Contingency Manager of CDEM Groups, local authorities, NZ Fire Service, NZ Police and other agencies, with copy to MCDEM Regional Emergency Management Advisors (REMAs). It gave the earthquake parameters, did not detail any assistance required, and noted that the NCMC was not yet

³ Refer <u>www.geonet.org.nz</u>

activated. All further communication would be via normal email as part of NCMC situation reports.

A further note was issued by the Duty Team at 0638 to state that the NCMC was being activated and that all Wellington staff were to contact it within 30 minutes to notify their availability. REMAs were to contact affected CDEM Groups within the same time frame and notify the NCMC when they had made this contact.

Some Wellington-based staff self-activated at first light to the NCMC at the Beehive.

Others were activated by standard processes and the NCMC was activated at Mode 2 – 'Engage', defined in the Guide as:

In addition to monitoring activities: collect, analyse and disseminate information on emergencies; report, advise government; provide public information service. Support agencies to be kept informed.

The first Situation Report⁴ (Sitrep) carried information about the state of CD centres in the affected region (most activated), first impressions of damage, and status reports on people, property, transport, lifelines and the international response. The sitrep noted that response arrangements were as directed by the National CDEM Plan and CDEM Group Plan.

The NCMC activation was later escalated to Mode 3 – 'Assist', defined in the Guide as:

In addition to engage activities: process/co-ordinate requests for support from regional and local organisations.

The NCMC was generally found to have operated effectively and to have benefited from the experiences of the Samoan and Chilean events in the previous twelve months. Greater resource availability from the Department of Internal Affairs and a recent simulation exercise also paid dividends. The NCMC organised itself into a 24 hour operation with staff on eight-hour shifts.

 $^{^{}m 4}$ Issued at 0915 on 4 September, approximately four-and-a-half hours after the event

6. Response in the Community

Warnings, alerts and initial messages to the public

Radio New Zealand (Radio NZ) records show that, at the time of the earthquake, a live presenter was on air and a small team of journalists was working in the newsroom. Being a live 24 hour broadcaster enabled Radio NZ to respond instantly to texts from listeners, and to communications with MCDEM.

Radio NZ provided web coverage from early on the morning of 4 September, with news reports being posted within the first two hours. A direct link to the MCDEM website was highlighted on the home page.

The first formal press release was received from MCDEM at 0633. The time on the release was 0435, the exact time of the earthquake. It made no mention of the possibility of a tsunami because it was immediately recognised that this was not a tsunamagenic earthquake. It has since been appreciated that a 'no tsunami threat' notice would have reassured the public.

For further coverage of information dissemination, see the section on "Management of information to the public" (Page 55).

Interviews with some Christchurch citizens indicate that the public view of how well CDEM worked was influenced by how severe the damage to their homes and businesses was.⁵ Those with minimal damage were impressed but those with more severe damage tended to look for more help and advice than seemed available. Even general indications about when disruptions to schooling, transport, housing and jobs, etc., could be expected to ease were looked for.

Activations and information gathering

The earthquake was powerfully felt locally, and it was obvious a major event had occurred. However, the likelihood of either an Alpine Fault or a Wellington earthquake was so prevalent in the minds of even emergency management, and so low was the expectation of a large event in Christchurch, that it took some time for an appreciation of exactly what had occurred. The absence of three senior CDEM Group Controllers at the same time, the token involvement of local politicians in the CDEM Group coupled with a

Working notes, Dr. Suzanne Vallance Faculty of Environment, Society and Design, Lincoln University

lack of understanding of their roles, add weight to the observation in the August 2010 Canterbury CDEM Group Capability Assessment Report (still in draft) of complacency.

The Emergency Operations Centres in Selwyn, Waimakariri and Christchurch and the Emergency Co-ordinating Centre at Environment Canterbury were activated spontaneously, all within an hour of the earthquake. Timaru District Council EOC was also activated.

Since the Group Controller and two deputies were not available initially, a fourth level controller filled the role for less than 48 hours until the senior Group Controller returned from overseas. By this time, states of emergency had been declared in three separate territorial authorities. Had either the senior Group Controller or his deputy been available straight away, what was seen by many as the unsatisfactory situation of three separate declarations could have been replaced with one declaration covering the three TAs.

How to get information from all affected areas quickly was a challenge. Concern was voiced over the lack of planned rapid impact assessment processes which — in the case particularly of Christchurch City Council — meant delayed attention to the needs of areas outside the central business district. In Waimakariri, initial intelligence reports came from the Police and Fire Service but a helicopter was available at first light. Selwyn has a well-established arrangement through the rural fire service to utilise helicopter flights for intelligence gathering. This gave good information about ground and structure damage but did not provide an appreciation of the extent of liquefaction. This showed the continuing need for ground-based assessment. Selwyn and Waimakariri utilised their own geographical information systems (GIS) effectively to ascertain initial impacts, but these maps were not made available at CDEM Group level; this exemplifies the Group Controller's struggle to obtain information to assist with the coordination responsibility.

A simple, early but comprehensive reconnaissance can be planned by involving the capability for low-level flights over the region. Value could be added by a photographer with a high resolution camera and a GPS system to locate and map where photographs have been taken.

The lack of a reconnaissance plan in Christchurch contrasts with Wellington region, where extensive arrangements have been made with a helicopter firm outside the city to take pre-arranged flight paths (picking up NZ Transport Agency personnel on the way) to view and video vital access routes and installations. Pre-supplied maps are used by the

helicopter crew to mark obstacles and blockages. The region's 29 park rangers are trained to deploy and report on damage in the areas where they happen to be. To complete coverage, plans are in place for fishing vessels to do a rapid check of sea route access. These plans have been tested by exercises but are untried in the absence of a major Wellington earthquake event.

Further, each territorial authority in Wellington region reportedly has its own local plans for rapid impact assessment.

There may be a case for NCMC, on activation, to ask the RNZAF to utilise the P3 aircraft on standby for search and rescue as a matter of routine to conduct early photo-reconnaissance.

The business community, through the Canterbury Employers' Chamber of Commerce, gathered its own information. A call centre was set up by Monday 6 September and visual inspections, anecdotal evidence gathering, and liaison activities were underway. That day the Chamber was able to provide sufficient information to the Minister of Finance to enable decisions about the extent of urgent government aid to assist the survival of Canterbury businesses.

There are sources of intelligence within communities that could be included in plans for the early provision of impact assessments. The electorate offices of locally-based Members of Parliament seem to be an under-utilised resource. Local community boards and council wards might also take on CD and impact assessment roles.

Recommendation 1

It is recommended that all CDEM Group Plans and the Guide to the National Civil Defence Emergency Management Plan address how to make and communicate the rapid assessment of a disaster's impacts. Plans should include means by which information can be obtained from the stricken communities themselves, including "Nil" reports, to distinguish these responses from the absence of a response caused by a failure of communications systems (see also Recommendation 12).

The Canterbury CDEM Plan describes Community Emergency Response Teams (CERTs), not to be confused with USAR Response Teams (RTs). These are registered rescue teams able to do various skilled tasks, whereas CERTs are community based teams who are

taught basic CD skills. According to the Canterbury CDEM website, although CERTs are trained in USAR and general rescue their focus is more on reconnaissance and helping in emergency events as a disciplined unit, for example assisting with sandbagging. There are currently four or five of these teams in the Group area at different levels of training. The concept is taken from the Federal Emergency Management Agency (FEMA) in the USA. In Christchurch, CERTs worked with the Fire Service. CERTs can be registered by MCDEM as a means of quality control, though not all are.

Several interviewees mentioned the parlous state of community CD and the need for stronger community ownership. CD posts were often inadequately indicated, unequipped and unstaffed, so visits to local CD headquarters were in vain. Basic CD support for some suburbs was absent. Schools were poorly equipped to act as CD Posts and also serve their charges should an emergency occur in school time. (as it did on 22 February, when teachers reportedly reacted well to safeguard children until parents could take them away – a challenge made more difficult for some when the school was simultaneously acting as a CD post). One suggestion was that the Department of Education supply every school with a radio telephone and maintain necessary records so they can inform parents of their children's situation in an emergency.

A rejuvenation of local CD organisation at suburb level is needed. There was a feeling that the CERT concept was excellent and could be the basis of an improved volunteer capacity at a suburban level. The aftermath of the earthquakes, with subsequent heightened awareness, is a good time to develop such community-based resources.

Recommendation 2

It is recommended that a policy for the rejuvenation of local CDEM throughout the country be developed by MCDEM to take advantage of current high level public awareness of the need; that this policy aim to encourage CDEM Groups to incentivise and promote this revival, and advises CDEM Groups to look to CERTs and community boards as means by which community involvement may be established.

It was generally concluded that the Art Gallery served well as Christchurch City Council's Emergency Operations Centre, even though it was the second choice because of internal

damage to the Council offices. There was some comment about initial frustration with communications caused by the delay during the change of premises. Post the February earthquake, the Art Gallery could make superfluous a proposal to develop a purpose built EOC for Christchurch City. As well as the facilities it offered, there was a benefit in the glass frontage allowing people to see the activity going on inside. It made the EOC a part of the community. The lesson here is for in-depth consideration of all requirements for an EOC, including its resilience, before selecting a site.

Observations on Activations and Information Gathering

The September and February earthquakes have done much to dispel the notion that communities — especially urban ones - are fractured and helpless. Although capability varied among communities, there were many instances of neighbourly assistance, of streets and communities coming together in the common cause, and of less affected areas providing services and assistance to those with greater disruption. However, community resilience could be further fostered — refer to the discussion on page 57.

Activation of the EOCs and the ECC went well, but hangovers from prior working relationship difficulties, and concentration by the three EOCs on their own local operations, hampered response co-ordination at the group level. Although the CDEM Group Controller and two alternatives were not available initially, a fully competent controller activated the role.

The September earthquake could be seen as a blessing in disguise because it dispelled the complacency in the minds of both the public and emergency management throughout the Region, and enabled a more effective response to the far worse February disaster.

There was a comment that initial briefings to mayors and councillors were not sufficiently operationally focussed. A template could set out for advisors what fundamental information mayors and councillors require at the outset of a disaster response. This could be keyed with a checklist, both hard copy and electronic (see Recommendation 5) setting out items like role, responsibilities, decision points and contact information. Wellington's CDEM Group has produced a brochure on the role of councillors during an emergency (see Appendix), and combines this with various disaster response fact sheets, relevant to all citizens, into a desk pack. Pocket checklists are being produced.

At the time of local body elections, MCDEM makes briefing material available that covers CD at a national level.

The ECC felt a lack of information being relayed to it, obstructing its coordination role. When information or data was received, it was not in a form readily suitable for the ECC's (or national) use. EOCs were correctly concentrating on managing operations but information was not being shared. For example, Selwyn's EOC contacted Ashburton District Council on their own initiative and obtained five backup staff plus some cover for absences, then used nation-wide contacts to augment their strength further, all without informing the ECC.

The Employers' Chamber of Commerce also carried out its own activities and relayed intelligence to central government to allow urgent action. This included an immediate injection of about \$10.5 million of government money, to ease the cash flow problems of about 2,300 businesses, an action afterwards recognised as timely for the survival of many.

The new EMIS (Emergency Management Information System) data sharing system should alleviate this situation, if it is fully utilised by people trained in its use and remains locally available despite any disruptions to communications systems caused by the event. We discuss EMIS further on in this report.

There were some shortcomings in the provision for, and carrying out of, initial reconnaissance to ascertain immediate impacts of the earthquake. This arises from a lack of the planning that has taken place in other regions. The impression was that authorities were unaware for some time of the extent of damage and disruption in some areas. The same complaint has arisen following the February event so the need for a means of rapid reconnaissance of the whole area of possible impact is underlined.

Declarations of States of Emergency

The Director's Guidelines for Declarations⁶ acknowledge that the Act is not easy to follow. There are two types of declaration – national and local – and local is further divided into a district or ward declaration and a CDEM Group declaration. Either type of local declaration may be in respect of the whole territory or of a part. Apparently, at the passing of the Act in 2002, there was concern that isolated communities could be imperilled if the lowest level of declaration was at the Group.

⁶ MCDEM publication DGL 05/06

On declaring an emergency, the local controller (for district-wide declarations) or the group controller (for CDEM Group declarations) takes charge of the response, with access to statutory powers. The purpose of a declaration is to be a public method of granting people the necessary authority to protect life and property in extraordinary emergency events.

The Act states (Section 25) that each CDEM Group must authorise at least one person to make declarations. If more than one person is authorised, a hierarchical system must be specified to establish the responsibility at the time of an event. In addition, any mayor or designated councillor in the mayor's absence can declare an emergency for their district.

Under the Canterbury CDEM Group Plan, in accordance with legislation, the Chair of the Joint Committee may make a CDEM Group declaration or, in his/her absence, the Deputy or, if both are unavailable, any member of the Joint Committee. (The Joint Committee is the governing body of the CDEM Group, comprising elected representatives of each territorial authority). If there are no elected members available, the CEO of Environment Canterbury has the power to declare a CDEM Group emergency for the entire area of the CDEM Group, or any sub-district.

So the Joint Committee Chair may declare an emergency for the whole CDEM Group, or part of it, or for the territorial authority, or part of it, which he/she represents. A mayor or councillor on the Joint Committee may declare only for the territorial authority, or part of it, which he/she represents, unless the Chair of the Joint Committee is unavailable, when the deputy or – failing them – any councillor on the Joint Committee may declare for the whole Group.

At the time of the earthquake, the mayors of Christchurch City, Waimakariri District and Selwyn District were all available to make declarations and did so for their territorial authorities — at 9:50 a.m. on 4 September in the case of Christchurch and 10:00 a.m. for the two districts. All followed advice to declare from Regional Emergency Management Advisors (REMAs). Reasons for declaring a state of emergency were to enable the closure of the Christchurch central business district, support the response, enhance public confidence, and take on evacuation powers in case of need.

Local declarations are for a multi-agency emergency led by an agency other than a CDEM Group, or a response below CDEM Group-level (i.e. district or ward); at this level, CDEM

Group support and co-ordination will be required and may be monitored by the National Controller⁷

States of emergency must be for a set period up to seven days, and can be renewed. In this case, Order in Council 2010/316 dated 16 September extended some powers under Part 5 of the Act, 'Powers in relation to civil defence emergency management', for all three districts until 29 November.

The three mayoral declarations made after the September earthquake conferred emergency powers on each local controller, an employee of each council. One mayor acted as if the declaration had bestowed emergency powers on himself – which at face value was not unreasonable. We have commented on the adequacy of briefings to mayors and councillors in the previous section of this report and, in a later section, suggest the formal specification of a role for elected representatives.

Observations on Declarations of States of Emergency.

The three separate declarations gave powers to three controllers, each for a different geographical area. Had there been one group-wide declaration made by the chair of the Joint Committee, power would have been conferred on one controller, the Group Controller in the ECC. Some believed that the Group Controller was, in fact, in charge.

Adding to this source of confusion is the potential difficulty of a mayor's declaration as a Joint Committee member for a whole or part of a CDEM Group area, or in their own right for their own district, which would have the result of transferring powers to a controller who may not be an employee of any of the local councils.

The Reid report into the 2004 flood event in the North Island notes that one mayor declined to declare a state of emergency on the grounds that it would transfer control away from him. It seems that a system which transfers powers outside the organisational control of the elected representative on his/her making a declaration is flawed.

Elected representatives either on Joint Committees or on Councils have the responsibility to decide on a declaration. If a declaration is made, then power passes to the controller. No elected political leader is likely to make a declaration and then be suspected of

^{7 (}Director's Guidelines for Declarations - MCDEM Publication DGL 05/06)

abrogating their duty to the community and be held accountable for action (or inaction) over which they have no control. Although the response to an emergency is a team effort, with mayor and controller working closely together (as in the 22 February event), it is the elected representative who is accountable the public.

Recommendation 3

It is recommended that the special powers that are conferred by a declaration of a state of emergency be vested in the person who declares that emergency, with those powers being executed through the controller. The elected representative who declares the emergency may delegate these powers to his/her controller.

Separate declarations were made, despite the advice in the Director's Guidelines to to avoid, if possible, a number of independent declarations made by individual mayors within the same CDEM Group. 'If this was to occur the process should be well managed.' Some of those we spoke to claimed the process was not well managed, and the three declarations gave rise to confusion and unnecessary complexity. See also the section on the response of the emergency services (Page 34). In the event, this lack of initial coordination did not greatly affect the immediate response. The February event was quickly followed by a declaration of a national state of emergency.

Declarations of states of emergency are a signal to the public of the extent of the disaster and how seriously it is being dealt with. Though not in itself a reason to declare, this is a legitimate consideration when deciding to declare or not. In this case, the opinion was expressed that one declaration by the Joint Committee for areas worst affected by the earthquake would have better informed and assured the people of Canterbury.

This general confusion surrounding states of emergency was one reason why some suggest civil defence and emergency management should become a regional council matter. This point is returned to later in this report. There was also the suggestion that local states of emergency could be only for an entire CDEM Group, thus ensuring full support from all members for an impacted area and simplifying the whole process.

Declarations of Emergency give controllers wide powers. This emergency was considered well managed by the controllers, with the following caveats:

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- Canterbury CDEM Group plans provide for the Group Controller role to be cycled through two or more people, to relieve the Senior Controller from time to time. This means the identity of the Group Controller changed with the shift changes. Local controllers and others were therefore dealing with different group controllers at different times, and these controllers sometimes had differing opinions and ways of working. It was suggested that a better structure was one Senior Group Controller who was relieved by a Deputy, but working always under the Senior Controller, who needed to be involved in any important decision or action. However, another CDEM Group with the same planned arrangements as Canterbury did not see a problem, provided that the various regional controllers worked, trained and exercised closely together so that no different approaches became apparent. It seems each region will have to work out its own solution to this issue.
- The first alternate Group Controller in this event was also the manager of the Emergency Management Office and so, in normal times, the immediate superior of the Group Controller. Whilst we found nothing to indicate this created problems in this case, it does convey a lack of diligence in structuring the response organisation. The CDEM Group plan at paragraph 6.1 (d) names five alternate group controllers, and the individual who took the role of first alternate is not on the list at all. The person who took over as Group Controller for 48 hours in the absence of the Senior Group Controller and two alternates, is named as first alternate. The published list of controllers does not seem to have been adhered to.
- There was confusion about whether local controllers were operating under the
 direction of the Group Controller or had the emergency powers themselves. Local
 controllers seemed definite about their retention of emergency powers and tended to
 ignore the Group Controller's needs. This left the Group Controller under-briefed
 from time to time and without the information needed to co-ordinate and assist.

Summary of Response in the Community

The early response to this event seemed well conducted, in spite of some unexpected circumstances like the absence of the first three choices of group controller, and the declaration of three separate states of emergency. Those with duties under CD arrangements turned out as required in national, group and local emergency centres.

Early intelligence about the disruption caused was hampered in some areas by inadequate early impact assessments. Other CDEM Groups have plans for these.

The earthquake exposed the inadequacy of suburban civil defence. Community Emergency Response Teams (CERTs) are potentially a valuable community resource and base upon which a suburban revival of CD could be built, but they are under-developed and under-trained at present. Run down suburban CD volunteer resources exacerbated the inadequate intelligence flow between the affected communities and central authorities.

Emergencies were declared in three areas to enable statutory powers to be adopted but it is unclear whether there was a proper understanding of these among political leaders and some CD personnel, and what organisational hierarchy a declaration of emergency imposed.

7. Response to the Emergency

Local authorities

Too few people seemed to have been fully briefed or to understand their responsibilities and the applicable rules or guidelines. For emergency events there is a problem of people who are not generally involved in CD having to take on roles they have not properly prepared for, often at very short notice. However, Selwyn District Council impressed us with the extent to which CD has been integrated into their normal business processes.

In Canterbury, and possibly other regions of New Zealand, CD responsibilities like membership of the Joint Committee or Co-ordinating Executive Group (CEG) are often delegated. Four of the ten people on the Joint Mayoral Committee of the Canterbury CDEM Group were not mayors. However, the people actually involved may have a greater sense of commitment. According to the draft Capability Assessment Report, there is no induction material for new members.

The CEG membership is mostly at chief executive level but attendance and interest were variable, and few understood the CEG's role. The manager of the Emergency Management Office reported to the Joint Committee, not the CEG Chair, which might leave the latter vulnerable to being cut out of the information loop.

These and other factors were cited as reasons for reforming the CDEM arrangements in regions by placing responsibility squarely with the regional council. CDEM matters would then arise as a matter of course in the business and meeting agendas of the regional council and its committees (including the Chief Executives Committee). The regional council would run the Emergency Management Office and employ its manager and staff, avoiding the situation in Christchurch where the EMO is a CDEM Group structure that has been out-sourced to Environment Canterbury, creating confusion over who actually employs the EMO manager.

Others were vehemently opposed to the transfer of CD to regional councils. The loyalty of local staff to their TA civil defence needs as opposed to more distant regional requirements was cited, and it was doubted that the remarkable commitment shown by local council staff to their duties following the September (and February) event would be at the same level for a regional council.

Alternatives suggested included maintaining CD at the TA level, with strong MCDEM support available at short notice. Instead of a CDEM Group, there would be strong mutual aid agreements with neighbouring and distant TAs.

One model variation already being used in some CDEM Groups entails the setting up of a group office with a second tier manager who appoints all CDEM officers for the region. The manager is the Group Controller and all resources for the region are pooled and managed by the CDEM Group. Although the Group Office may be located in the regional council, it is responsible to the Group.

This discussion relates to the fundamental structure of Civil Defence and Emergency Management, which is based upon the premise that management and control should devolve to local levels to the greatest possible extent. We acknowledge that any changes are likely to require amendments to the CDEM Act and that the February earthquake will probably prompt a review of the Act. We therefore leave further consideration of this matter to subsequent enquiries, but record the following recommendation because the September event exercised the local CDEM structures and arrangements to a greater extent than the February one, which was dealt with as a national emergency.

Recommendation 4

It is recommended that any review of the CDEM Act include consideration of whether the structure, roles and responsibilities of CDEM Groups and their subordinate structures should be changed.

CDEM Group Plans, the Guide and other resource material available from MCDEM and from CDEM Group is extensive. For people like CEOs and elected representatives for whom CD duties will be a rare undertaking, having the vital points on a couple of laminated pages for assimilation once the emergency has occurred would be invaluable. A pocket checklist for such people has already been mentioned. Since smart-phones and tablet computers are now commonly used, it should not be a major investment to develop an Emergency Management 'Key actions' application which could be loaded on to every relevant official's device (and updated automatically), incorporating generic, national and Council-specific checklists, responsibilities and contact details.

Recommendation 5

It is recommended that CDEM Groups address the urgent information needs of executive staff and leaders involved in a civil defence response. As well as more traditional means like laminated cards, the opportunities offered by smart phones and tablet computers should be investigated.

Regional Emergency Management Advisors (REMAs) are MCDEM staff who deploy to EOCs and ECCs when they are opened. After the September event, REMAs were present in all EOCs and the ECC. They reported that TA staff appreciated dealing directly with MCDEM in the person of the REMA. Several REMAs observed that TAs did not utilise the ECC's co-ordinating function to its best advantage.

Building Safety Evaluations

The Department of Building and Housing (DBH) is the lead government agency for building safety evaluation following events that impact on buildings. DBH supports the "Guidelines for Territorial Authorities" prepared by the New Zealand Society for Earthquake Engineering and last published in August 2009 after revision of a 1998 document.

The Guidelines draw heavily on North American experience and procedures. Their scope covers the rapid assessment of buildings to be carried out during a state of emergency. They address all types of building (including residential) and infrastructure (roads, bridges, water supplies, power supplies, etc.).

It is important to note that the focus of the building safety assessments and the placards that are placed on buildings to inform the public about an inspection are for the period between this initial reconnaissance and the lifting of the state of emergency. The expectation of specialists conducting the evaluations is that the findings will be current for a few weeks at most.

The Guidelines conceive the building safety assessment process as part of a longer term programme to ensure the structural integrity of buildings after a disaster that causes a state of emergency to be declared. The rapid safety evaluation process itself comprises two levels. The first is based on exterior inspection and involves placards on the buildings, cordoning off, and recording in a central database. Level 2 inspections are

suitable for larger buildings and critical facilities. Interiors are assessed, drawings consulted, and calculations made in addition to the Level 1 activities. The results of the Level 1 inspection may be revised.

Detailed engineering evaluation and remedial work are envisaged in the longer term. These are the building owner's responsibility but may be required by the TA.

Despite these guidelines clearly stating in their foreword that 'Territorial authorities have the responsibility of co-ordinating building inspections to provide for public safety,' participants in the process perceived that they needed to rely on a centrally organised exercise, at least in the Christchurch City Council's area. There was no system in place to utilise the reports of building owners' own engineers where these had been done.

Other recommendations in the DBH Guidelines are to prepare and adopt an emergency plan, write responsibilities into role descriptions, identify priorities for evaluation, assemble and stockpile resources, prepare a database for receiving and recording information, and document the approach that will be taken post-disaster.

The Guidelines recommend one of three placards be affixed to inspected buildings:

Colour	Placard Heading	Placard Sub	Placard Wording
		Heading	
Green	Inspected	No restriction on use or occupancy	While no apparent hazards have been found a more comprehensive inspection may reveal safety hazards
Yellow	Restricted Use	No entry except on essential business	This building has been damaged and its structural safety is questionable. Enter only at own risk. Subsequent aftershocks may result in increased damage and danger
Red	Unsafe	Do not enter or occupy	This building has been seriously damaged and is unsafe. Do not enter. Entry may result in death or injury.

The green placards do not warn about aftershocks as the yellow placards do.

There was evidence of small but significant differences in how each council conducted building safety assessments, and in how the placards were used and interpreted. This was partly due to the use of out-of-date procedures from the 1998 Guidelines. We were

also told of inadequate record keeping or information distribution so that it was often not known without a visual check what type of placard had been applied to a particular building, or whether it had been revised.

Placards were widely interpreted as a signal of the ongoing safety status of a building.

Normally, placards have no validity after the lifting of the state of emergency. If access to a building is to continue to be refused, the TA must by then have used its powers under the Building Act 2004. After the 4 September event, Order in Council SR 2010/315 extended the validity period for red and yellow placards to 16 September 2011. Thus a rapid evaluation lasting a few minutes established the safety status of a building for over twelve months, without the need for further inspection. Green placarded buildings, by inference, were widely regarded as permanently safe, also without further inspection.

When used on dwellings, the placards are intended as a best-judgment indication of safety and habitability. However, they were subsequently used for a short time in the consideration of rates rebates and emergency financial grants from the Red Cross Canterbury Earthquake Recovery Fund. The accuracy of the stickers therefore had consequences well beyond their original purpose.

We heard a view that the system does not suit residential properties. Where continued occupancy of a building is the concern rather than public access, the key issue is whether it is safe to live in. A two-level system might be more suitable: red for certified unsafe, white for not obviously unsafe but care essential. Note the change of colour from green to white to avoid the notion that green means "go ahead".

Widespread confusion among householders was reported. Red placards were interpreted as denoting demolition, green were safety certificates, while yellow seemed to leave many just bemused. Debates with the rapid assessment engineers ensued, either to redtag a home so owners could depend on a total loss settlement from their insurers or green-tag it to avoid the necessity to find somewhere else to live. These engineers were often the first officials whom residents had seen, and their 15-20 minute assessment of a property did not meet expectations for more comprehensive attention.

This extrinsic employment of the placards gave them a value that their ease of removal and copying did not support. Instances of placard swapping by building owners or tenants were cited but it is not known whether this was connected to the financial assistance available on their evidence. Extending the life of the placards exposed

deficiencies in their colour fastness and how well they were secured to buildings. After the February 2011 earthquake, questions were raised about green placarded buildings that had collapsed, suggesting widespread public confusion about what the placards meant.

There is some evidence, then, that a further review of the Guidelines would be useful and that the wording and employment of the placards should be its focus. Whether the procedures for rapid building evaluation should be a legislated rather than having a recommended status only should also be addressed.

Recommendation 6

It is recommended that the Building Safety Evaluation Guidelines for Territorial Authorities be reviewed with a focus on the placarding system, its purpose, associated record keeping and clarity of wordings to a general reader; and consideration be given to mandating the guidelines as a national Standard.

Cordons

Powers conferred by a declaration of a state of emergency include evacuation from, and prevention of access to, public areas. Cordons are manned by police to enforce this. Sitrep No. 5 of 5 September reports that the Group Controller authorised NZ Police to restrict public access to Christchurch City and Kaiapoi CBDs, Kairaki Beach, Pine Beach and other points at their discretion. As local controllers were in charge of their own districts' emergencies, some liaison must have occurred in order to co-ordinate this request.

It was decided (though initially not by the Police) that the cordon in the Christchurch CBD should be reinforced with military personnel who were available locally. Normal channels to effect this were considered too cumbersome by the community's leaders because of the need to co-ordinate requirements among the three districts that had declared. Instead, informal means were used, leading to difficulties and confusion about the purpose of this unplanned intervention and who was authorising it. This was resolved but resulted in a delay of a few days.

This delay was noticeably absent after the February earthquake because, we understand, an urgent request was made direct to NCMC who in turn dealt with Defence Forces Headquarters.

Consents process

Some early debate was reported on the best approach for granting the many building consents that would now be required. There were arguments for and against a fast track process and the importing of sufficient staff from other TAs to cope with demand while applying normal procedures. Eventually, an Order-in-Council eased the constraint by waiving the need for consents in some circumstances.

Emergency Accommodation

Waimakariri's plans for provision of emergency accommodation seemed to meet the demands of this disaster. People were encouraged to go first to unaffected family members. Failing this, the TA found and paid for alternative accommodation or directed victims to community resources like church halls, marae, etc. Any need Selwyn had for emergency accommodation was met by local motels and hotels.

Within Christchurch, comment was received that the marae-based response was largely ignored, possibly because of a lack of connection between CD and iwi. Communities centred on a marae have been shown in other emergencies to be cohesive and resilient, and to be capable of making a valuable contribution in their outreach to others, especially in the provision of emergency accommodation where they are well integrated with CDEM planning.

Emergency Services

The Fire (including USAR), Police and Defence services at both national and regional levels reported a largely normal business response. They had exercised extensively – including joint training – and reported that, if anything, the event went better than the exercises had indicated it might. In all services, local personnel put their professional duties ahead of family and home needs. This level of commitment serves New Zealand well, but, if not managed appropriately, can create its own difficulties and longer term problems. Many families of emergency services personnel suffered with their communities. Shortly before the February aftershock, we were advised by one emergency services employer that the cost of providing counselling to the children of their affected employees was the highest continuing support cost following the September event. This needs to be factored in to future work planning.

The Fire Service responded by setting up internal crisis caring centres for firemen and their families, in a "caring for carers" programme. This was very well received by staff and their families.

The emergency services remarked that one declaration of emergency instead of three would have assisted with the co-ordination of their resources for the response. With separate declarations, it was left to the individual services to assess relative priorities with insufficient knowledge so an inevitable "first come, first served" approach ensued. A noted under-utilisation of Defence Force helicopters, in contrast to the well-integrated use of other Defence Force resources, may have been one result of this fragmentation.

Sometimes, the push/pull dilemma posed quandaries for emergency services chiefs, especially in the Defence Force. The Defence Force is never the lead agency in CD emergencies. When the NCMC or an EOC is set up, the NZDF provides a liaison officer to advise the Controller on the capability and resources of the Defence Force. Liaison officers were appointed to all three local EOCs after the September event. Normal practice is for requests for support to be made through the NCMC liaison officer by the national controller; in the meantime the NZDF advances to a state of readiness in anticipation of requests.

Reality is not always this tidy, and some confusion followed requests for particular resources instead of requests to fill a need, causing a potential mismatch between the two. An example was a request for a particular aircraft type which turned out not to be the best type for the purpose. Delay in the provision of service personnel to assist with manning cordons was also cited by Defence chiefs as a result of unclear instructions about duties.

The preferred status expressed by the emergency services was national resources under local management. Within pre-determined geographical limits, however, commanders of NZDF camps and facilities may support responses to local emergencies with their own resources. This was an area where a single state of emergency declaration and coordinated requests for support would have clarified matters for the Commander of Burnham Camp.

Defence Force chiefs observed an over-estimation by departments of what defence resources could be made available.

From the CD side, co-ordination with the emergency services was considered to be very good. The sharing of operational and GIS information with the ECC was cited as an area for improvement, although the emergency services themselves stated they had good inter-service sharing systems.

The Fire Service undertook its largest USAR deployment to date, with over 140 people. USAR teams include about 24 structural engineers, and they became the main USAR contribution, organising and helping with rapid safety inspections of buildings alongside engineers arranged through Institution of Professional Engineers' procedures. These, and other volunteers, brought the number up to about 100. This could occur only because of the lack of entrapments and casualties.

In carrying out emergency stabilisation work the Fire Service has to be sensitive of the border between that and normal commercial building work. If commercial processes have broken down, or are overloaded, the Fire Service can get involved to do emergency or first repairs, otherwise the building owner must be left to rely on normal market operations. This can be a sensitive demarcation which the public may not be attuned to.

It was noted that the Fire Service response was enhanced by its being a national organisation, unlike everywhere else in the world, where the fire services are regional. This means the New Zealand resources of the Fire Service are well integrated and managed.

The task of the Police is to manage the emergency until CD takes over. If a declaration of emergency is warranted, they prefer it to be done early on so that powers can be transferred and they can adapt their role under the new regime. The Police view is that the military are used only after Police resources are exhausted; military involvement is therefore an implicit admission by Police of an inability to cope. There was some concern among Police management that this stage had not been reached and yet military assistance was brought in.

Although this may seem sensitive on the part of a department, it indicates again the need for planned communications to be maintained, even under the stress of informal or non-compliant channels.

Welfare agencies/services

The National Welfare Co-ordination Group (NWCG) co-ordinates welfare assistance at a national level when a CDEM Group cannot meet demand. The NWCG represents the welfare sector of seventeen named agencies (both government and NGOs) and any other agencies enlisted in a particular emergency. This large operation is chaired and led by the Ministry of Social Development.

The NWCG was in stand-by mode by mid-morning on 4th September while the MSD's Regional Commissioner in Christchurch and staff were assessing whether additional support would be required. The Group met that afternoon to co-ordinate national welfare response requirements.

By 14.00 that day, emergency welfare centres were being set up around Christchurch and other impacted districts. At 16.00 the 0800 Government helpline (0800 779 997) was activated, with service provided between 07.00 and 22.00 daily. Under the CDEM Group plan, emergency welfare centres are the point of contact for immediate welfare support. They are activated by the local CDEM welfare manager and provide an interface between the community and responding agencies. They are designed to provide a range of emergency welfare services such as temporary shelter, registration, finding accommodation, catering, first aid and providing information about the emergency, and response and recovery activities.

The Group Welfare Advisory Group (WAG) has been formed under the CDEM Group plan to develop, document and implement integrated emergency welfare planning for the Canterbury area. According to the plan, the WAG exists to identify gaps in the coordination and delivery of welfare functions prior to and during emergencies, and to address these gaps through individual and multi-agency action. One comment was that the role of the WAG was not widely understood by other response participants.

An assumption in plans and guides that the WAG can readily transform from planning and relationship-building to response co-ordination was questioned. The reply to this is that the WAG is in existence for the initial response phase only, to gather and disseminate welfare information and needs. As welfare centres close with the end of the response phase, and recovery centres replace them, the WAG may evolve into the Social Environment Task Group (SETG) under the recovery structure. This group has the same Chair but is an action group, involved in planning and operations.

The roles of the WAG Chair and Group Welfare Manager were seen to overlap, and the latter resigned to avoid confusion.

Observers expressed concern about the number of welfare agencies and representatives attending meetings, and the running of welfare centres, particularly the issue of "free riders" and the provision of accommodation. The welfare sector itself saw both situations as normal and manageable. Although WAG meetings were large in order to brief and inform all agencies directly, under the SETG sub-groups were established and meetings with action agenda items were much smaller.

The WAG's verdict on welfare centres was that they performed their role properly and managed the difficult matters of emergency accommodation over-stayers and free riders to within tolerances. There was a comment that emergency accommodation and other welfare needs should be managed as separate services. The welfare sector saw itself as operating alongside but not as part of the overall CDEM response that comes under the direction of the CDEM Controller. There was misunderstanding on both sides, due in large part to different operating styles. Welfare viewed the CDEM response as process-driven and militaristic while they focused on actual needs, responding to them independently of other physical emergency activities and without the mass of confusing CDEM Group instruction and processes.

Other reasons for confusion between the welfare and CDEM response activities included a supposed lack of documentation within the welfare sector spelling out the responsibilities of each agency. In fact, the Canterbury CDEM Group Plan includes Memoranda of Understanding with several welfare agencies so this may be a case of unawareness of what is in place. Such documentation was considered unnecessary by the sector itself because, they claim, roles and responsibilities are so well known and accepted without set agreements. A complaint was that the welfare sector did not seem to accept the Controller as the person in charge of the response whilst a state of emergency existed but the sector, led by MSD and its local officials, merely saw itself as dealing with its priorities without the need for such formalities. Perhaps there was also uncertainty over which controller was in charge and what role the Group Controller had.

An observation was that welfare activities and management seemed at first to be left solely to volunteers. This may have resulted from a lack of regional presence by some of the welfare agencies. We conducted relatively few interviews around this aspect so our

comments are more general. In New Zealand the voluntary sector is heavily relied upon to provide vital community services. It was claimed that organisations in the sector struggled to maintain services over an extended period. Few organisations seemed to have plans for staffing shifts or other arrangements needed to provide continuous service.

We also heard that training was not yet fit for purpose, and that Group and local emergency welfare arrangements and activities were not well integrated. The approach embodied by the "Right Service, Right Time" organisation was cited with approval. "Right Service, Right Time" is a clearing house for 54 welfare services that endeavours to meet the needs of families holistically by co-ordinating the available assistance from all welfare agencies and ensuring a continuum of help is maintained. It is a Canterbury innovation, and not present in other regions.

We note that the draft Canterbury CDEM Capability Assessment Report recommends a review of the capability and capacity of the Group's welfare function to identify gaps, and we endorse this recommendation. At the same time, we note the comment that the MCDEM Welfare in Emergencies Best Practice Guide could be clearer and more concise.

On 6 September, Cabinet approved the contribution of \$5 million to the Joint Mayoral Relief Fund set up by the three councils. This was later reconfigured as the Red Cross Canterbury Earthquake Recovery Fund. The Government's contribution was delayed because of the unusual establishment process which did not comply with the Director's Guide for government financial assistance, and the Red Cross being made responsible for the fund. Other NGOs also reportedly had reservations about contributing funds to the Red Cross rather than through established government processes.

Lifeline Utilities

Among utilities, we were only able to meet Orion Group. The 4 September earthquake was their most significant event to that date, with an average customer interruption about three times higher than the previous biggest event, the Canterbury snowstorm in 1992. Orion had been pursuing a seismic safety programme, involving the reinforcement of built structures and the securing of equipment to solid bases. The result of this risk reduction programme was that there was no significant damage to the network or any substation. About 80% of outages were due to the safety tripping of overloaded transformers, with the remainder because of lines and cable damage.

As with the emergency services, staff still reported for work despite the stress of their domestic situations.

Orion brought in advisors to help with external communications, and felt this helped with news media demands well. One area to develop is use of the social media.

Orion made the point that their pricing model encourages major energy users to own and maintain their own diesel generators to reduce load during peak times. Hospital, water, telecommunications and police were able to utilise these generators and they served well. However, as far as energy companies themselves are concerned, Orion points out that regulatory incentives to invest to protect against major events are poor.

People in the Community

A claimed disconnection between CD and marae-based communities has already been noted.

There is no national structure specifically for the administration of volunteers following an emergency event. In contrast, Volunteering Australia includes in its mission, "mobilising and supporting volunteer effort by providing a national service for recruitment and deployment of volunteers, including assisting with the registration of spontaneous volunteers in national emergency response situations." It supports this aim through a volunteer recruitment website, www.govolunteer.com.au, which is sponsored by both the private sector and government. The equivalent New Zealand organisation is Volunteering NZ but this does not yet have an operational arm like Australia's "GoVolunteer".

TAs appeared to have no planned system to manage spontaneous volunteers and donations. The partial nature of contributions became a management and public relations problem, for example, the donation of goods presented a distribution challenge. It may have been that many systems were overwhelmed. In these days of social networking, the informal marshalling of voluntary labour — especially young people —can be expected to grow.

Waimakariri did try to manage spontaneous volunteers and is now planning to formalise this. We heard debate over a need for some sort of "command and control" structure for spontaneous volunteers and donations, or just for organisers with access to simple equipment.

Recommendation 7

It is recommended that MCDEM discuss with Volunteering NZ the possibility of the latter's taking on the capability to mobilise and support volunteer effort, including assistance with spontaneous volunteers, along the lines of the Volunteering Australia model.

Observations of Response to the Emergency

The commitment of staff in local bodies, emergency services and utilities to report for work despite fraught domestic situations is admirable; however, the need for a full time continuous service means staff must be helped to pace themselves. For the emergency services such a concept is routine but, in other organisations, carrying on past points of tiredness and ignoring shift times can result in individual poor judgement and problems later of staff shortages.

The process for building safety evaluations is well documented and understood by practitioners as well as CD professionals. The system of red/yellow/green placards as a first indication of structural integrity seems logical and straightforward. However, the outcome is very public and may impact private homes. This earthquake showed that the public and non-CD officials have a poor understanding of what the inspections and their resulting colour-coded placards indicate, with resulting misapplication and false assurance. These unintended consequences of the building safety evaluation process should be considered in a review of the scheme.

Although the emergency services' response was applauded, there do seem to be some clarification and process issues. Understanding established communications lines and their maintenance in all response organisations at all levels may well resolve this. Such lines are going to be tested and adulterated in an emergency, particularly by those ignorant or unused to them, but if they are planned to be as direct and robust as possible, and can be quickly reinstated when disrupted by someone taking an unplanned communications route, then any harm should be minimised.

A strain on the consent issuing process is a predictable result following a natural event.

TAs and Group plans could make provision for this situation. If an acceptable process that

meets all requirements can be agreed upon, the question arises of why such a process does not replace the existing one.

Location of sites by reference to postal address was sometimes problematic. Such addresses can be ambiguous or confusing, and there is no standardisation. A unique address system would have helped with building safety assessments, and would be valuable for emergency services and others. Some countries, including the USA, are developing unique addressing systems based on mapping co-ordinates. This would make co-ordination with GPS straightforward.

Recommendation 8

It is recommended that the possibility of developing a unique addressing system for New Zealand, including urban addresses, be investigated.

Keeping people in place is generally preferred to evacuation which should be viewed as a last resort. Some noted a tendency to treat evacuation as a first option. While evacuation may be considered necessary, it is important to weigh the benefits against the potential implications of dislocating and accommodating large numbers of people. The concept of maintaining or quickly restoring habitability of homes – making them safe, sanitary and secure, if only temporarily – could be further explored.

In the first stages of response, whether householders are insured or not is irrelevant but CD personnel contacting victims note their insurance status as part of early information gathering. The implication that insurance companies will provide some sort of emergency service to their customers is wrong. Initial rescue, help and impact assessment are the responsibility of local authorities and not insurance companies.

The welfare sector's structure for participating in co-ordination, information flows, planning and operations seemed to be the source of some confusion, at least among non-welfare sector management. Although we were not able to fully investigate, it does seem the structure and process of the welfare response needs review, at both national and local levels. The respective roles of the committees, their chairs and of appointed welfare managers – and their inter-relationships – need clarifying. The numbers of people and organisations involved in the welfare cluster calls for a carefully planned

structure that results in manageable committees and meetings, and efficient use of staff time.

The different ways the welfare sector and the CD response agencies work means that what each agency requires or expects of the other should be clearly set out to facilitate meaningful communication between the two during the readiness and reduction stages so that, during the response and recovery phases, misunderstandings and clashes of working methods are avoided.

Recommendation 9

It is recommended that the welfare function as part of CDEM plans and arrangements be reviewed, with attention paid to:

- the relationship of welfare agencies with the CDEM Group
- the interaction between welfare agencies and CD during response and recovery
- the emergency response training available for welfare organisations
- staffing requirements and management of volunteers for emergency operation of welfare agencies
- the establishment of "one stop" facilities like "Right Service, right time" to ease access to welfare services.

With regard to lifelines, the drive to reward standardisation and lower cost should be balanced against incentives required to ensure adequate resilience of the network. Interdependencies of lifelines, long recognised by the practitioners, were much in evidence and should be recognised by joint planning and by attention from the regulators. Mutual aid arrangements are another valuable impact reduction measure that should interest regulators.

Community resilience was mostly better than many had expected. Neighbourly help and initiatives were evident in many communities. This local spirit is something that could be utilised for future community resilience-building. The current national preparedness message is seen to raise awareness levels without succeeding greatly as a call to action (at least, not before the Canterbury earthquakes). Simpler messages, like checking

emergency packs when clocks are adjusted twice yearly, and more targeted approaches to build "social capital" (see page 58) may prove to be a valuable investment.

Recommendation 10

It is recommended that renewed (and innovative) efforts be made to get public action on preparedness and mitigation, based on research into community reaction after the September and February events.

Summary of Response to the Emergency

The response to the emergency was good but did show up some shortcomings. Those for whom CD or emergency response was not part of their norm were sometimes not well informed about the established structures and processes. Use of alternatives to the laid down communications channels caused confusion and delay.

Building safety evaluations and the placarding of buildings to indicate if they were safe to enter was achieved largely by personnel brought in from outside the region, who also organised the process. There is some evidence, after the 22 February earthquake, that the meaning of the placards is not well understood by the public or even some agencies, and this was not helped by some authorities putting the placards to unforeseen uses. A review of the process and the placards themselves is warranted.

Management and delivery of welfare services is an area that needs review, mainly to generate closer ties between the welfare sector and the rest of CDEM in the readiness and reduction activities (writing plans, listing responsibilities, setting up structures). This would help avoid misunderstandings and confusion during the response.

Community resilience and volunteering are aspects of the response that were perhaps undervalued, and represent opportunities for investment of time and money to improve our readiness and response to future disasters.

8. Management of the Event

Local authorities' initial response plans

Every interviewee emphasised their good impression of the response of local authority staff but concern was raised about having to rely on staff who were also victims of the disaster. The provisions for mutual aid or reinforcing from outside are not available at the outset even if the disaster has affected the local staff, and instead assume outside help will only provide for relief and shift changes. Early relief of locals to allow them to concentrate on domestic situations would have an impact on decision-making, stress levels and personal interactions.

An added benefit of allowing local staff to remain in stricken communities arises from their familiarity with both sides, resulting in a well-informed and two way communication links, keeping CDEM/TAs in close contact with their communities.

The actions of elected representatives and their staff were commented on repeatedly. CD planning does not assign a meaningful response role to such people apart from declaring states of emergency. (The Christchurch City Council Plan nominates the mayor or deputy as the media spokesperson and the mayor of Selwyn took on a similarly public role). Elected representatives are the leaders of the community. They are expected by the public to have a role in an emergency and they will meet this expectation. After 4 September elected representatives toured their electorates to assess the situations and became the public faces of the disaster. Some expressed frustration in trying to draw the attention of authorities to the particular needs of their communities. A role for elected representatives and community leaders must not only be recognised and defined but also supported and resourced by CD plans and arrangements.

For effective co-ordination of the activities of CD and elected representatives, the latter need to know how the national CD and Emergency Response arrangements work, and how they devolve to their own communities. This is currently embodied in extensive documentation. This needs to be distilled into a quick guide for elected representatives to familiarise themselves with before stepping into the limelight after a disaster. The Wellington CDEM Group has compiled such a guide which is reproduced at the end of this report.

Recommendation 11

It is recommended that defined roles in emergency events for local and national politicians be developed by MCDEM and CDEM Groups, and that plans include early post event briefing on this role. To help elected representatives fill their roles effectively, it is recommended that quick reference guides be produced setting out responsibilities, actions required, and relevant contact details (refer to Recommendation 5 about use of modern means like smart phone or tablet computer applications).

The resources of elected parliamentary and local representatives could be incorporated into CD planning. There are electorate offices in every sizeable community in New Zealand. In an area similar to the one affected by the 4 September event, there would be eight to ten staffed electorate offices. There are also local body community board members. These are an instinctive source for enquiry or information by the public, particularly when a CD presence in the community is less visible. They could be utilised to provide initial impact reports, relay welfare needs, and keep officials updated with community concerns. Their potential value means that they could be provided with their own telephone access to especially delegated CD officials, contingent on the need for protocols for use.

Recommendation 12

It is recommended that MPs' electorate offices and local government community boards be incorporated into CD response arrangements for the purposes of receiving and conveying information to and from local communities; and that the provision of special telephone access be investigated to ascertain whether agreed protocols for use could make this a practical tool.

Local authorities' co-ordination with support agencies

The Director's Guidelines suggest clusters of same-sector agencies confer to ensure joined-up plans and operations. The only clusters mentioned in the CDEM Group Plan for Canterbury are the Northern and Southern clusters of the welfare grouping, i.e., a geographical split. However, active lifelines group and emergency services told us they met and exercised regularly.

The draft Capability Assessment Report, known also as MCDEM's Monitoring and Assessment Evaluation, confirms that this limited employment of a cluster system needs to be clarified to avoid non-awareness and confusion.

The performance of the welfare "cluster" is covered in the previous section, and the emergency services were all satisfied with the degree of co-ordination they achieved.

Physical security of assets was cited as an initial concern, with TAs struggling to control access in damaged or evacuated areas immediately after the event. Police in numbers were needed quickly and in outlying areas but this was not possible. In Christchurch City, business people helped to safeguard their own and other properties until the cordons were set up.

It was evident that agencies with pre-determined and well-practised roles co-ordinated activities well. New players were not well integrated. Overall performance exceeded previously perceived levels of response and co-ordination.

CDEM Group Processes and Interactions, and Co-ordination among CDEM Group members

The ten local authorities in the Canterbury region have united with emergency response organisations to form the Canterbury CDEM Group. The Group is responsible for the effective and efficient delivery of CDEM within the Group area. The governance of the Group is provided by a Joint Committee of elected representatives from all of the local authorities in the CDEM Group Area. Supporting the CDEM Group Joint Committee is the Coordinating Executive Group (CEG), a statutory group comprising Chief Executive Officers (or persons acting on their behalf) of the local authorities, and senior managers of key emergency response agencies. The CEG implements the decisions of the CDEM Group Joint Committee, provides it with strategic advice, and acts as the catalyst for the allagency partnership approach to emergency management in Canterbury. The Group Emergency Management Office (EMO), which is physically located at the ECan offices in Christchurch, provides technical and planning support and coordination to all elements of the CDEM Group.

The draft Capability Assessment Report notes that the Group governance structures are in place and functioning, if sometimes perfunctorily. However, feedback from interviewees after the 4 September event shows incomplete understanding of the roles,

responsibilities and accountabilities of some elements and how the various parts interact with each other. This was most evident in the interaction between the ECC and the EOCs.

Some regarded Environment Canterbury (ECan) as the CDEM Group controlling body (or it sees itself as such) taking charge of the response. The Group Plan identifies it as the Administering Authority (in accordance with the Act), providing secretariat services and a venue for meetings. Under the plan, the CDEM Group delegates to ECan the running and siting of both the Group Emergency Management Office (EMO) and the Group Emergency Co-ordination Centre (ECC) under Service Level Agreements (in common with most other CDEM Groups in the country). The two senior Group Controllers happen to be employees of ECan but their seniority is reversed when an emergency occurs (see page 25). The EMO carries out the day-to-day work of the Group, and the ECC comes into existence following an emergency (declared or otherwise) to co-ordinate the response at a regional level.

The upshot was a certain resentment of the assumed ECan charge position that affected the efforts of the ECC to meet its responsibilities of co-ordination and support for EOCs and partner agencies. TAs did not operate as a CDEM Group but in isolation from each other and the Group (although resources were provided from other TAs in the CDEM Group not affected by the earthquake). Although the root cause may have been the existence of three separate states of emergency and ensuing confusion over who was in authority, there is little doubt this attitude is a continuation of the unsatisfactory relationship between the regional and local authorities in the Canterbury region that was extant before the earthquake.

It appears, therefore, that the concerns of the draft Capability Assessment Report were borne out, and showed the need for the roles of, and relationship between, Group ECC and local EOCs to be reconfirmed and embedded in the Group Plan and Local CDEM arrangements or Standard Operating Procedures. The existence and provisions of the Group's Service Level Agreements should also be reviewed and clarified.

Recommendation 13

It is recommended that the draft Canterbury CDEM Capability Assessment Report of August 2010 be finalised and its recommendations formally considered.

Information Management

Although concerns were expressed about information management that are recorded in various parts of this report, it was generally accepted that the advent of EMIS — originally slated for this year but delayed because of the Canterbury earthquakes — would resolve most of these.

The provisos were that adequate training to all users was given and that this was followed up by ensuring widespread proficiency in the use of EMIS. To the greatest extent possible, EMIS should become part of the day-to-day work of those expected to utilise it in an emergency. Although EMIS is primarily designed for emergencies and not "business as usual", at least one CDEM Group intends to make regular use of EMIS to familiarise staff with it. This group's management agrees that expecting immediate widespread and efficient use of a computer programme that staff are not used to operating could be high risk if the replaced systems have been decommissioned. The reviewers support this approach, noting also how repeated training and simulation in areas such as the NCMC helped to ensure a rapid and effective response.

Selwyn District Council has its own Emergency Event Programme (EEP) that does a similar job to EMIS. Whilst they will transfer to EMIS when it is rolled out, their experience with EEP could be a good case study for other councils.

The emergency services who use CIMS, the Co-ordinated Incident Management System, reported that it worked well. It has been in force for some years now and is well practised and embedded in standard operations for these services. A recommendation in the Review of the February 2004 Flood Event for production of a best practice guide for CIMS's use in an EOC was addressed by the Ministry.

Whole of Government co-ordination and Management through DESC process

A national level response would be overseen by Cabinet's Domestic and External Security Committee (DESC) which is chaired by the Prime Minister and includes the Ministers whose responsibilities are relevant to the emergency. The DESC did not meet in response to the 4 September earthquake as its role was taken on by the whole of Cabinet. The Minister for Civil Defence is outside Cabinet but is on the DESC for civil defence matters.

The government was advised that this disaster had sufficiently important implications for the economy of the South Island to require a unique management structure and an immediate focus on recovery. The decision was quickly taken to appoint a Minister responsible for Canterbury Earthquake Recovery, the Hon. Gerry Brownlee, Member for Ilam, Leader of the House and the Minister for Economic Development.

Some people were concerned that the Minister responsible under the Act is not a member of Cabinet. If Cabinet had had full access to a Minister who understood how comprehensive the Act and Director's Guide were, this might have reduced the perceived need for some special legislation or the development of new processes when existing, well-practised, processes and powers already existed.

Recommendation 14

It is recommended that relevant incoming Ministers be briefed on key roles and responsibilities in an emergency, and on how to access lessons and recommendations from previous disasters, to minimise the need for development of ad hoc processes in each event.

Senior officials from those Ministries whose Ministers form DESC comprise a group called ODESC to advise DESC and carry out its decisions. The Department of the Prime Minister and Cabinet co-ordinates ODESC which met throughout the emergency period. The Ministers for Civil Defence and Emergency Management, and the Minister responsible for Canterbury Earthquake Recovery attended ODESC meetings, which was unusual. In the latter case, care was needed not to compromise the position of a Cabinet Minister involved in drafting advice to his own Cabinet but the practice did speed up the decision process. A Watch Group maintains an overview and keeps an eye out for emerging issues that may need attention. This also met regularly.

Local interviewees agreed that there was little local involvement in papers to Cabinet or the decisions that emanated from there. This gave an impression to some of extensive and remote direction from Wellington. The immediate focus of Wellington on recovery caused tension with local responders, who queried the priority and the process as not being in accordance with the Act on which CDEM plans for recovery are based. The Wellington-based Ministerial staff put much of the local concern down to a loss of perspective and focus due to tiredness and stress.

We had the impression that it took a while for local staff to appreciate that the legislated and planned process for recovery was not being followed, hence there were two conflicting processes. The view that the Act does not cater for big disasters mystified practitioners but there is a note in the ODESC minutes of a meeting on 9 September on the need for "absolute clarity about regulations; in particular for the period immediately after the declarations are lifted". It was widely assumed that existing legislation could not be relied upon and that MED was already giving attention to developing new legislation. That note is in relation to a discussion of extraordinary steps to control construction supply chains, provide temporary housing, and apply engineering solutions to safeguard entire suburbs.

It appears that the chief problem was in communications – the need to explain intentions and actions, and to seek the assistance of experienced staff.

MCDEM's role as national lead agency

The intervention of central government and appointment of a special minister responsible for recovery, who then utilised his own office and department (MED), caused confusion over who the lead agency was and what role MCDEM had. The National Civil Defence plan is based upon the concept of a lead agency and support agencies acting under its directions, so confusion over the identity of the lead agency is damaging.

The Director's Guide on the role of MED in civil defence shows that it advises government and implements policy in relation to a wide range of economic issues. MED's advice during and after a CD emergency will address the effects on business, and the energy, ICT and tourism sectors in particular, to assist long term recovery. MED's unexplained appearance as the lead agency for the recovery would, therefore, have caused surprise and confusion.

It was evident in the region that MCDEM was not being kept informed of such matters as Ministers' visits which seemed to be uncoordinated and often unaccompanied by MCDEM staff.

Regional Emergency Management Advisors (REMAs)

REMAs were described as the eyes and ears of the National Controller, helping and advising the Regional Controller, and a conduit to the national centre. After the 4 September event, REMAs deployed also to the local authority EOCs so were available to

local controllers. REMAs from all over the country attended the Canterbury response. Collectively, they are some of the most experienced CD people in the country. It was universally reckoned they worked well, and that this outreach from MCDEM to the regions was of good value.

Observations of CDEM Group Processes

The statutory requirements and their minimal fulfilment by the Canterbury CDEM Group created a leadership void after the earthquake, and this was filled by mayors or chief executives. This is a role for elected representatives that should be reflected and supported in plans, as should a conduit for local intelligence.

CDEM operates on a command and control model that assumes a hierarchical structure is strictly observed (EOC-ECC-NCMC-Government decision and back). The example was given of formal approval for utilising Defence Force staff to secure cordons taking 36 hours to navigate upwards to a decision-maker in Wellington, and another 24 hours for the decision to reach the local originator. This can clash with the attitude of politicians and community leaders who want more direct communications and the quicker response this implies (it could be argued that a single declaration of emergency would have accelerated this process, as it did in February). CDEM staff should understand they can communicate directly with local or national counterparts (as could have happened with the example above), provided the co-ordinating centre is kept informed. The EMIS will prove of great value if it moderates the hierarchical system and alters entrenched attitudes.

Special circumstances arise when the victims of a disaster are those on whom the community relies for its response. The experience of 4 September demonstrates that these staff will turn out despite their domestic situations, but their commitment can cloud their judgement and decision-making. CD plans should cater for immediate relief from outside the disaster area so that victims can attend to families and homes before being required to meet professional responsibilities. Releasing staff/victims to their communities would also provide a quality source of intelligence to and from those communities.

Notwithstanding, a crisis will mean long and arduous hours of duty for many at both national and local levels. There are techniques for coping with such workloads, such as altering sleep patterns, appropriate exercise and nutrition, and helpful distractions.

Recommendation 15

It is recommended that CDEM Group plans incorporate arrangements for the immediate relief of staff who are themselves disaster victims, and training in recognised techniques for managing arduous working hours under high levels of personal stress.

Most interviewees commented that the response to the emergency at national and local levels demonstrated the merits of building relationships before the event through exercises, planning and training. This included connections from outside the region. An example given was the training courses offered by ECan for all CD personnel which served to build relationships with people from all over the country. Ex-course participants were then seconded to fill roles within the ECC. In some minds, this was justification for reinstating a national training programme.

Recommendation 16

It is recommended that consideration be given to a national training programme or annual conference for CDEM personnel to provide opportunities for relationship building and discussion of case studies like the Canterbury earthquakes.

Many of the issues during the response arose through poor communications. The ECC struggled with its co-ordination role, and relationships were strained. Frustration was expressed about the number and extent of Group meetings. Daily briefings became overly time-consuming. Teleconferencing alleviated this and reportedly could have been used more extensively.

Faith is being placed in the new EMIS to resolve most communications issues. There are several caveats for its success. Training must be comprehensive and widespread, staff must become accustomed to the software by constant use – preferably during day-to-day activity – and, in the event, all must use EMIS to communicate.

Summary of CDEM Group Processes

Problems that arose out of the response activities of CD, MCDEM and supporting agencies were largely through inadequate communications or misunderstanding of roles, either as laid down or adopted ad hoc. Those who had no role or only a limited one in the plans but

nevertheless had a legitimate part to play after the disaster, took an appropriate part in the response (or tried to), thus demonstrating an area for review of planning.

Communications and information-sharing difficulties are expected to be largely resolved by the introduction of the EMIS and its full utilisation in emergencies.

Greater utilisation of elected representatives and their resources in the community would have improved intelligence gathering and two-way communications with disaster-affected communities.

Techniques for coping with long shifts coupled with short intervals can be taught. This should be investigated and implemented for relevant staff. Another preparation measure is the capability to relieve immediately from outside the staff who are victims of the disaster, rather than expecting them to perform initial shifts. This would not only allow the local staff to attend to their own situations but also be a valuable conduit for relaying information and advice to and from the EOC.

9. Support to Government

Central government procedures and activities commenced in accordance with plans. As noted, the NCMC was activated early, ODESC and its Watch Group met, and the whole-of-government approach was adopted.

Difficulties were cited when new participants, with no prior knowledge of procedures, were introduced. It took time for the new structure put in place by Parliament and the established information pathways to work together. Greater understanding for the new participants, perhaps through an early briefing on established structures and procedures, might have avoided this.

Before any event happens – in fact, after each election and the appointment of a Minister of Civil Defence and Emergency Management – it was suggested that the Ministerial briefing should include previous reports on disaster responses and exercises. A compendium could be drawn up and provided.

Observations

One of the roles of elected politicians is to be visible in their communities. This typically involves visiting the disaster site as early as possible to give assurance, comfort and confirmation of the country's support. This was done after 4 September and was very well received. It was also a morale booster for CD and emergency personnel. Such activity could be anticipated in response plans, with an efficient means of briefing and coordination so that both politicians and officials are included appropriately in the visits.

It was remarked that the low ranking of the Minister of Civil Defence (a Minister outside Cabinet) is taken as a signal by territorial authorities, and their own participation in CDEM Groups is similarly downgraded.

10. Management of Information to the Public

At its meeting on 5 September, ODESC agreed that media messaging would be coordinated by MCDEM, and all agencies were responsible for ensuring messages were
aligned. However, a MCDEM interviewee wondered whether DPMC had been coordinating media messaging. Also at that ODESC meeting, it was decided that EQC,
MCDEM and insurance agents were to calibrate and co-ordinate media messaging around
claims, to highlight that relevant resources were being increased to deal with the large
volume of claims. There are no representatives of EQC, insurance agents or insurance
companies on ODESC (although EQC is on the Watch Group), so presumably MCDEM was
tasked with conveying this to them. We note that EQC was represented on ODESC for
the February event response.

The ODESC meeting noted that MCDEM was to investigate the centralisation of public information into a single website. At a meeting on 9 September, government agencies were asked to have links on their websites with the Beehive website, to ensure that ministerial messages were spread as widely as possible. Public relations messaging was stated to be working well, especially through the Ministerial visits to the region.

Public communications is another vital role for political leaders who need to instil calm, reassurance and a sense of leadership. This role is different from that of management or government officials. Preparing political leaders beforehand for dealing with a crisis is hardly possible because of their workloads and schedules. There is therefore a need to brief these politicians so that they can fulfil their roles most effectively.

ECan and Christchurch City Council set up a website⁹ to provide information on the response to affected communities. This site has since been taken over for the 22 February event. Other organisations had their own means of communicating with their audiences. The Canterbury Employers' Chamber of Commerce used surveys, emails (the first went out to members within 24 hours), and its own dedicated www.recovercanterbury.co.nz website. MSD produced cards with useful telephone numbers and advice, including how to help neighbours. Waimakariri District Council produced daily flyers and hand delivered them to earthquake-damaged homes. Selwyn District Council has an out-of-hours call centre agreement with Palmerston North City

⁹ www.canterburyearthquake.org.nz

Council, and told us this was alerted very early and served well. They also used posters in shop windows, bulletin boards, and personally circulated among their residents. A dropin centre for information was set up after a few days. Selwyn brought their own communications staff up to full strength by utilising Ashburton District Council resources, and later employed an outside organisation that used its own contacts to create opportunities for message delivery.

Federated Farmers organised a texting network for their members. Despite the many new communications channels, some of which like *Twitter* or *Facebook* were utilised, stories by journalists are still the main means of information dissemination. Arguments for using old-fashioned media were that older and more vulnerable people still relied on it, and there is still no alternative to the print media for complex or longer stories. There is a need for explaining what has happened, and how - for example, people needed to understand liquefaction — as well as advice on what to do and what help is available.

Talk-back radio was considered an important information vehicle and source but at least one TA had difficulty getting air time. The value of local radio was emphasised.

However the main means of communication today is the cell phone, and many people resorted to it as a torch or radio as well as a phone. A suggestion was to involve cell phone network providers in the CDEM plans by way of memoranda of understanding to text emergency messages to all subscribers in a given region. Alternatively, subscribers could sign up for receiving emergency messages and warnings for stipulated regions. There are already several commercial options available to send emergency information via cell phones but they should not be regarded as reliable for time-critical messages like warnings. These services could be useful for general messaging during emergencies, and CDEM Groups could investigate them.

There was an opinion that television coverage provided only limited useful information, the main channels being more interested in their ratings. Advice to victims in the early aftermath was absent from TV screens. Information such as safely dealing with contaminated silt, the wearing of masks or gloves, the operability of toilets, how to dispose of body wastes, and how to get water out of hot water cylinders, was hard to find. The notorious "triangle of life" email emerged again, and its erroneous contradiction of the "drop, cover and hold" message spread virally without an effective broadcast response from authorities.

It was remarked that many people resorted to portaloo drivers and drain layers to fill an information void, causing misinformation and misinterpretation to become widespread. Community meetings, which were well supported by most agencies, were regarded as particularly helpful but unfortunately the high expectations created at some of these meetings, like the value to individual householders of the EQC Tonkin and Taylor report, were not met. (See comment on the Tonkin and Taylor land remediation report for EQC on page 64.)

It was generally accepted that the facilities for journalists at the NCMC are inadequate. People entering and leaving the bunker had to pass through the media area and were therefore directly exposed to journalists. The media centre had few amenities for the journalists and was overcrowded. We understand better facilities are under consideration.

A view expressed was that there was little special attention towards international media. They needed more general information about the country. They tended to assume a worst case situation more than local media. There was a need to cultivate international media to protect trading partner confidence, "Brand NZ" and the currency.

Observations on Management of Information to the Public

The notion of a co-ordinated public information effort across all government agencies, led by MCDEM, seems to have been more imagined than real or, at best, limited to joint press conferences. Nevertheless, the outcome for the national effort was satisfactory.

The media were kept informed and given sufficient access. There was a ready recognition that they could frequently obtain information more quickly than official channels, and their co-operation was well worth cultivating. The media responded with a community spirit. Newstalk ZB unpinned its Canterbury link from the national network so that it could more readily respond to local requirements.

At the local level, communications with the public were more problematic, especially in Christchurch where the low-tech means adopted by the two district councils would have been much less effective because of scale. The need was intense and the means often disrupted. Despite the several communication methods employed by Selwyn District Council, for example, they felt challenged to meet the demand for information.

Without effective official information channels, informal systems gained momentum. Misinformation and misinterpretation created anxiety. Public meetings were appreciated and drew good attendance but unless they are followed up by action and delivery on undertakings, they quickly turn to a means for venting frustration and anger.

Good communications are needed to manage public expectations. Residents expected some attention from authorities within a very short period after the earthquake.

Regardless of how unrealistic this expectation was, it was not effectively responded to or managed.

After the earthquake, CanCERN (Canterbury Communities' Earthquake Recovery Network) emerged to represent citizens via their community associations or groups in engagement with the recovery agencies. CanCERN took time and many volunteer hours to establish but its effectiveness may justify the adoption of the model in CD planning, with the provision of funding and resources to assist in the aftermath of future disasters. However, if Recommendation 11 of this report is accepted, community boards, which are already established, and local politicians will have a designated role covering this area.

In trying to provide information, it became evident to some that public awareness and preparation were still problems. Many people did not have battery-operated radios except in their cars so, without electrical power, had no means of receiving messages. Cell phones – the main communications tool used today – were not well utilised for community information or advice by response agencies.

The experience of this event has led some to call for a renewed effort at raising levels of awareness and action. A more grass-roots, community activity approach was suggested rather than the current general call to "Get ready, get thru". One approach is the accumulation of 'social capital' through encouragement of community groups by CDEM Groups to engage with each other formally and informally, link with other institutions, and represent community interests to both the public and private sectors. Building social capital in a community would facilitate the quantity and quality of communications by building trust and common language.

Recommendation 17

It is recommended that CDEM Group activity include a programme for reaching out to communities through established interest groups to build awareness and cohesion so that these groups may play a role in community resilience and response to emergencies.

Summary of Management of Information to the Public

The flagship for public communications was the web site www.canterburyearthquake.org.nz, set up by ECan and Christchurch City Council. Conventional means like radio, newspaper and television were still relied on but use of newer channels was also noted. A widely used way to utilise cell phones was not found.

The smaller communities utilised traditional ways like shop posters, flyers and bulletin boards to get information to their citizens.

Elected leaders took an important role in communications, and this could be formalised and extended to local constituency or list MPs as well as mayors and councillors.

The public's desire for information was sometimes met through informal means that led to inaccuracy and rumour. Community meetings were well supported and served to counter misinformation but they needed to consistently deliver their undertakings to preserve their legitimacy.

Citizens moved to gain representation by forming CANCern, thus establishing a community network. Plans for building such connections could be incorporated into CD preparations unless the need is met through this report's recommendation on the involvement of MPs and community boards.

At the NCMC, media facilities were make-shift and need improvement. Comment was made that the international media need specialised attention as they tend to have limited background information and take a different standpoint from local journalists.

The population's current sensitivity to natural disasters provides an opportunity for an innovative campaign to encourage preparation.

11. Establishment of recovery initiatives and the recovery framework

CDEM Group Processes

The national CD Plan states that recovery consists of co-ordinated efforts and processes to effect the short, medium and long term holistic regeneration of a community following an emergency. The response to, and efforts to recover from, an emergency are interrelated. Actions to achieve a response or recovery, or both, should be concurrent and co-ordinated. Accordingly, as early as 9 September, the Director of CDEM was signalling an interest in seeing early development of a recovery strategy that included human and social aspects as well as the rebuilding of infrastructure.

The CDEM Group met on 11 September to discuss the recovery phase. The approach was to be based on existing CDEM Group recovery plans and was consistent with published recovery guidelines and international practice.

A Christchurch City Building Recovery Office opened on 13 September at the City Council. It comprised representatives from EQC, building inspectors and engineers, and was intended to provide advice to residential and business owners needing to re-occupy, or arrange demolition or major repairs. The office was also able to obtain consents for property owners and access property records. It was reported that there was some coordination with other districts but one opinion is that the office could have been more effective if set up under ECan as a regional resource.

Waimakariri District Council treated recovery as essentially the same process as response. They did not use the Guide template as they found it "artificial" in differentiating between response and recovery. Selwyn District Council was attending to recovery matters before its state of emergency lapsed on 16 September. For Selwyn, recovery was largely a matter of social cohesion, as physical damage was not generally serious. The rural community in the District was well served by the Ministry of Agriculture and Fisheries, and by Federated Farmers. Parliament enacted the Canterbury Earthquake Response and Recovery Act on 14 September. It established the Canterbury Earthquake Recovery Commission (CERC) of seven members, a mix of local mayors, and four other appointed persons.

On 16 September all declared states of emergency were lifted. However, the ability to exercise many of the powers of a state of emergency had been extended to 29 November

by an Order in Council under the new Act (Order number 2010/316). Formal transition from response to recovery at the regional level was effected on 23 September by way of a meeting between the Group Controller and the Group Recovery Manager.

One opinion was that Christchurch ceded control of recovery to the CERC while the two district councils carried on with their own plans. There was a question over whether this was what the government intended.

Task groups were set up in accordance with recovery plans. The Welfare Advisory Group transitioned to the Social Environment Task Group. Other task groups covered the economic, built environment, environmental and hazards areas. A rural task group was set up but was disbanded after only a short time.

The appointment of a national government Minister responsible for Canterbury Earthquake Recovery, his employment of his own department (MED) and ministerial office staff, and the creation of the Canterbury Earthquake Recovery Commission (CERC) effectively replaced the established CD recovery structures. Some wondered at the necessity for the CERC; the point was made that the Commission's membership was close to that of the Joint Committee so was essentially a duplication of something already in existence. However, as noted elsewhere, mayors had not necessarily been active members of the Joint Committee, and the Joint Committee has no response/recovery role, so the claim of duplication is at best theoretical only.

National Processes

The ad hoc arrangements quickly put in place by the government reportedly created some governance issues that had to be worked through. Despite the advent of the new Minister and his treating his ministry (MED) as the lead agency, MCDEM were still the responsible ministry under CDEM legislation. Whether MED, as a policy advising ministry and not an operationally focussed one, was equipped to take over the role of lead ministry was queried. However, with the new Act's extension beyond the CDEM Act, how well MCDEM would have coped is also conjecture.

From the central government agency standpoint, co-ordination of ministerial visits to the disaster area and of actions by some ministers was lacking. It was thought that the policy managers of departments could have made more effort at liaison, albeit informally, to achieve a degree of cohesiveness and to exchange intelligence and information.

Observations of Recovery Initiatives

It was accepted that much of the recovery work undertaken after 4 September was effective but the imposition of an *ad hoc* structure, with new and inexperienced participants in recovery taking key roles, caused disconnection. CDEM professionals were confused over why the provisions of the CDEM Act, the National CDEM Plan, and the Guide were cast aside without even being referred to. There was, however, some acknowledgement that the Act's coverage of the recovery stage was not adequate for the purposes of such a significant disaster, although it can also be argued that this hypothesis has not been tested.

A by-product of the arrangements that were being made *ad hoc* was the necessity for many meetings to inform people of what had been decided. The overhead of time imposed by these was again remarked upon by several interviewees. They gave an impression of recovery being "caught up in bureaucracy and red tape" and there was little tolerance for this.

Response and recovery are not easy concepts to differentiate. They are not discrete processes – they go on simultaneously, influence each other, and are not even clearly demarcated. They may be useful for CD purposes but may be misconstrued in the public mind. For example, it would be natural to consider the lifting of the state of emergency as signalling the transition from response to recovery but if you still use a portaloo or are not back in your own home then you are not in recovery, and may object to the notion that you are.

These are the pitfalls of keeping the public informed. Particularly after experiencing such traumatic events, people load expressions with connotations that the experts do not intend. As with the interpretation of "recovery" as being back to an acceptable level of normality, after the 22 February event people treated the term "after shock" pejoratively, assuming it carried the meaning that it had less serious consequences than the "main shock".

For some CD workers, the transition from response to recovery had another dimension. It marked a point when extraordinary effort and long hours fuelled by high adrenalin flows could give way to a more sustainable level of activity. Some reported a change of attitude as recovery gained precedence over response, and remarked that this was positive to the extent of querying whether "response" was left to go on for too long.

Another aspect of the transition to recovery concerns leadership. The opinion was expressed that elected representatives provided good leadership for the response but were not so well equipped to lead recovery activities (perhaps with the exception of planning and strategy). There was talk of an awkward governance interface and a need to defer to specialists in various fields.

Recovery is therefore more than a technical matter of reinstating buildings and infrastructure. There is a social context that is influenced heavily by victims' expectations. These must be heard and reconciled if recovery is to be successful.

Summary of Recovery Initiatives

The transition from response to recovery was being dealt with at Group and City levels in accordance with the guidance in documents and plans available to CDEM. The districts, however, adopted a pragmatic approach and treated the process as continuous, responding to the needs of the day. Government implementation of special legislation and structures to expedite recovery after 4 September created some issues in matters of governance, the place of existing structures, and processes and co-ordination of the new with the existing.

12. Other Matters

Temporary accommodation

After the event, Canterbury CDEM commenced planning to address the long-term housing needs of those currently in emergency accommodation, including over 120 people still in welfare centres ten days after the earthquake (the number had been over 300). But many more than these would need consideration as homes were assessed as uninhabitable, at least while repairs or remediation of land was carried out.

Emergency (days), temporary (weeks) and alternative (months or years) accommodation is a challenging need after any disaster. Floods, for example, can lead to months out of a home if the building needs to dry out.

Housing displaced people is a constant requirement after disaster, and overseas jurisdictions have found innovative ways of achieving this. Inadequate housing arrangements have been cited as a root cause of the so-called "second disaster" to describe the tide of public discontent that threatens to overwhelm recovery efforts as the disaster victims reach the end of their tolerance and patience.

Recommendation 18

It is recommended that CDEM plans extend beyond consideration of emergency accommodation only to longer term arrangements, for example, involving Housing NZ in more certain arrangements than providing "on the day".

Information Sharing

Organisations gather information for their own purposes after a disaster; some of this may be useful to others and prevent duplicated effort. Sharing of information is beset with issues of privacy and misuse. Often information is formatted or slanted for a particular purpose that makes it less useful for an alternative purpose. After 4 September, the Earthquake Commission instructed the engineering firm Tonkin and Taylor to provide it with a report on the options for remediation of land that had liquefied. This instruction was appropriated by other agencies as a means by which home owners could be informed about their properties. The report, which served the purposes of EQC, was too technical for ordinary people and did not address the situations of

individual homes, as was expected, so was condemned by the public. It was not the fault of Tonkin and Taylor, who had met their brief from EQC, yet the frustration of homeowners is understandable. Again, better communication and managing their expectations might have reduced this.

There are several other examples of misuse of information by authorities. Territorial authorities try to utilise information from insurance companies or EQC to assess the extent of damage to find out whether a building is safe to occupy or not. The colour of placards placed on buildings as part of the safety evaluation process was a factor in decisions about emergency financial assistance. The connection was flimsy yet it imbued placards with a financial value that could have led to the abuse of the process. The period of validity of these placards was extended by Order in Council to a much longer life than originally intended.

Public perceptions of information sharing must also be considered. EQC has experienced reluctance by home-owners to make claims because of a perception that the claim would be recorded on a Land Information Memorandum at the TA, to the detriment of the property's value.

Despite these drawbacks, there will be pressure to share information among agencies to expedite recovery and, generally, this is desirable. It is wasteful and frustrating to have to develop protocols for information sharing after a disaster. Such protocols among insurance companies, EQC and TAs could be negotiated as part of CDEM planning. Use of prescribed procedures (for example, under the Official Information Act) and prescription for the use to which particular information will be put, would do much to streamline the release of information after a disaster, and to allay public suspicions.

However, taking information sharing to another level is an example across the Tasman. The Australian government sponsors the Trusted Information Sharing Network (TISN) for Critical Infrastructure (www.tisn.gov.au). The TISN provides an environment where business and government can share vital information on security issues relevant to the resilient operation of critical infrastructure and continuity of essential services in the face of all hazards. The TISN comprises seven sector groups (including banking and finance, but not insurance or local authorities, although the latter are represented on the Advisory Council) and two expert advisory groups. It is overseen by the Critical Infrastructure Advisory Council. The TISN is a carefully thought out, formal and protected means by

which information of interest to more than one sector can be shared without fear of general disclosure or misuse by non-members. It is a model worthy of study for the purposes of sharing vital information to assist response and recovery from a disaster or emergency.

Recommendation 19

It is recommended that MCDEM investigate and promote means by which efficient and secure sharing of information in the interests of disaster response and recovery could be achieved.

Appendix 1 : Terms of Reference

REVIEW OF THE RESPONSE TO THE CANTERBURY EARTHQUAKE

TERMS OF REFERENCE

Background

- 1. A magnitude 7.1 earthquake occurred at 0435hrs on 4 September 2010, 30 kilometres west of Christchurch near Darfield at a depth of 10 kilometres. The earthquake was felt as far south as Invercargill and throughout the lower and central North Island. The earthquake caused widespread damage throughout the Canterbury region, particularly in urban areas of Christchurch City and Kaiapoi in the Waimakariri District. There were no deaths, but a small number of serious injuries and many minor injuries. The earthquake caused significant damage to buildings, including residential houses, as well as to road and rail networks, and water supply and wastewater systems. The earthquake also had a significant impact on farming areas, mostly in the Selwyn District.
- 2. Christchurch City, Waimakariri District and Selwyn District all declared states of local emergency on Saturday 4 September 2010. These declarations were all lifted at midday on 16 September 2010. Emergency Operations Centres (EOCs) were fully activated by these three councils, as well as the Group Emergency Coordination Centre (ECC).
- 3. A large number of aftershocks of up to magnitude 5.4 have occurred since the main earthquake and are expected to continue over the next few months. The Canterbury earthquake is described as the most costly emergency event to occur in New Zealand and the largest emergency response since the 2004 flooding in the lower North Island.
- 4. A process of organisational de-briefings within agencies at local, regional and national levels has commenced to review response operations and to catalogue strengths and weaknesses and issues that could inform enhancements. These reviews are to be conducted by the agencies themselves and will tend to focus on internal issues and relationships with that agency's partners. There is a need for a higher level review to report on the management of the response and the transition to recovery to inform continuing development of CDEM arrangements.

Objective

- 5. The objective is to complete an independent review of the response to the earthquake and the establishment of recovery arrangements in order to identify strengths and weaknesses in processes and policies. The review is to address the period from the time of the initial earthquake on 04 September 2010 through to 23 September 2010, the date of the official handover from the response to the recovery.
- 6. The review is to cover activities at the national level including the operation of the NCMC and co-ordination among government departments and agencies, as well as response

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activities conducted by the Canterbury CDEM Group and its members Christchurch City Council, Selwyn District Council and Waimakariri District Council, the co-ordination of emergency services, welfare agencies (Government and non government), and utility providers. The review is to examine the distribution of public information and messages, and the community response.

7. The focus of the review is to identify, from an emergency management perspective, the good practices that should be reinforced, and the lessons and processes that warrant improvements and enhancement.

Terms of Reference

- 8. The review will report on:
 - a. The response to the emergency in the communities impacted:

Distribution of warnings, alerts and initial messages to the public;

Activations and information gathering at all levels; and,

Declarations of states of emergency.

b. The response to the emergency by:

Local authorities in the impacted region;

Emergency services;

Welfare agencies/services;

Lifeline Utilities; and

Communities

c. The management of the response through:

Local authorities' initial response plans;

Local authorities' interactions and coordination with support agencies;

Interactions and coordination between the CDEM Group members;

CDEM Group processes;

Information management;

Whole-of-government co-ordination and management of support through the DESC process; and,

MCDEM's role as national lead agency in support of the local level response.

d. Support to Government to enable timely decision-making:

Provision of information;

Co-ordination and provision of advice and development of papers; and,

Implementation of decisions.

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e. Management of information to the public:

Distribution of warnings, alerts and advice;

Information updates; and,

Co-ordination of public messages between local authorities, Regional Authorities, the NCMC, Departments and Ministers.

f. Establishment of recovery initiatives and the recovery framework:

CDEM Group processes;

National processes; and,

Co-ordination within and between local, regional and national levels.

g. Any other material matter considered relevant that come to your attention.

Review Team Membership

- The review is to be conducted under a MCDEM contract by the Kestrel Group and Westlake Consulting, working jointly, and who will make available David Middleton and Richard Westlake.
- Secretarial support and accommodation for the review team will be arranged by MCDEM.
 The cost of conducting the review will be met by MCDEM.
- 11. The final report is to be provided to the Director MCDEM no later than 30 April 2011.

John Hamilton Director 14 January 2011

Appendix 2 : Interviewees			
Minister of Civil Defence Hon. John Carter, MP		12.30	28-Jan-11
Minister for Canterbury Ear Hon. Gerry Brownlee, MP	rthquake Recovery	4.30	14-Feb-11
Office of the Minister of Civ	vil Defence		
Marika Luiso	Private Secretary	12.30 3.30	28-Jan-11 and 16-Feb- 11
Felicity Cuzens Josie Vidal	Senior Private Secretary Press Secretary		08-Feb-11 08-Feb-11
Office of the Minister for Ca	anterbury Earthquake Recovery	,	
Tim Hurdle	Senior Ministerial Adviser		07-Feb-11
Scott McHardy	Private Secretary		07-Feb-11
Nick Bryant	Press Secretary	11.30	07-Feb-11
Canterbury MP's			
Nicky Wagner MP	List MP in Christchurch	8.30	04-Feb-11
Hon. Jim Anderton, MP	MP for Wigram	4.30	16-Feb-11
Hon. Ruth Dyson MP	MP for Port Hills	12.00	04-May-11
Hon. Clayton Cosgrove MP	MP for Waimakiriri	3.30	04-May-11
Brendan Burns MP Hon Lianne Dalziel MP	MP for Christchurch Central	4.30	04-May-11
non Lianne Daiziei MP	MP for Christchurch East	3.45	17-May-11
Mayors			
Bob Parker	Christchurch City	11.30	04-Feb-11
Ron Keating	Waimakariri District	12.50	21-Feb-11
Kelvin Coe	Selwyn District	11.00	13-May-11
Department of Prime Minis	ter and Cabinet		
Steve Brazier	Director Security and Risk	8.30	28-Jan-11
Pat Helm	Policy Adviser	8.30	28-Jan-11
Department of Tatoural Aff			
Department of Internal Aff Brendan Boyle	Chief Executive	4.00	07-Feb-11
Ministry of Civil Defence an	nd Emergency Management		
David Coetzee	National Controller	9.00	31-Jan-11
Richard Smith	Duty Manager	10.00	02-May-11
Peter Cameron	Southern Regional Co- ordinator	4.30	31-Jan-11
Simon Chambers	Regional Emergency	10.00	04-Feb-11
	Management Advisor		
John Titmus	Northern Regional Co-ordinator	8.30	10-Feb-11
Suzanne Vowles	Regional Emergency	8.30	10-Feb-11
	Management Advisor		

John Lovell	Regional Emergency	8.30	21-Feb-11
Vince Cholewa	Management Advisor Communications Adviser	10.00	07-Feb-11
Canterbury Civil Defence Em	ergency Management Group		
-		3.30	04-Feb-11
Bob Upton	Group Controller, Canterbury	- 6 -	
Jon Mitchell	Manager - Regional Emergency Management Office	10,00	21-Feb-11
Helen Grant	Environment Canterbury	2.30	06-Apr-11
Michelle Mitchell	MSD Regional Commissioner	2.00	05-Apr-11
Environment Canterbury			
Dame Margaret Bazley	Chair	1.00	22-Feb-11
barne riargaret bazrey		3.30	22-Mar-11
New Zealand Fire Service		5.50	22 1101 11
Paul McGill	Di	10.00	28-Jan-11
Paul McGill	Director of Operations and	10.00	20-Jaii-11
	Training (Acting CEO at time of		
	earthquake)		
Rob Saunders	Assistant National Commander,	1.30	04-Feb-11
	Fire Region Manager		
Steve Barclay	USAR Task Force Manager	1.30	04-Feb-11
Bruce Irvine	_	1.30	04-Feb-11
New Zealand Defence Force			
Air Vice Marshall Peter	Commander Joint Forces New	3.00	28-Jan-11
Stockwell, AFC	Zealand	0.00	
Captain Lance Cook, DSD,		3.00	28-Jan-11
RNZN	Chief Staff Officer - Joint	3.00	20 3011 11
	Operations (J3)	3.00	28-Jan-11
Wing Commander Carol	IOD LIG IENZ	3.00	20-Jail-11
Abraham	J3R, HQ JFNZ		
New Zealand Police		1 20	07 Feb 11
Inspector Gerard Prins	Manager Emergency	1.30	07-Feb-11
	Management		
Inspector Garth den Heyer	Manager Security and	1.30	07-Feb-11
	Emergency Planning		
Waimakariri District Counci			
Brennan Wiremu	Emergency Management	12.50	21-Feb-11
	Advisor		
Selwyn District Council			
Paul Davey	Chief Executive	11.00	13-May-11
Wilson Brown	Emergency Management	11.00	13-May-11
	Manager		
Douglas Marshall	Controller	1.30	17-May-11
<u> </u>			•
Orion Group			
Roger Sutton	Chief Executive	3.30	21-Feb-11
John O'Donnell	General Manager Infrastructure	3.30	21-Feb-11
	and Chair Christchurch	3.23	· - -
	Lifelines		

Canterbury Employers' Chan	nber of Commerce			
Peter Townsend	Chief Executive	9.20	17-May-11	
GNS Science				
Dr. Terry Webb	General Manager Natural	1.00	08-Feb-11	
Dr. Ken Gledhill	Hazards Section Manager Geohazards Monitoring	1.00	08-Feb-11	
	•			
Kestrel Group				
Kristen Hoskin	Director	12.00	14-Feb-11	
Gavin Treadgold	Director	12.00	14-Feb-11	
David Brunsdon	Director	11.00	26-Apr-11	
	nergency Management Group			
Rian van Schalkwyk	Manager Emergency Management, Greater Wellington - the Regional Council	11.30	07-Apr-11	

Appendix 3: Bibliography

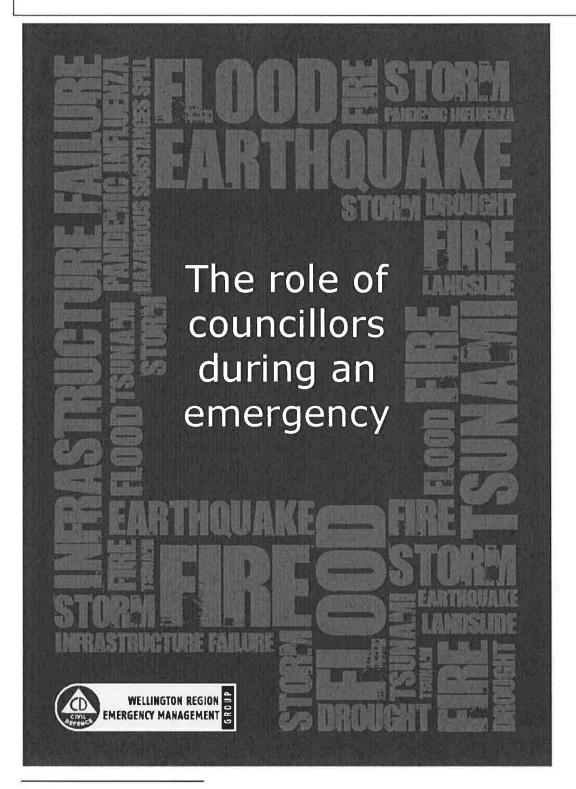
- Civil Defence Emergency Management Act (2002) Public Act 2002 No. 33. Date of Assent 17 October 2002
- The Canterbury Earthquake Response and Recovery Act (2010), Public Act 2010 No. 114. Date of Assent 14 September 2010, and Orders in Council made there-under.
- 3. The Guide to the National Civil Defence Emergency Management Plan 2006, Ministry of Civil Defence and Emergency Management, Edition June 2009
- 4. New Zealand Society for Earthquake Engineering Bulletin Volume 43, number 4
- Geotechnical Reconnaissance of the 2010 Darfield (New Zealand) Earthquake, version 1, edited by Misko Cubrinovski of the University of Canterbury and Russell A. Green of Virginia Tech, Blacksburg, Virginia, USA
- 6. Review of the February 2004 Flood Event (The Reid Report), P. Reid, D. Brunsdon, P. Fitzharris, D. Oughton, 2004
- 7. Independent External Review of the Civil Defence Emergency Management Response to the Tsunami Threat from the Samoan Earthquake on 30 September 2009 (The Murdoch Review)
- 8. Canterbury Civil Defence and Emergency Management Capability Assessment Report August 2010 (draft), Ministry of Civil Defence and Emergency Management.
- New Zealand Fire Service Commission, The New Zealand Co-ordinated Incident Management System, CIMS, 1998
- 10. Community, Resilience and Recovery: Building or Burning Bridges? Professor Suzanne Vallance; Draft of paper accepted for publication in the Lincoln Planning Review, forthcoming
- 11. Civil Defence Briefings dated 4 to 13 September (13 in number), to the Minister of Civil Defence by the Department of Internal Affairs.
- 12. Cabinet Minutes relevant to the Canterbury Earthquake, 4 September 2010
- 13. Various Minutes of Standing and Ad Hoc Cabinet Committees relating to Earthquake Support and Response, 08-21 Sep 10
- 14. Agendas and minutes of the ODESC (P) Civil Contingencies Meetings of 5 and 9 September, and the Watch Group Meeting of 7 September, 2010
- 15. New Zealand Fire Service Presentation NZFS Response to the Canterbury Earthquake
- 16. National Crisis Management Centre Sitreps #1-18, Canterbury EarthquakeMedia Releases, dated 4 September to 11 September (10 in number), issued by the Ministry of Civil Defence and Emergency Management
- 17. After Action Report, Agenda Item no. 8 for the meeting of the Canterbury CDEM Group on 13 December 2010, Robert Upton, CDEM Group Controller
- 18. Disaster Resilience Summary, Orion Group, Issue date 16 November 2010
- 19. Orion Group Presentation: Independent Review of Response Phase of Canterbury Earthquake, February 2011

- 20. September 4, 2010, 4.35am Orion Quake Documentary, DVD
- 21. Building Safety Evaluation during a State of Emergency Guidelines for Territorial Authorities, prepared by the New Zealand Society for Earthquake Engineering, August 2009
- 22. Canterbury Earthquake Saturday 4th September 2010. The Radio New Zealand Response Programming, Coverage and Feedback, Radio New Zealand, 14 September 2010

Appendix 4 : Glossary

CD	Civil Defence	
CDEM Act	The Civil Defence and Emergency Management Act (2002)	
CDEM Group	A group of Territorial Authorities and other response/recovery organisations established under the CDEM Act	
CEG	Co-ordinating Executive Group	
CERC	Canterbury Earthquake Recovery Commission	
CERT	Community Emergency Response Team	
DESC	Domestic and External Security Committee (a Cabinet committee)	
Director's Guide	The Guide to the National Civil Defence Emergency Management Plan	
ECan	Environment Canterbury (the Canterbury Regional Council)	
ECC	Emergency Co-ordinating Centre	
EMIS	Emergency Management Information System	
EOC	Emergency Operations Centre	
EQC	Earthquake Commission	
FTE	Full time employee	
GeoNet	The national seismic hazard monitoring system, managed by GNS Science	
GNS Science	Institute of Geological and Nuclear Sciences Limited (a Crown Research Institute)	
Guide	The Guide to the National Civil Defence Emergency Management Plan	
JC	Joint Committee (of CDEM Group mayors or delegates)	
MCDEM	Ministry of Civil Defence and Emergency Management	
MED	Ministry of Economic Development	
MSD	Ministry of Social Development	
NCMC	National Crisis Management Centre (the "Bunker")	
NGO	Non Government Agency	
NWCG	National Welfare Co-ordinating Group	
ODESC	Officials Domestic and External Security Committee	
REMA	Regional Emergency Management Advisor	
SETG	Social Environment Task Group	
TA	Territorial Authority	
The Act	The Civil Defence and Emergency Management Act (2002)	
USAR	Urban Search and Rescue	

Appendix 5: Wellington CD and Emergency Management Group brochure 10



 $^{^{10}}$ The reviewers acknowledge the permission of the Wellington Region CD and Emergency Management Group to reprint this brochure

Overview and key contacts

The role of councillors, especially the Mayors and the Chairperson, in **showing** leadership and involvement with the community in times of crisis is an important one.

In any emergency the community will look to its leaders for guidance, therefore it is essential that all councillors understand the role of the Wellington Region Civil Defence Emergency Management Group.

This booklet provides some guidance for councillors.

Group functions and powers

CDEM Groups are responsible for the implementation of local CDEM in an efficient and effective manner. Under the CDEM Act (s17 & 18) each CDEM Group should, in summary:

- Identify, assess and manage the relevant hazards and risks and communicate about risks
- Maintain a Civil Defence Emergency Management Plan (CDEM Group Plan)
- Maintain and provide suitably trained personnel, including volunteers
- Maintain and provide resources for effective civil defence emergency management in its area
- Respond to emergencies
- · Carry out recovery activities
- Within its area, promote and raise public awareness and compliance with the legislation

KEY CONTACTS - Managers of Emergency Management

Greater Wellington Rian van Schalkwyk 04 830 4236 027 449 5079

rianvan@gw.govt.nz

Wellington City Counc Fred Mecoy 04 460 0653 021 227 8653

Fred Mecoy@wcc govt.nz

Portrua City Council Trevor Farmer 04 237 1430 027 530 3368 tfarmer@pcc.govt.nz Kapiti Coast District Council Tom Finnimore

04 296 4839 027 555 5829

tom finnimore@kapiticoast

Hutt Valley Emergency Management Office Paul Nickalls

04 570 6445 0274 781 792

paul nickalls@huttcity govt nz

Carterton District Council

Robert Millar 06 379 6626 021 664 533

robert@cdc govt nz

Paul Walker 06 370 6300 0274 465 628 paulw@mstn.govt.nz

South Waltarapa Distric

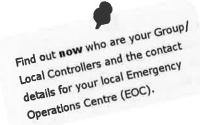
06 306 9611 027 495 7767

civildefence@swdc.govt.nz

What you need to know

Before an emergency

- Have knowledge of the CDEM context and processes
- As councillors, you are responsible for the performance of your council
- Have a close working relationship with your Group/Local Controllers
- As councillors you may be the first point of contact for the public
- Political leaders often have more involvement in recovery than in the response phase
- The Group Controllers are responsible for the overall direction of response activities in an emergency situation
- Members of the Wellington CDEM Group (the Mayors and Chairperson) are responsible for declaring a State of Emergency
- In the absence of all the CDEM Group members, the responsibility to declare lies with elected representatives
- Once a state of emergency is declared management of the emergency is delegated to the Group and Local Controllers



Make sure you and your family are prepared!



Controllers	
Group/Local Controller:	
Alternate Controllers:	
EOC contact details	
Location:	
Alternate location:	
Phone:	
Satellite phone:	

For more information see the Wellington CDEM Group Plan and the CDEM Act (2002).

What you need to do

During an emergency

Other councillors' role in an emergency

- During a disaster numerous tasks are identified where councillors can assist their communities with response and recovery
- The Mayors and Chairman, in consultation with the Group/Local Controller will identify the matters that should be tasked to the other councillors and arrange for the tasking.

Public information

During an emergency

It will be appropriate for the Mayors & Chairperson to make media releases relating to the disaster. Factors that may need to be addressed are (but not limited to):

- Sympathy messages for bereavements, injured, homeless;
- Support messages to Civil Defence staff and the general public; and
- Other messages that would be supportive to the community

All public messages must be done in consultation with the Controllers, Public Information Managers and other Mayors in the region

Elected representative checklist

My family is prepared

I know the functions and powers of the Wellington Region CDEM Group

I have met with the Group/Local Manager of Emergency Management I have met with my Group/Local Controller

I know the location and contact details of my local Emergency Operations Centre

I know what my role is in an emergency

What you need to do

During an emergency

- Ensure that you and your family are safe. Prepare your family for the time you anticipate being away
- Check if your phone or cellular phone is working, if so contact the following:
 - 1. Group/Local Controller
 - 2. Your Chief Executive
 - 3. The Chairperson of the CDEM Group

**If you can't contact any of the above, contact the Group/Local Emergency Operations Centre.

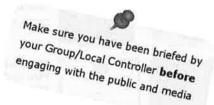
- If communications are disabled pack a bag with essentials warm clothing, snacks or food and water
- Make your way to the nearest local Civil Defence Post or Emergency Operations Centre.

Mayors/Chairperson's role in an emergency

The Mayors/Chairperson should:

- Attend appropriate Group & Local Controllers' briefings
- · Brief all local councillors at least daily
- · Inform the Controller of any issues raised by councillors
- Assist the Group/Local Controllers in liaising with local or national politicians as appropriate
- Declare a State of Emergency (if required)
- In consultation with the Controllers identify the matters that should be tasked to the remaining councillors

Mayors/Chairperson/other councillors should not solicit donations of clothing, food or other items after a disaster. The arrival of unsolicited goods can create a problem for agencies and organisations who then have to set aside valuable create a problem for agencies and organisations who then have to set aside valuable create a problem for agencies and distribution resources to handle these goods which staff, transport, storage and distribution resources. Those wanting to assist will be are often inappropriate for their intended purpose. Those wanting to assist will be encouraged to make cash donations to a Mayoral fund.



Important documents



The Civil Defence Emergency Management Act 2002 (replaced the Civil Defence Act 1983).

The 2002 Act:

Promotes sustainable management of hazards, encourages and enables communities to achieve acceptable levels of risk, provides for planning and preparation for emergencies, and for response and recovery, requires local authorities to coordinate planning and activities, provides a basis for the integration of national and local civil defence emergency management, encourages coordination across a wide range of agencies, recognising that emergencies are multi-agency events.





Wellington Region Civil Defence Emergency Management Group Plan

The CDEM Group Plan provides the context and strategic direction for civil defence emergency management in the Wellington Region. It focuses on issues that the CDEM Group considers will benefit from a collective approach.

The Wellington CDEM Group Plan is currently under review





National Civil Defence Emergency Management Plan Order 2005 and The Guide to the National Civil Defence Emergency Management Plan

The purpose of the Gulde is to assist and support New Zealand agencies to achieve the purpose of the National CDEM Plan. The Gulde Incorporates the wording of the National CDEM Plan, which states the principles, arrangements and frameworks that apply to the management of emergencies and supports these with further detail, diagrams and operational information.

Other relevant legislation

- Accident Insurance Act 1998
- Biosecurity Act 1993
- Broadcasting Act 1989
- Building Act 1991
- Customs and Excise Act 1996
- Defence Act 1990
- Earthquake Commission Act 1993
- Energy Companies Act 1992
- Fire Service Act 1975
- Forest and Rural Fires Act 1977
- Gas Act 1992
- Hazardous Substances and New Organisms Act 1996

- Health Act 1956
- Health and Safety in Employment Act 1992
- Hospitals Act 1957
- Local Government Act 2002
- Local Government Official Information and Meetings Act 1987
- Maritime Transport Act 1994
- New Zealand Public Health and Disability Act 2000
- Port Companies Act 1998
- Public Works Act 1981
- Resource Management Act 1991
- Telecommunications Act 1987