

July 2017 Christchurch and Banks Peninsula Flood

Post Event Report



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Executive Summary

At 1050 hours on Saturday 22 July, a local state of emergency was declared for the Christchurch district in response to heavy rain and the threat of associated flooding. Christchurch City Council activated their Emergency Operations Centre (EOC) at 1130 following the declaration.

Significant amounts of rain fell in the hill catchments above the Heathcote River from the morning of Friday 21 July to the end of Saturday 22 July. This led to Hendersons Basin, Hoon Hay Valley Basin, and Cashmere-Worsley Valley Basin filling up. These storage areas took several days to drain through the Heathcote River. This rainfall coincided with higher than normal tides and a storm surge which increased tidal levels by 400-450mm. As a result, localised flooding occurred in Christchurch (including surface flooding in Southshore) and Banks Peninsula. In addition, minor slips occurred in the hill areas.

Overall, the response by Christchurch City Council to the July 2017 Christchurch and Banks Peninsula Flood went very well. Communication (both internally, and externally with members of the public) was viewed positively with regular, consistent messages from multiple agencies key to this success. In addition, the majority of staff in the EOC were experienced and collaborative, contributing to the overall success of the response.

A number of opportunities for improvement were also identified. A key opportunity exists to identify and train further staff to fulfil key EOC functions. In addition, there is a chance to review and update plans and procedures, and also to review data management and display practices. These opportunities for improvement, along with others, have been captured in a Corrective Actions Plan with remedial actions and deadlines assigned.

Long term recovery issues, such as remedial works, have been addressed in the Council's existing Land Drainage Recovery Programme, and are therefore not addressed in this report.



Introduction

Purpose

The purpose of this report is to document the involvement of Christchurch City Council in the response to the July 2017 Christchurch and Banks Peninsula Floods. This report provides a brief event summary (including a timeline of actions), successful aspects of the event and significant findings, and opportunities for improvement (in the form of a Corrective Actions Plan).

Recovery

This report touches lightly on recovery, documenting short term issues in the Corrective Actions Plan.

Longer term recovery issues, such as remedial works, have been addressed in the Council's existing Land Drainage Recovery Programme and are therefore not addressed in this report. Information about this programme, including works to reduce the Heathcote flooding risk, can be found on the Council's website (<https://ccc.govt.nz/services/water-and-drainage/stormwater-and-drainage/stormwater-projects/about-the-land-drainage-recovery-programme>).

Event summary

Overview

At 1050 hours on Saturday 22 July, a local state of emergency was declared for the Christchurch district in response to heavy rain and the threat of associated flooding.

Significant amounts of rain fell in the hill catchments above the Heathcote River from the morning of Friday 21 July to the end of Saturday 22 July. This led to Hendersons Basin, Hoon Hay Valley Basin, and Cashmere-Worsley Valley Basin filling up. These storage areas took several days to drain through the Heathcote River. This rainfall coincided with higher than normal tides and a storm surge which increased tidal levels by 400-450mm. As a result, localised flooding occurred in Christchurch (including surface flooding in Southshore) and across Banks Peninsula. Minor slips also occurred in the hill areas.



Impacts

14 residential properties experienced flooding of habitable areas. Refer to [Appendix 1: Properties affected by flooding](#) on page 14 for maps of affected properties.

A number of roads were closed across the district to restrict entry to areas subject to flooding. A list of roads affected are included in [Appendix 2: Road closures](#) on page 18.

The Christchurch water supply was unaffected. However, water was temporarily sent via tanks to Duvauchelle as the water treatment plant was unable to cope with the highly turbid raw water.

It is unknown exactly how many residents evacuated their homes as there is no compulsion to notify the Council. As of 27 July 2017, WINZ had received 23 applications for financial assistance, resulting in 44 payments totalling almost \$9400. These payments cover more than just accommodation costs, so this cannot be used to quantify the number of evacuees.

A few people were referred for psychosocial assistance, including emotional assistance, help towards food and clothing and general support. This was mostly provided by the Salvation Army.

EOC activation

In response to the floods, Christchurch City Council activated their Emergency Operations Centre (EOC) at 1130 on Saturday 22 July. A full list of staff who participated in the EOC is included in [Appendix 3: Agencies and Personnel present in the EOC](#) on page 26.

EOC deactivation

The EOC was deactivated at 1800 hours on Tuesday 25 July following a declaration terminating the state of local emergency.

Recovery transition period

A notice of local transition period was given at 1600 hours on Tuesday 25 July 2017 and expired at 1600 hours on Tuesday 22 August 2017.

Powers available during this transition period (which are the powers provided in the CDEM Act 2002) did not end up being required.



Response timeline

The following table outlines key actions taken in response to the July 2017 Christchurch and Banks Peninsula Flooding event.

Time	Action
Wednesday 19 July	
All day	CCC Civil Defence Duty Officer monitored the weather.
1157	Keith Davison (Land Drainage Manager) notifies key personnel that the Wet Weather Emergency Operation Plan is on standby.
Thursday 20 July	
0825	Keith Davison (Land Drainage Manager) notifies key personnel that the Wet Weather Emergency Operation Plan is deployed. Key actions undertaken were: • Temporary large pumps distributed (Flockton Basin, Edtide, Breezes Rd/Avonside Drive, Maces Road, Main South Road, Riccarton Mall) • Dudley Creek bypass opened • City Care's wet weather rounds commenced • Personnel went out and about to monitor the event
1100	CCC Civil Defence Duty Officer placed the Team Leaders of the Response Teams on standby.
1206	CCC Civil Defence Duty Officer touched base with Akaroa and Little River volunteer teams.
1330	Meeting between CCC Civil Defence Duty Officer, CCC Land Drainage, CCC Land Drainage Communications Adviser and CTOC personnel.
1510	CCC Civil Defence Duty Officer provided a summary of events to Mary Richardson (local Controller), with a focus on sandbags.
1515	CCC Civil Defence Duty Officer sent a message via Bulletin to all EOC rostered staff placing them on standby.
1530	CCC Civil Defence Duty Officer updated the CCC Civil Defence team, and Burnside and Pioneer Civil Defence Centres were provided a heads up.
1630	Briefing with the Mayor and other key personnel.
Friday 21 July	
0845	Briefing with the Mayor and other key personnel.
1500	Calls received from the CCC Call Centre with reports of flooding in Richardson Terrace, Clarendon Terrace, Rockinghorse Road and Bridge Street.
	Roading contractors contacted and dispatched to monitor water levels and close roads/erect warning signs as appropriate.
	Initiation of Southshore bund work. Work continued until c0300 Saturday.
1600	Briefing with the Mayor and other key personnel.
1700	Linwood Civil Defence Centre opened.
	Critical roading and land drainage staff set up in 4th floor meeting room at Civic Offices to plan and co-ordinate actions.



1800	Response Teams deployed for wellbeing checks in the Heathcote and Southshore areas.
2015	Meeting between CCC Civil Defence Duty Officer, CCC Land Drainage, CCC Land Drainage Communications Adviser, and Mary Richardson (local Controller). Response Teams stood down.
2100	Critical roading and land drainage staff (set up in 4th floor meeting room at Civic Offices) stood down.
Saturday 22 July	
0100	Call from Peter Christensen (Surface Water Engineer) to the CCC Civil Defence Duty Officer to inform that no issues likely overnight. CCC Civil Defence Duty Officer passed this message onto to Mary Richardson (local Controller)
0700	Call from Mary Richardson (local Controller) to the CCC Civil Defence Duty Officer and Peter Christensen for an update.
0930	Continued work on the Southshore bund (through to Sunday)
	Staff and consultants in the Land Drainage team deployed for information gathering (until c1700). In addition, drones commissioned to help with information gathering.
0930	Call from Peter Christensen (Surface Water Engineer) to the CCC Civil Defence Duty Officer to arrange a meeting for 1130. Weather forecast worse than previously issued.
1000	Roading contractors provided update of road conditions and closed roads.
1050	A state of local emergency declared.
1130	CCC EOC activated.
1200	Surveyors deployed for information gathering (until c1700).
1300	NZDF support requested by Head of Civil Defence.
1400	Road closures in place to establish cordon control in Lower Heathcote area.
1430	Briefing of Councillors.
1500	NZDF arrived at Opawa Road/Richardson Terrace.
1800	A database allowing residents to register for flooding updates was established via the Council website and promoted via Newsline.
1800	CCC SITREP#1 issued.
2000	Civil Defence Centre at Linwood closed.
Sunday 23 July	
0800	CCC SITREP#2 issued.
Mid-morning	Staff and consultants in the Land Drainage team deployed for continued information gathering.
1200	Response teams deployed in conjunction with a Council Building Evaluation team to door knock and assess damage around the Heathcote area.
1800	CCC SITREP#3 issued.
Monday 24 July	
0800	CCC SITREP#4 issued.



1300	Calls started (by the Call Centre) to residents that registered for flooding updates to ascertain their needs.
1400	Civil Defence teams of 3 deployed to the 57 properties identified as 'above floor' or 'above foundation' flooding. These teams consisted of a Building Inspector, Welfare Officer and Engineer.
1800	CCC SITREP#5 issued.
Tuesday 25 July	
0900	CCC SITREP#6 issued.
1600	CCC SITREP#7 (final one) issued.
1600	Declaration terminating state of local emergency made.
1600	Notice of local transition period made.
1700	Hot debrief
1800	CCC EOC stood down.



Evaluation

Debriefs

A hot debrief was held at 1700 hours on Tuesday 25 July in order to capture immediate feedback from Emergency Operations Centre (EOC) staff. This was followed by a cold debrief on Friday 25 August for EOC staff, including partner agencies. Feedback on what went well, along with significant findings is outlined below. Areas for improvement have been incorporated into [Appendix 4: Corrective Actions Plan](#) on page 34.

Successful aspects of the event and significant findings

Communications

- Liaison with other emergency services and agencies involved was generally good.
- Consistent messages came from multiple sources (contractors, partner agencies, Christchurch City Council (CCC) Communications team, CCC Customer Services team, Mayor etc.).
- Communications from very early on and throughout the event was excellent and of very high quality. The Public Information Management (PIM) team were brilliant.
- Communications was very good internally in the EOC, with other agencies, and out to the public.
- Great communication between Planning and Intelligence (P&I) and Welfare, and between P&I and Operations.
- Use of SMS notifications to staff.
- The St John Liaison Officer felt they were able to get hold of information quickly and easily.
- Regular newswire and social media updates very useful.
- Useful having an established comms lead in business as usual (BAU) that carried over into PIM.
- Contractors on the ground active in sharing information.
- Good coordination of public information.
- Updating newswire blog kept residents and media updated.
- Social media worked brilliantly for updating residents.
- Newswire – easy to get information out, key people in PIM roles at the beginning.
- Media reports – picked up in a clear and timely manner.
- Briefing with Elected Members early on – instructions about clear roles.
- Single, consistent messaging.
- Information flow seemed to work well.
- Don't underestimate the power of accurate information relayed in a meaningful, understandable way – even if it's not good information.



**EOC equipment
and resources
(including
processes)**

- From an Army perspective, they were able to provide high ground clearance vehicles within 3 hours of being requested, which provided an additional capability for CCC EOC.
- Very useful to have water level monitoring throughout the catchments as a result of the Land Drainage Recovery Plan wet weather monitoring programme. This gave EOC staff much more data to work with than traditionally.
- Contractor's understood their roles.
- Stood Civil Defence Emergency Management (CDEM) up early.
- We don't need to reinvent the wheel, there are existing processes and templates.
- This event reinforced the need for technology ready to go.
- CCC has a wealth of flooding information (historical) as well as skilled experts to support an EOC flooding response.

EOC activation

- Room was set up very quickly.
- Speed of how everyone came together.
- Useful having PIM and welfare functions next to each other.

EOC staff

- CCC CDEM team were very active and had visible presence.
- Most EOC staff were very experienced and familiar with other staff, which made the response easier.
- Useful having other agencies present.
- The teamwork across CCC Units started early (meetings etc.) so that the event was managed effectively from the outset.
- Interagency coordination was good.
- P&I team had experience.
- Experienced people understood what needed to be done, especially when the EOC had just activated. Experience in previous activations seemed important. Important to select the right staff at the beginning of a response.
- Useful having all EOC functions and external agencies co-located. Faster and easier to organise work.
- Having a core team of people that have worked in EOCs together meant better speed and action.
- Good collaboration between staff.
- Staff more aware of their duties.
- Good availability of staff to support PIM.
- Useful having Medical Officer of Health on hand.
- Useful having IT support straight away.
- Useful having GIS support.
- Land Drainage Team key.
- Relationships with key stakeholders solid.
- Willing volunteers to staff EOC.
- There were remarkable and willing people involved in the response (Council staff, volunteers, and partner agencies).
- Having key people start in the EOC and establish good practices is essential.



Response Management

- There was clear direction from the Controller.
- Useful having one Controller overall in charge (with alternate Controllers to back up).
- The timely declaration assisted the response and the perception of the response.
- The Controller was very engaged.
- Clear direction from the top. Planning started during BAU before the state of emergency was declared. This meant EOC hit the ground running.
- One Controller to set direction for the EOC.
- All requests through to Logistics dealt with by the end of each shift (on top of things).
- Handovers.
- Early risk reduction measures put in place.
- This was a quieter/slower event so easier to remain more organised.
- This event reinforced the need for early, clear decisions.
- Important to remember the order of what should be focused on (people, processes, information, technology).

Coordination

- Very good coordination between teams once the State of Emergency was declared.
- Onsite/ground staff (i.e. Contractors) setting up road blocks appeared to be well coordinated.

Roster

- Once the EOC was activated, staff quickly arrived and were flexible in terms of rostering.
- This event reinforced the need for a strong, organised roster.

Contact Centre support

- Contact Centre support was excellent and prompt.
- Better coordination between Contact Centre and EOC.
- Close liaison between PIM and Contact Centre.
- It is crucial having Contact Centre involved right from the start of an event.

Focus on residents

- No deaths or serious injury occurred.
- There was a clear focus on residents and their situation all the way through the response. This was achieved through:
 - Having the ability for interested parties to register their details,
 - Sending regular messages to affected residents and interested parties,
 - Having Response Teams and other personnel on the ground Friday through to Monday.
- Useful having a TV with news updates – kept the focus on citizens and a reminder of the real world.
- Welfare call backs to affected residents.
- Registration activated early.
- Resilience of Christchurch community still really strong.



**Response
Teams**

- Response Teams deployed for public reassurance.
- Response Teams well organised.
- Great to have a Response Team EOC liaison who was always available.
- Mobilised early on.
- Access to surf boats was beneficial.

**Learning
opportunity**

- A good opportunity to train new EOC Controller Support Staff.
- Able to learn what high pressure means.
- This event reinforced the need for training and relationships.
- Experience is key to providing successful support. Training is not necessarily enough.

**Data
Management**

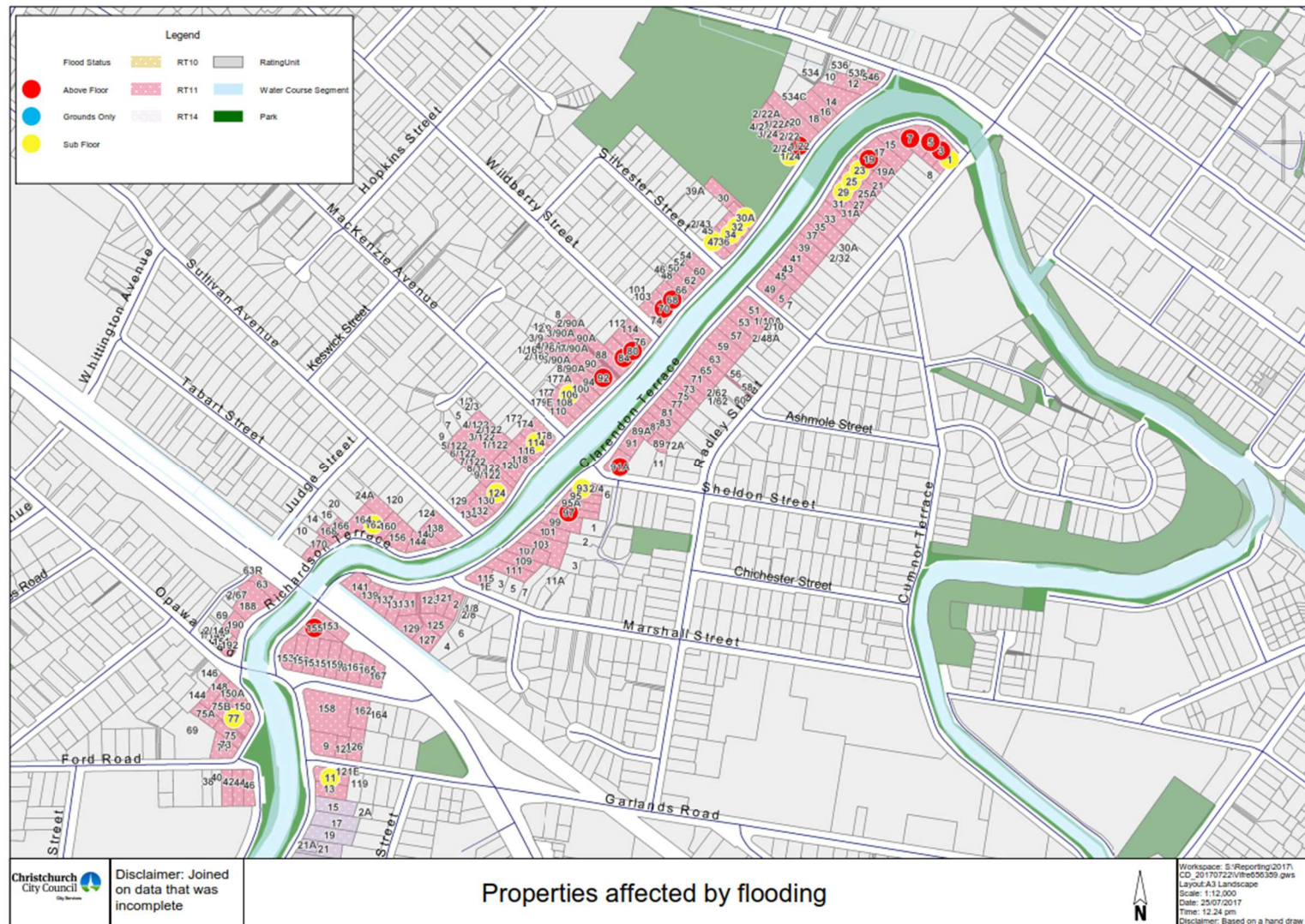
- Capture of field information via FULCRUM app.
- Situation Report process went smoothly.
- Good visualisation of road closures on large screen.
- Useful having a large map of affected areas.
- Good road closure map eventually.
- Useful having an existing database from the Land Drainage Recovery Programme of at-risk residents and stakeholders.
- Good collaboration and sharing of information between teams.
- The information that was supplied by the Land Drainage Engineers informing of the height of the tides which affected the river levels very useful.
- Good information from flood modelling.
- Good transparency of intelligence.
- Good situational awareness.
- Information flow seemed to work well.
- It is crucial to ensure that information requested is properly structure in relation to its purpose.

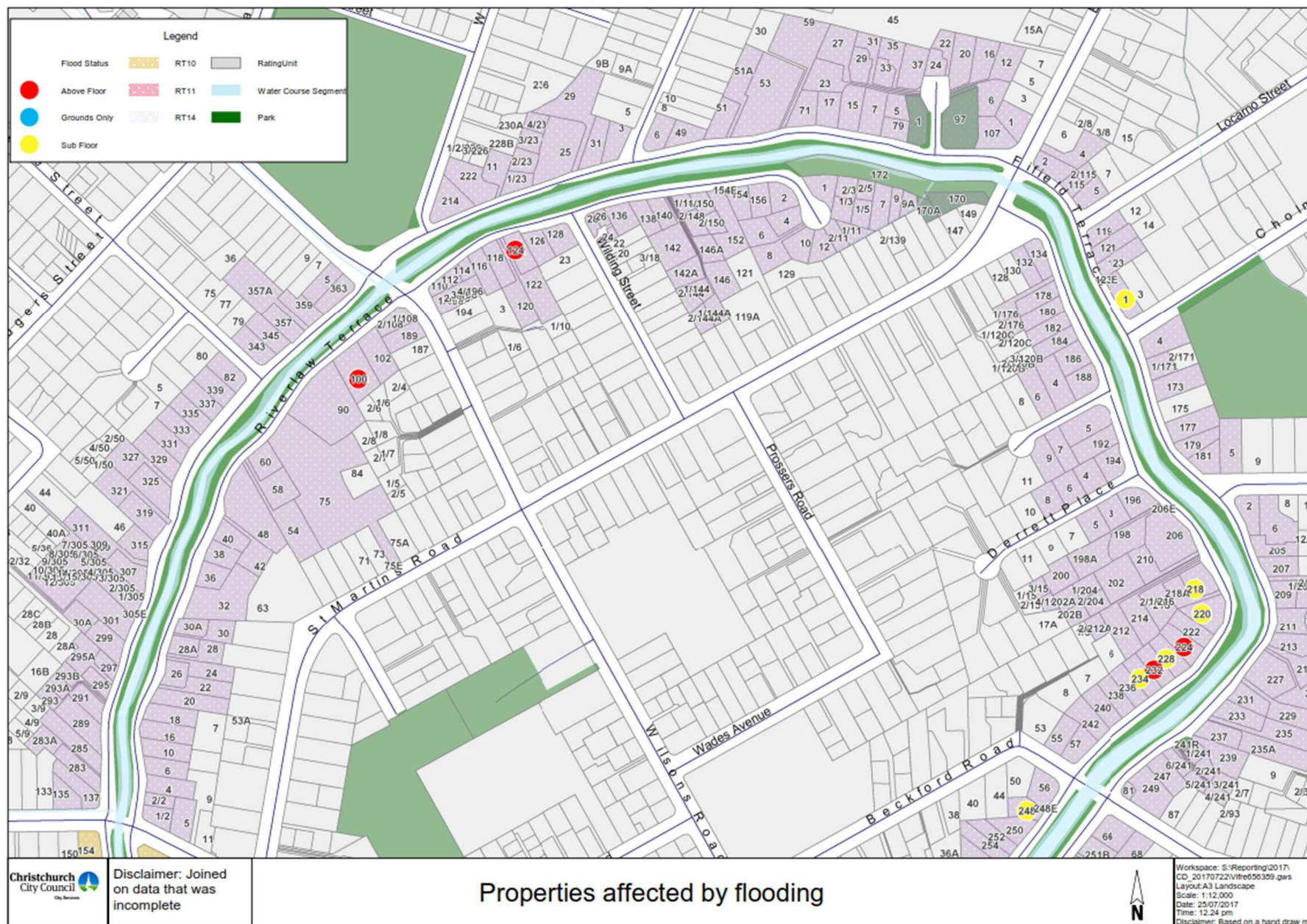
Conclusions

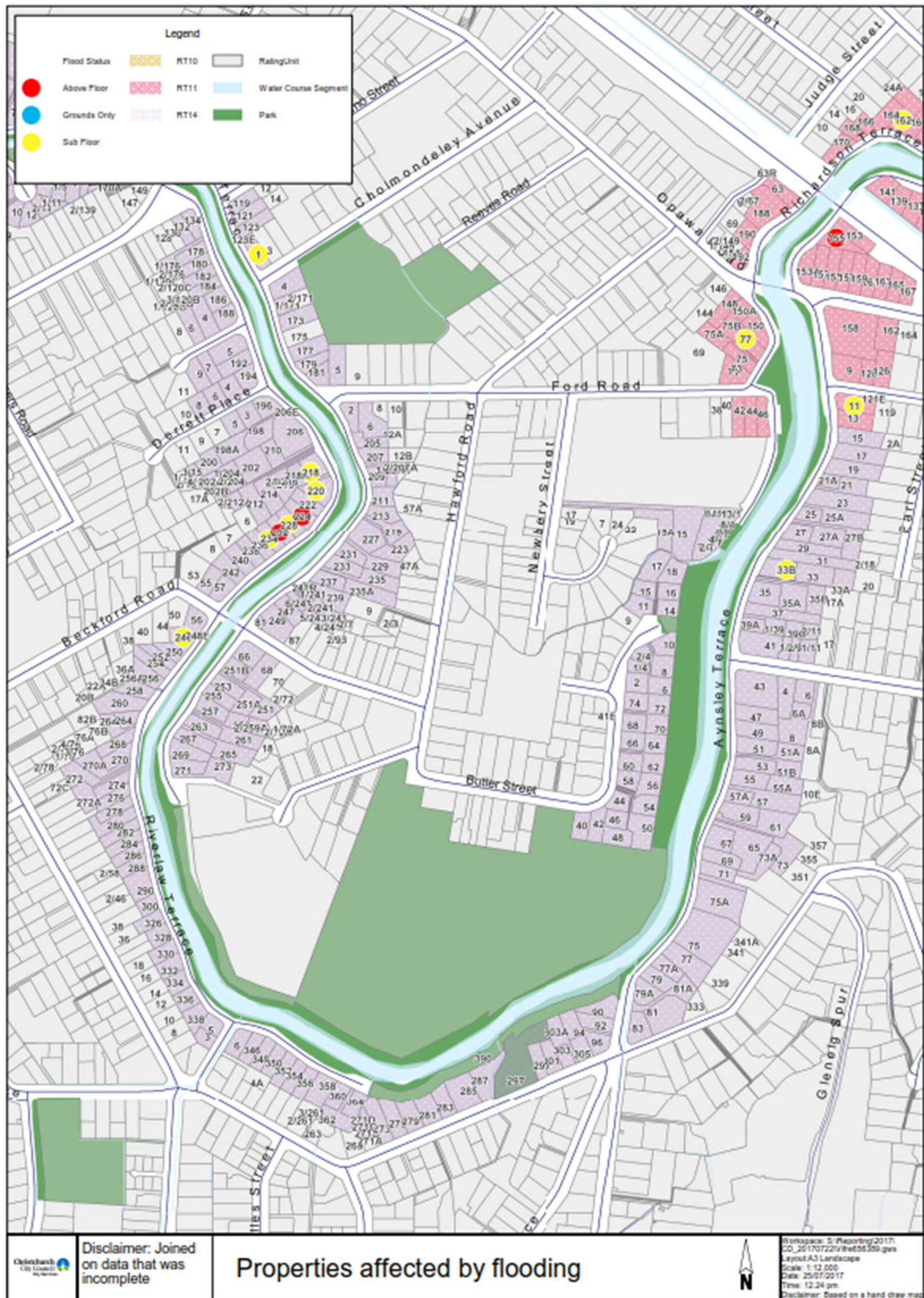
In conclusion, the response by Christchurch City Council to the July 2017 Christchurch and Banks Peninsula Flood went very well overall. Communication (both internally and externally with members of the public) was viewed positively with regular, consistent messages from multiple agencies key to this success. In addition, the majority of staff in the EOC were experienced and collaborative, contributing to the overall success of the response.

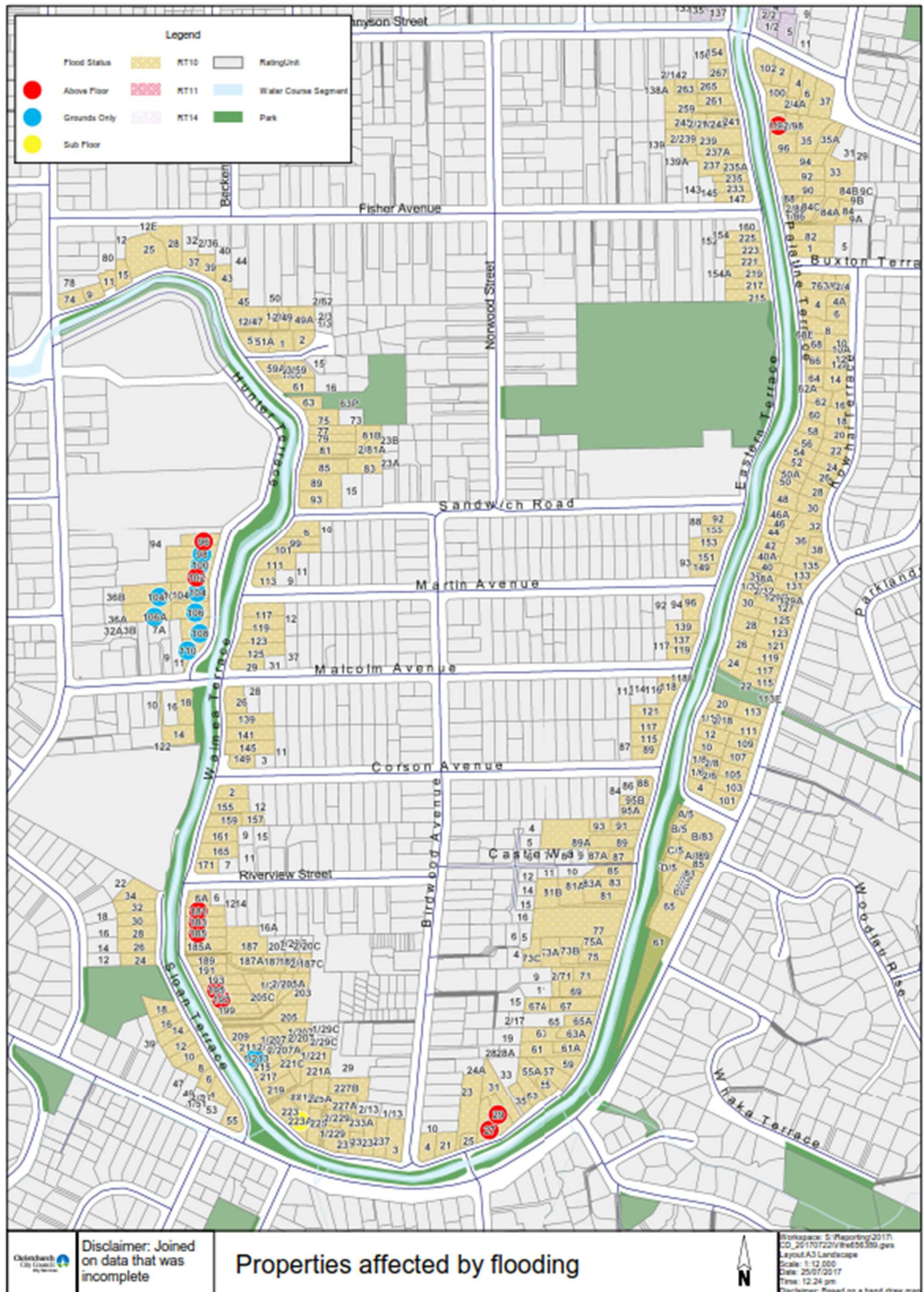
A number of opportunities for improvement were also identified. A key opportunity exists to identify and train further staff to fulfil key EOC functions. In addition, there is a chance to review and update plans and procedures, and also to review data management and display practices. These opportunities for improvement, along with others, have been captured in a Corrective Actions Plan (see Appendix 4), with remedial actions and deadlines assigned.

Appendix 1: Properties affected by flooding











Appendix 2: Road closures

Introduction

Road closures have been split into the following areas:

- Banks Peninsula
- Southern/Eastern Christchurch
- Northern/Central Christchurch

Banks Peninsula

ROAD CONDITIONS STORM REPORTING ON BANKS PENINSULA		Date: 22/07/2017
		Time: 4:00pm
		From: Craig Fraser

Key:
1 Closed
2 Road Open with Severe Flooding, Slips and/or Trees partially blocking Road
3 Road Open with Minor Surface Flooding, Slips and/or Trees
4 Open

Road	Status	Comments
Summit Road	3	Surface flooding and minor slips signs out Hill top to Long Bay
Long Bay Road	3	Some Slips - Signed out to complete next week
Onuku Road	2	Large Slip across road now passable many other slips along length location is 200m south of Lighthouse Road
Wainui Main Road	3	Made safe Slips off road - Will require proper clean up Next week
Gebbies Pass	1	Severe Flooding Minor Slips
Lyttelton Streets	3	Minor Flooding & Slips
Akaroa Streets	2	Wide Spread Flooding Flooding
Selwyn Road	2	Large Slip across some of road signed out at number #24
Dudley Road	3	Minor Slip - Signs Out
Beach Road	2	Large Slip across some of road signed out between Bruce Tce & the Lighthouse
Days Road	3	Minor Slip - Signs Out

ROAD CONDITIONS STORM REPORTING ON BANKS PENINSULA		Date: 22/07/2017
		Time: 4:00pm
		From: Craig Fraser
Seafeld Road	4	Flooding Subsided
Governors Bay Rd	2	Wide Spread Flooding & slips From Governors Bay Teddington Road to Rapaki
Governors Bay Teddington Rd	3	Severe Flooding
Charteris Bay Road	1	Severe Flooding & Slips Orton Bradley Park to Gebbies Pass
Alymers Valley Rd	3	Made Safe Slip at Location #42 contractors on Site
Decanter Bay Rd	2	Slip half way up the hill open one lane
Takamatua Beach Front	4	Flooding Subsided



Southern/Eastern Christchurch

ROAD CONDITION REPORT
SOUTHERN/EASTERN AREA
CHRISTCHURCH CITY



DATE: 22/07/2017

TIME: 16:00:00

FROM: Ngree King

Key:

1	Closed
2	Open Severe Flooding
3	Open Flooding
4	Open

High Tide 15:30 will affect roads around the river area which will cause flooding until the tide goes out

	Road	From	To	
Road/Section:	Runnymede	Bailey Intersection		3
Comments:	Flooding signs up			
Road/Section:	Avonside Drive	Wainoni Rd	Rowing Club	3
Comments:	Flooding sign up			
Road/Section:	Maces Rd	Ruru Rd Intersection		3
Comments:	The flooding has receded but all signs are staying up in anticipation of the high tide. Staff will continue to monitor this site			
Road/Section:	Waitakiri Drive	Bottle Lake Entrance		3
Comments:	Slow draining surface water			
Road/Section:	Kerrs Road	Avonside Drive Intersection		3
Comments:	Floodings signs up			
Road/Section:	Titirangi Cres	Pukaki Drive Intersection		2
Comments:	Flooding caused by a blocked stormwater outlet. No signs up for this.			
Road/Section:	Puhara Ave	Intersection of Pukaki Drive		2
Comments:	Flooding blocked stormwater outlet. No signs for this			
Road/Section:	118 Clifton Tce			3
Comments:	Slip partially blocking the lane. A crew is working on this.			
Road/Section:	Dyers Pass Road	Sign of the Kiwi	Governors Bay	1
Comments:	Slips on Governors Bay side Heavy Maintenance Crew attending			
Road/Section:	Cashmere Road			4
Comments:	Two slips here at 486 Cashmere Road and Cashmere Road just after Happy Home Road Intersection.			
Road/Section:	Marine pde	Bowhill Rd	Fleming St	3
Comments:	Flooding is draining - capacity issue will clear eventually			
Road/Section:	Fitzgerald Ave	Intersection Avonside Drive		3
Comments:	CTOC has sent City Care to this site.			



ROAD CONDITION REPORT
SOUTHERN/EASTERN AREA
CHRISTCHURCH CITY



DATE: 22/07/2017

TIME: 16:00:00

FROM: Ngree King

Key:

1	Closed
2	Open Severe Flooding
3	Open Flooding
4	Open

High Tide 15:30 will affect roads around the river area which will cause flooding until the tide goes out

	Road	From	To	
Road/Section:	230 Maces Road			3
Comments:	CityCare signs still up			
Road/Section:	15 Rocking Horse Road	Near Caspian Street		3
Comments:	Signs up. This is a blocked outlet to the estuary.			
Road/Section:	Riverlaw Tce	Ensors Road	To no exit at end of road	1
Comments:	River has breached its banks here water is across to the houses. road is closed. The water is just about at the height of the bridge. All conjoining side streets.			
Road/Section:	New Brighton Road	Cresswell Ave	Lake Terrace Road	1
Comments:	This road is closed. It is being monitored			
Road/Section:	Burwood Road	Intersect Rothesay Road		3
Comments:	The land has sunk. The water is on the berm and carriageway			
Road/Section:	Eastern Tce	Waltham Road	Birdwood Ave	1
Comments:	River has breached its banks here water is across to the road from Tennyson St to Malcolm Ave. Closed at the corner of Birdwood which continues on to Waimea Tce.			
Road/Section:	Palatine Tce	Burnbrae St	Buxton Tce	1
Comments:	Looking at closing to Centaurus Road.			
Road/Section:	Hunter Tce	Malcolm Ave	To No Exit Sign	1
Comments:	River has breached its banks here and residents are self evacuating road including entrance to Library which is nearly under water on Hunter Tce			
Road/Section:	Waimea Tce	Colombo St	Birdwood Ave	1
Comments:	All conjoining roads. River has breached its banks Road closed.			



ROAD CONDITION REPORT SOUTHERN/EASTERN AREA CHRISTCHURCH CITY				DATE:	22/07/2017
				TIME:	16:00:00
				FROM:	Ngree King
 CHRISTCHURCH CITY COUNCIL - YOUR PEOPLE - YOUR CITY					
Key: 1 Closed 2 Open Severe Flooding 3 Open Flooding 4 Open					
High Tide 15:30 will affect roads around the river area which will cause flooding until the tide goes out					
	▼ Road ▼	▼ From ▼	▼ To ▼		▼
Road/Section:	242 Ferry Road				4
Comments:	Flooding across the South side lane of road heading west by the left slip lane into				
Road/Section:	Fifield Tce	St Martins Road to end of street (no exit)			1
Comments:	River has breached its banks here water is across to the houses. road is closed. Side streets have been closed.				
Road/Section:	Aynsley Tce	Centaurus Rd	Opawa Road		1
Comments:	Includes intersections of side streets leading into Aynsley				
Road/Section:	Aynsley Tce	Clarendon Tce	Opawa Rd		1
Comments:					
Road/Section:	Main Road	Bayview Road			3
Comments:	There is tidal flooding in this area which will go down when the tide goes out.				
Road/Section:	Ferrymead				3
Comments:	Possible road closure. Being inspected.				
Road/Section:	Avonside Drive	Torlesse Road	Wainoni Rd		1
Comments:	This area was already marked off as flooding but has now been upgraded to closed.				
Road/Section:	Avondale Road	New Brighton Road	Mervyn Drive		3
Comments:	There is tidal flooding on this road.				



ROAD CONDITION REPORT
SOUTHERN/EASTERN AREA
CHRISTCHURCH CITY



DATE: 22/07/2017

TIME: 16:00:00

FROM: Ngree King

Key:

- 1 Closed
- 2 Open Severe Flooding
- 3 Open Flooding
- 4 Open

High Tide 15:30 will affect roads around the river area which will cause flooding until the tide goes out

	Road	From	To	
Road/Section:	Ford Road	Opawa Road	Louisson Place	1
Comments:				
Road/Section:	Richardson Tce	Wildberry	Opawa Road	1
Comments:	All side streets leading onto Richardson Tce			
Road/Section:	Clarendon Tce	Opawa Road	Radley St	1
Comments:	Flooding under bridge severe no access. All side streets leading onto Clarendon are closed.			
Road/Section:	Cumnor Tce	Garlands Rd	Marshall St	1
Comments:	Road Closed			
Road/Section:	Palatine Terrace	Tennyson St	Cashmere Road	1
Comments:	Road Closed			
Road/Section:	Evans Pass Rd			3
Comments:	Rock Fall is blocking the one lane			
Road/Section:	Ernlea Terrace	Colombo St	End of Road	1
Comments:	Road Closed			
Road/Section:	Locarno St	Int Fifield Tce		3
Comments:	Flooding			



ROAD CONDITION REPORT SOUTHERN/EASTERN AREA CHRISTCHURCH CITY				DATE:	22/07/2017
				TIME:	16:00:00
				FROM:	Ngree King
 CHRISTCHURCH CITY COUNCIL - YOUR PEOPLE - YOUR CITY					
Key: 1 Closed 2 Open Severe Flooding 3 Open Flooding 4 Open					
High Tide 15:30 will affect roads around the river area which will cause flooding until the tide goes out					
	▼ Road ▼	▼ From ▼	▼ To ▼		
Road/Section:	Ashgrove Tce	Young St	Colombo St		1
Comments:	Open from Barrington St To Young St				
Road/Section:	Centaurus Road	Lansdowne Terrace	St Martins/Gamblins Road		1
Comments:	The bridge to Eastern Tce side roads closed Sloane Tce Remura St. Bus company has				
Road/Section:	Gilbert Place	The whole street			1
Comments:					
Road/Section:	Cashmere Road	Sutherlands Road	Hoon Hay Valley Road		1
Comments:					
Road/Section:	Sumnervale Drive	Intersection Evans Pass			3
Comments:	Road Slips - being checked out				
Road/Section:	Fairfield Tce	Ensors Road	To No Exit end		1
Comments:	All conjoining side streets				
Road/Section:	Ashgrove Tce	Both ways off Ferniehurst St			1
Comments:	Going down Ashgrove east and west. Side roads connecting to Ashgrove currently being				
Road/Section:	Gainsborough St	Sparks Road	Wyn Street		1
Comments:	Road being closed now includes Marion intersection				



ROAD CONDITION REPORT SOUTHERN/EASTERN AREA CHRISTCHURCH CITY				DATE:	22/07/2017										
				TIME:	16:00:00										
				FROM:	Ngree King										
 CHRISTCHURCH CITY COUNCIL - YOUR PEOPLE - YOUR CITY															
<table border="1" style="width: 100%;"> <tr> <th colspan="2">Key:</th> </tr> <tr> <td style="background-color: red; color: white;">1</td> <td>Closed</td> </tr> <tr> <td style="background-color: orange;">2</td> <td>Open Severe Flooding</td> </tr> <tr> <td style="background-color: cyan;">3</td> <td>Open Flooding</td> </tr> <tr> <td style="background-color: white;">4</td> <td>Open</td> </tr> </table>						Key:		1	Closed	2	Open Severe Flooding	3	Open Flooding	4	Open
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High Tide 15:30 will affect roads around the river area which will cause flooding until the tide goes out															
	▼ Road	▼ From	▼ To	▼	▼										
Road/Section:	Hendersons Road	Sparks Road Roundabout	Cnr Cashmere and Hoon Hay		1										
Comments:	Being closed so far back as otherwise traffic would not be able to turn around.														
Road/Section:	48 Lansdowne Tce	Int Wedgewood Ave													
Comments:	Slip at this address which will be addressed at a later date.														
Road/Section:	Avonside Drive	Woodham Road	Retreat Road		1										
Comments:	Road Closed														
Road/Section:	Retreat Road	Avonside Road	Gayhurst Road		1										
Comments:	Road Closed														
Road/Section:	Avonside Road	Gayhurst Road	Wainoni Road		1										
Comments:	Road Closed														
Road/Section:	Opawa Road	Clarendon Tce	Brougham St		1										
Comments:	To the start of the new motorway.														
General Comment:	Entire North Side of the Avon River is inaccessible (Ashgrove Tce and Eastern Tce). The river is being closely monitored. We are setting up Cordons in Beckenham, Opawa and Woolston as requested by the council. The members of the public are disregarding staff blocking the road and going over the grass. Extra traffic management is being sent out to help with this.														



Northern/Central Christchurch

Northern / Central AREA CHRISTCHURCH CITY				DATE:	6/09/2017
				TIME:	14:12:31
				FROM:	Katie Easterbrook
 CHRISTCHURCH CITY COUNCIL - YOUR PEOPLE - YOUR CITY					
					
Key: 1 Closed 2 Open Severe Flooding 3 Open Flooding 4 Open					
	Road	From	To		
Road/Section:	Emmett Street	200m from Shirley Rd int	Orontes Street	1	
Comments:	Road Closed				
Road/Section:	River Road	Banks Ave	Medway Street	1	
Comments:	Road Closed				
Road/Section:	Emmett Street	Orcades Street	Bellbrook Cres	1	
Comments:	Road Closed				
Road/Section:	113 Glandovey Road			3	
Comments:	Flooding - capacity issue will clear eventually				
Road/Section:	70 Edgeware Road			3	
Comments:	Flooding - capacity issue flooding signs out				
Road/Section:					
Comments:					



Appendix 3: Agencies and Personnel present in the EOC

The following table outlines the core personnel involved in the EOC response. The EOC sign in sheets are also included in this appendix.

Function	Agency	Personnel
Controller	CCC	Mary Richardson
	CCC	Steve May
	CCC	Anne Columbus
EA Controller Support	CCC	Katie Louw
	CCC	Lorraine Howard
	CCC	Kim Munroe
	CCC	Lelanie Crous
	CCC	Louise Bezuidenhout
EOC Manager	CCC	Murray Sinclair
	CCC	Emma Hunt
	CCC	Anita Walker
Operations	CCC	Ross Herrett (Manager)
	CCC	Chris Gregory (Manager)
	CTOC	Ray Young
	CTOC	Simon Harty
	CTOC	Luke Murphy
	CTOC	Luke Thomas
	CTOC	Ryan Cooney
	CTOC	Janine Porter
	CCC	Sylvia Maclaren (Land Drainage)
	CCC	Karissa Hyde (Land Drainage)
	CCC	Daryl Saunders (Survey)
	CCC	Jed Clement (Survey)
	CCC	Michael Croucher (Survey)
	CCC	James Anderson (Survey)
	CCC	Gemma Dioni (Survey)
	CCC	Vanessa Nuttall (City Streets)
	CCC	Mark Pinner (City Streets)
	CCC	Tim Joyce
	CCC	Shane Bruyns (Building Evaluation)



Function	Agency	Personnel
	CCC	Rob Carlisle (Building Evaluation)
	Volunteer	Louis Couperus (Response Team Liaison)
	CCC	Jan Wright (Response Team Liaison)
	CCC	Terry Sparks (Building Evaluation)
	CCC	Tom Parsons
	CCC	Pana Tогiaso
	CCC	Colin Hill (Land Drainage)
	CCC	Peter Christensen (Land Drainage)
	CCC	Jo Carlton (Land Drainage)
	CCC	Steve Masters (Road Maintenance)
Planning and Intelligence	CCC	Graham Clark (Manager)
	CCC	Cody Kinzett (GIS)
	CCC	Susanna Rodnyanskaya (GIS)
	CCC	Ivan Thomson (Planning)
	CCC	Steve McNeill
	CCC	Sonali Chandratilake
	CCC	Fleur Bridger
	CCC	Grant MacLeod
	CCC	Bridget O'Brien
	CCC	Michael Jacobson
	CCC	Brent Smith
Logistics	CCC	Sue Chappell (Manager)
	CCC	Michael Day (Manager)
	CCC	Peter Langbein (Manager)
	CCC	Adrian Seagar
	CCC	Stuart Graham (Facilities)
	CCC	Casey Bartram (HR)
	CCC	Anne Goldingham (HR)
Public Information Management	CCC	Ross Pringle (Manager)
	CCC	Sarah Kelly
	CCC	Lois Cairns
	CCC	Aimee Kenworthy
	CCC	Kim de Leijer



Function	Agency	Personnel
	CCC	James Richardson
	CCC	Kelly Andrew
	CCC	Daniel Terris
	CCC	Jocelyn Ritchie
Recovery	CCC	Helen Beaumont
Welfare	CCC	Kate Oliver (Manager)
	CCC	Jo Daly
	CCC	Marie Auckram
	CCC	Aidan Kimberley
	CCC	Claire Milne
	CCC	Claire Phillips
	CCC	Guy Field
IT Support	CCC	Karl Raines
	CCC	Jeremy Stephens
Liaison	Ngai Tahu	Angela Lamont
	FENZ	Steve Kennedy
	Ambulance	Craig Downing
	CDHB	Alistair Humphrey
	CDHB	Jenny Ewing
	NZDF	Cameron Charles
	MCDEM	Peter Cameron
	MCDEM	Keith Evans
	MCDEM	Bridget Vercoe
	Police	Peter Hegarty
	Police	Lane Todd
	CDEM Group	Neville Reilly (Group Controller)
	CDEM Group	Gavin Treadgold
	CDEM Group	Jessica Petersen



EMERGENCY OPERATIONS CENTRE SIGN IN SHEET

DATE	NAME	ORGANISATION	ROLE	TIME IN	TIME OUT
22/7	Katie Lynam	CCC	Support	1:15	1:45
22/7	Steve Perkins	RAM	Guest	1:15	1:45
22/7	Craig Dunning	Ambulance	Ops Mgr	13:15	
22/7	Karl Raines	CCC	IT Support	12:45	
"	Jonny Gilling	CDHB	Emergency Manager	"	
"	Murray Smith	CCC	CD Mgr	12:05	
22-7	Ron Jones	RTO- CCC	RTO Liaison	13:05	16:28
22/7	Cathy Graham	CCC	CoC	1:30	1930
22/7	Finha Hunt			12:00	1345
22/7	Susanna Raghunathan	CCC	EOC	14:40	
22/7	Maeqa			14:40	
22/7	Sharon Graham	CCC	Facilities Manager	14:05	16:27
22-7	Mark Holin	City/CCC	Land Drainage	1120	14:05
22/7	Anita Walker	CCC	Support to response manager	12:15	1800
22/7	Cameron Charles	NZDF	L/O	1420	2000
22/7	Jo Daly	CCC	Welfare	14:35	2150
22/7	Sylvia MacLaren	CCC	Ops	14:30pm	
22/7	Lorraine Huxford	CCC	Controller/Sup	2:45pm	9:00
22/7	Peter Amerer	MCDEM	LIAISON	2:45pm	
22/7	Ave Goldingham	CCC	Logis	3:12	0900
22/7	Kerrin Hughes	CCC	Land Drainage	3:12	
"	D Saunders	"	Survey	"	
"	Ivan Thomas	CCC	Planning	3:20	
"	Robb Perrett	CCC	Operations	11:30	5:00pm
"	ADRIAN GEAR	CCC	Colts	1530	2000
"	Cathy Kitch	CCC	Colts	4pm	8pm
"	Jeremy Stephens	CCC	IT	2:45pm	4:35pm
"	Sue Chappell	CCC	Public Manager	11:00	
"	Mark Hickman	CCC	Welfare	1645	1845
"	Neville Reilly	CDDEM	Op. Center	1645	
"	Sharon Graham	CCC	log	1651	20:15
22-7	Vanessa Walford	CCC	Ops	11:30	7:40pm
22-7	Mark Pinner	CCC			
"	Steve McNeill	"	P&I	12:45	7:00
"	Smithson	CDDEM	CD Manager	11:20	2100
"	Tim Joyce	CCC		11:45	10:15pm



EMERGENCY OPERATIONS CENTRE SIGN IN SHEET

DATE	NAME	ORGANISATION	ROLE	TIME IN	TIME OUT
22.07	Michael O'Neill	CCC - Survey	with cane measuring	3:15	6:45
"	led Clement	ccc - survey	survey levels	3:15	6:45
"	Daryl Sanders	"	survey levels	3:15	6:45
"	JAMES ANDERSON	"	"	"	"
"	GEMMA DIONIS	"	"	"	4:30
1.	Ryan Cooney	CTOC	Transport Ops	12:00	20:30
27.07	Mark Columbus	CCC	Control	8:40	06:45
22/7	Kate Lowry	CCC	Response Mgr	8:40pm	4:30am
22/7	Guy Field	CCC	ke fare	8:50	4:30am
22/7	Peter Haughey	CCC	Logistics Mgr	8:57	
22/7	Michael Jordan	CCC	P&I	21:00	6:40am
22/7	VAN DER PLOEG	CCC	PUMPS	22:00	
22/7	Chris Gregory	CCC	Ops	10:30	22:30
22/7	Graham Clark	CCC	Planning & Intel	12:30	22:35
22/7	Kelly Andrew	CCC	Public Info/Media	7:45pm	10:10pm
22/7	Pam Togiago	CCC	Ops	9:00pm	06:30
22/7	Emma Hunt	CCC	D.O.	9pm	04:30
22/7	Colin Hill	CCC	LD ops	8:45	06:30
23/7	Kimble Leyer	CCC	PIM	00:20	06:30
23/7	Peter Christensen	CCC	LD ops	00:20	03:00
23.7.	Steven MAY	CCC	C	05:30	12:45
23.7	Brent Smith	CCC	Planning/Intel	05:45	12:00
23/7	Go Carlton	CCC	LD Ops	05:50	11:30
23/7/17	Simon Hough	CTOC	TTM	05:55	5:57
23/7/17	Anita Walker	CCCDEM	EOC manager	05:45	16:10/133
"	Ryan Cooney	CTOC	Transport Ops	05:55	
23/7/17	Kate Oliver	CCCDEM	Welfare	05:55	2:45pm
"	DAN TERRIS	CCC	PUBLIC INFO	05:57	14:00
"	Steve Moskos	CCC	ROAD MAINT	06:00	noon
"	Simon Hough	CTOC	TTM	06:00	7am
23/7/17	Ton Parsons	CCC	with water ops	06:00	12:30
	Ross Hestelf	CCC	Ops Mgr	06:45	12:00
	Jessica Petersen	COEM Canterbury	Welfare	08:20	
23/07	Cameron Charles	NZDF	L/O	10:30	11:15
"	Tom Joyce	CCC		10:30	10:30
"	Murphy	CCC		11:00	2:55



EMERGENCY OPERATIONS CENTRE SIGN IN SHEET

DATE	NAME	ORGANISATION	ROLE	TIME IN	TIME OUT
23/7	Vanessa Nuttall	CCC	Ops Admin	10:30	7:30pm
23/7	Michael Day	CCC	Logs Manager	10:45	9:30pm
23/7	Sandra Icardy	CCC	PIM	10:45	
23/7	Lorraine Howard	CCC	Controller Spp	10:45	8:45
1	Jenny Bury	CDM	Emergency Manager	10:45	1370
23/7	Loic Cairns	CCC	PIM	1050	
23/7	Aidan Kimberley	CCC	Welfare	11:02	6pm
"	Murray Sinden	CCC	EOC Mgr	11:05	
23/7	Ane Giddings	CCC	Log	11:05	2130
23/7	Sue Chappell	CCC	Log	11:00	1330
23/7	Cathy Bottom	CCC	Log	11:05	1130
23/7	SPANE BRUNN	CCC	BUILDING EVA	11:00	
23-7	Louis Cooper	CCC RIS	RT Liaison	11:00	1640
23/7	Sarah Chambers	CDM	CDM Liaison	1130	1400
23/7	Graham Cronn	CCC	PAI MANAGER	11:30	21:00
23/7	Kim Moore	CCC	Admin Support	11:00	14:15
"	Steve McNeill	"	Planning	11:40	
"	Chris Motson	CDM	CDM Liaison	11:40	1320
"	Kate Evans	CDM	Inspector	11:40	
4	Stewart Corda	CCC	Log	11:46	12:03
1	Belinda Graham	CCC	Visitor	11:46	12:03
23/7	Peter Healey	Police	Visitor	11:55	12:20
23/7	Terry Sparks	CCC	Building Inspectors	11:55	
23/7	Marie Auckland	CCC	Welfare	12:15	1640
28/7	Jon W.	CCC	W	11:00	
23/7	Jon Clement	CCC	SURVEY WATER WLS	8:00	13:30
23/7	Chris Gregory	CCC	Ops Mgr	10:45	21:15
23/7	Simon Day	CTOC	TTM	14:05	14:20
23/7	Cherie Mire	CCC	Welfare	1130	1930
23/7	Sylvia Maeloen	CCC	Operations	1100	
23/7	Luke Murphy	CTOC	TTM	4:25	4:30
23/7	Mike		W	4:30pm	4:30
23/7	Aimee Kenworthy	CCC	Media	11am	6:30pm



EMERGENCY OPERATIONS CENTRE SIGN IN SHEET

DATE	NAME	ORGANISATION	ROLE	TIME IN	TIME OUT
23/7	Emma Hunt	CCC	Control team	11.40	0615
24/7	Amecolatus	ccc	Controller	0845	
24/7	Runde Wier	ccc	PIM	04:00	9:30am
24/7	Tom Parsons	ccc	Ops	04:00	8:00am
24/7	Kim Minnie	CCC	Admin	04:00	14:00
24/7	Bridget O'Brien	ccc	Planning & Intel.	04:00	
24/7	Luke Thomas	CTOC	Ops Transport	05:40	1430
24/7/17	Aiden Kimberley	CCC	Welfare	0700	1520
24/7/17	Keith Evans	McDEM	Kema.	0740	
24/7/17	Roger Ruff	CCC	PIM	8:05	7:05
4/4	Strawbridge	ccc	Logis	820	
24/7	Kate Loun	CCC	CDEM	8:30	4:30pm
	Neale Fern	CDEM	ca	8:45	
24/7	Chris Mike	CCC	Welfare	0900	1900
24/7	Casey Braham	CCC	Logis	0900	
24/7	Chris Gregory	ccc	Ops	11:00	1900
24/7	Michael Day	ccc	Logis	11:30	1840
24/7	Shane Smyth	ccc	Buildings	11:45	1825
24/7	Rob Colde	"	"	"	1425
"	Michael Jacobson	ccc	P&I	11:50	1840
	Marie Jackson	CCC	Logistics	12:00	1830
24/7	Fiona Brogan	CCC	P & I	12:00	6:30.
24/7	Lorraine Honeyd	ccc-	Controller Sup	12:00	6:10
24/7	Kate Oliver	CCC CDEM	Welfare	12:55.	19:00.
24/7	Amrita Walker	CCC CDEM	Welfare	1400	
"	Janet Chandra	ccc & dem	Welfare	1400	
"	Janine Porter	CTOC	Ops Transport	1400	1930
"	Tom Parsons	ccc	Visita	1540	1600
"	Emma Hunt	CCC	Welfare.	1600	1900
25/7	Michael Jacobson	ccc	P&I	0640	1030
25/7	Ross Ruff	CCC	PIM	7:55	
25/7	Coly Kinet	ccc	GIS	8am	
"	James Richardson	"	PIM	"	5PM
"	Michael Day	"	Logis	"	
24/7	Laurie Bewick	ccc	Controller Sup	12:00	18:30



EMERGENCY OPERATIONS CENTRE SIGN IN SHEET

DATE	NAME	ORGANISATION	ROLE	TIME IN	TIME OUT
25/7	Anne Goldingham	CCC	logs	0800	1000
25/7	Fiona Banoher	CCC	P&I	08:10	
25/7	Kate Oliver	CCC CDEM	Welfare	08:10	1800
25/07	Lekanie Cus	CCC	Control	08:00	
25/07	Luke Thomas	CTOC	Transport Ops	0815	
25/07	Anne Cusker	CCC	Control	0800	1000
"	Kate Louw	CCC	CDEM	0900	1600
"	Emma Hunt	CCC	Welfare	0830	1600
"	Sandra Whelan	CCC	CDEM	0900	1800
25/7	Chris Gregory	CCC	Ops	0800	
	Grant Maclean	CCC	P&I	1000	
	Claire Phillips	CCC	Welfare	10:30	10:35
25/7	Playne Miller	CCC	Welfare	10:30	14:30
	Kahava Manihua	CCC		1045	1050
25/7	Kim Munroe	CCC	Admin	8:30	5:05
	Jessica Petersen	CDEM Canterbury	Group Welfare Mgr	11:00	12:00
	Lydia Michela	CDEM Canterbury	Group Welfare Act	11:00	12:00
	Anne Goldingham	CCC	Logs	1205	
	Yani Johnson	CCC		12:05	
	Tim Scandrett			1205	
24/7	Bridget Vercoe	MCDDEM		18:10	
	Tim Joyce	CCC		1240	1710
25/7	Louise Bezuidenhout	CCC	Support	13:00	16:00
25/7	Anita Walker	CCC	Recovery	0945	1800
	Melanie	CCC		0910	1620

Appendix 4: Corrective Actions Plan

Issues and remedial actions have been grouped into the following sections:

1. Staff preparation and training
2. EOC equipment and resources
3. Procedures and processes
4. EOC activation/de-activation
5. Communications
6. Response management
7. Interaction with other agencies
8. Interaction with the community
9. EOC support
10. Rostering
11. Response Teams
12. Data Management
13. Recovery

Key

Completed	
Under action	
Still to action	

#	Issue	Action	Owner	Target date	Outcome
Staff preparation and training					
1.	There aren't enough CCC personnel identified to fulfil key EOC roles (especially Ops). As a result, current identified staff are experiencing response fatigue.	Work with current EOC functional managers, and business unit managers to identify further staff to fulfil key EOC functions.	Head of CDEM/ ORC	22 Dec 2017	
2.	There aren't enough fully trained staff to fulfil key EOC functions.	a) Develop training and exercise schedule for FY 17/18.	ORC	30 June 2018	
3.	There haven't been enough networking/exercises for EOC staff to build knowledge and relationships, and improve systems.	b) Identify staff to be trained.			
4.	The Action Plan was not adhered to consistently, leading to doubling up in some tasks.	c) Deliver training and exercise programme.			
5.	There isn't enough connection between the CDEM Unit and wider CCC staff assigned to EOC functions during BAU.	a) Assign each CDEM Unit staff member to an EOC functional area as a 'relationship manager'.	Head of CDEM/ORC	22 Dec 2017	a) Complete
6.	There isn't a robust process for ensuring the ongoing preparedness of each EOC functional area.	b) Develop an approach to maintaining relationships and ensuring ongoing preparation of each EOC functional area.			
7.	Staff weren't readily available to assist with this event.	a) Develop an internal CCC PR programme for CDEM. b) Clarify CCC staff with EOC roles and ensure contact details are up to date.	a) CDEM Planning Coordinator b) ORC/Business Support Administrator	30 Nov 2017	



#	Issue	Action	Owner	Target date	Outcome
EOC equipment and resources					
8.	The Function Room is a hard environment to work in for prolonged periods of time as there are no windows.	The primary EOC will be located in the CJESP, which is full of windows and natural light.	Head of CDEM	28 Feb 2018	
9.	Technology isn't being used to full advantage in the EOC and for field staff.	a) Review use of technology. b) Consider this within the CDEM Geo-Enablement programme.	ORC	On hold until embedded in the CJESP.	
10.	During the response, there wasn't always a clear understanding of the roles of each EOC function. This led to some functions being tasked inappropriately.	a) Refer to actions listed in response to issue #2. b) Create signage for use in the EOC with 'who does what'.	ORC	28 Feb 2018	
11.	There were not enough appropriate vehicles for field staff (including building evaluation and response teams).	a) Investigate potential arrangements with local 4WD clubs and CCC rangers. b) Work with Operational Delivery Lead Fleet & Security (Rachel Newton) on a process.	Volunteer Coordinator	28 Feb 2018	
12.	The Response Teams require further resources.	a) Identify resources required. b) Factor resources required into current/future budgets.	Volunteer Coordinator	30 Nov 2017	



#	Issue	Action	Owner	Target date	Outcome
13.	There is currently no access to advanced storm surge forecasts.	Arrange access.	Graham Harrington (Senior Surface Water Planner)	30 Nov 2017	Complete – NIWA has been instructed to develop a system as a trial for approximately 6 months. Depending on the outcome, a decision will be made whether or not to continue with it.
14.	The EOC functional boxes are unorganised.	Arrange time for CDEM Unit to organise boxes.	CDEM Planning Coordinator	28 Feb 2018	
15.	There were not enough mice for the laptops.	Order more as required.	ORC	22 Dec 2017	
16.	There isn't a comprehensive list of response resources and the functions they perform.	Compile list.	ORC	30 June 2018	
Procedures and Processes					
17.	There is not a clear understanding (across EOC functions) of what templates and procedures/processes exist currently for use in the EOC (and a consistent approach to using them).	a) Conduct a stocktake/review of procedures and processes. b) Link processes with ProMapp. c) Communicate these procedures and processes as part of the training programme.	a) CDEM Planning Coordinator b) CDEM Planning Coordinator c) ORC	30 June 2018	
18.	The Knowledgebase is unorganised and contains unnecessary documents.				
19.	There was confusion regarding the process for alerting partner agencies that the EOC was activated.	a) Review process. b) Communicate process and declaration checklist with relevant staff, including CDEM Unit and Controllers.	a) CDEM Planning Coordinator b) Head of CDEM	28 Feb 2018	



#	Issue	Action	Owner	Target date	Outcome
20.	Up to date contact lists (with partner agency details) were not readily available.	Review and disseminate contact lists with relevant staff.	CDEM Planning Coordinator	28 Feb 2018	
21.	There was not enough clarity about the change in reporting lines (line of command and authority) during the transition from BAU to Civil Defence emergency.	Ensure there are clear communications to all CCC staff when an EOC has been activated.	Mary Richardson/ Controllers	As required	
22.	Customer Services were not involved early enough.	Develop a process for Customer Services involvement in a Civil Defence emergency.	CDEM Planning Coordinator	28 Feb 2018	
23.	Traffic management plan coordination was not optimal between CTOC and Police.	Review arrangements.	Ryan Cooney	28 Feb 2018	
24.	There is no consistent approach for roading contractors to report the status of roads in an event.	Develop a template/process.	CDEM Planning Coordinator/ Volunteer Coordinator	28 Feb 2018	
25.	There isn't a robust process for informing the Mayor and Elected Members during a Civil Defence emergency.	Develop a process.	CDEM Planning Coordinator	28 Feb 2018	
26.	Questions (for Intelligence) were not structured very well.	a) As per the current CIMS guidelines, Planning and Intelligence are to be split into two functions. b) Tailored training to be provided on this basis.	ORC	28 Feb 2018	
27.	There is no clear, documented understanding of what information is required across EOC functions during a response.				



#	Issue	Action	Owner	Target date	Outcome
28.	It was not clear what 'mode' the EOC was activated at.	Clearly define what the various modes of EOC activation are. Have this information clearly displayed in an EOC.	CDEM Planning Coordinator	28 Feb 2018	
29.	There was confusion regarding the building evaluation process, including what Council staff should visit affected properties.	a) Determine when building evaluation 'placarding' process would be implemented for flooding (in conjunction with Building Consenting Unit (Robert Wright). b) Communicate with Controllers and relevant EOC functional managers.	Head of CDEM	a) 22 Dec 2017 b) 28 Feb 2018	
30.	There is no process for registration (information and welfare).	a) Determine who we need to register (affected residents vs those seeking information) and the data we require from those registering. b) Incorporate process into Geo-enablement project.	Community Resilience Coordinator (Kate Oliver) in conjunction with Regional CDEM and James Gunn.	a) 28 Feb 2018 b) 30 June 2018	
31.	No one (in Welfare) knew how to use ProMapp to access process documentation.	a) Review processes for welfare. b) Organise ProMapp training for welfare staff.	Community Resilience Coordinator (Kate Oliver)	28 Feb 2018	
32.	There isn't a robust rapid needs assessment process.	a) Clarify what processes currently exist. b) Determine if processes are fit for purpose. c) Incorporate this into the geospatial programme.	Community Resilience Coordinator (Kate Oliver)	30 June 2018	



#	Issue	Action	Owner	Target date	Outcome
33.	Data (i.e. welfare) couldn't easily be integrated into GIS.	Incorporate this into the geospatial programme.	Community Resilience Coordinator (Kate Oliver)	30 June 2018	
34.	There is no robust handover process (including filing protocol).	A handover process to be developed, including a checklist/template listing issues, priorities, required resources etc.	CDEM Planning Coordinator	28 Feb 2018	
35.	There is no process for EOC functional areas to feedback about what is working and what isn't working within the EOC during the response.				
EOC activation and deactivation					
36.	It was unclear to some staff whether or not the EOC should have been activated prior to the state of emergency being declared.	Review the CDEM Severe Weather procedure and EOC activation guidelines (in conjunction with the Land Drainage team).	CDEM Planning Coordinator	28 Feb 2018	
37.	Some EOC staff and other agencies felt that they should have been involved in planning prior to the EOC activation.				
38.	CCC Security staff did not man the doors early enough (for external agencies to access).	Process to be included in the EOC Activation SOP.	CDEM Planning Coordinator	28 Feb 2018	
39.	There is no clear, robust process for deactivating the EOC, including notification to CCC staff and key stakeholders.				
Communication					



#	Issue	Action	Owner	Target date	Outcome
40.	Bulletin (SMS service) was not used enough to communicate with staff.	Investigate opportunities for wider use prior to an activation, during an activation, and also during business as usual.	ORC	28 Feb 2018	
41.	SMS messages could be clearer, for example ensure all functions are advised if they are needed or not.				
42.	Staff feel that they were not given a heads up that they might be required over the weekend.				
43.	Generic functional email accounts and mobile phones were used inconsistently.	a) Process to be included in the EOC Activation SOP (to be emphasised at beginning of shifts and handovers). b) Include in EOC training.	a) CDEM Planning Coordinator b) ORC	28 Feb 2018	
44.	Some key agencies still had Murray Sinclair as a point of contact.	Ensure CDEM contact lists are updated and shared with relevant agencies on a regular basis (emphasise 0800#).	CDEM Business Support Administrator	Ongoing	
Response Management					
45.	A response rhythm was not set up early enough or clearly communicated with EOC staff.	Process to be included in the EOC Activation SOP (role of the EOC Response Manager).	CDEM Planning Coordinator	28 Feb 2018	
46.	There was disconnect between the flood modelling experts and P&I staff.	Flood modelling experts to be co-located with Intelligence as required.	CDEM Planning Coordinator	Ongoing	Flood modelling experts will continue to sit with Operations, as this information is the basis for organising and directing contractors.



#	Issue	Action	Owner	Target date	Outcome
47.	There is no process for addressing staff welfare during and after emergencies.	Process to be included in the EOC Activation SOP (role of the EOC Response Manager). This process is to include what staff can do to reduce stress and who they can go to, to discuss issues.	CDEM Planning Coordinator	28 Feb 2018	
48.	Rostering a Controller 'on-call' during some shifts did not work. It was necessary to have a Controller present at all times during the activation, especially to front media interviews etc.	Controllers/Logistics to note that a Controller should always be rostered on in the EOC (as opposed to being 'on-call'). A 2IC Controller should be appointed if the Controller has to be away.	Head of CDEM, ORC	28 Feb 2018	
49.	Planning and Intelligence was combined as one team rather than two teams as stipulated under the current CIMS guidelines.	This has been noted and the EOC roster has reflected this change.	CDEM Planning Coordinator	31 October 2017	Complete - This has been noted and the EOC roster has reflected this change.
50.	There was no 'Safety or Risk Advisor' to monitor safety conditions and advise the Controller on measures to minimise the risks to assigned personnel.	a) Approach HR Health and Safety Advisers and risk advisors about fulfilling this role. b) Include this role in the EOC roster.	a) Head of CDEM b) CDEM Business Support Administrator	22 Dec 2017	
Interaction with other agencies					
51.	Partner agencies weren't utilised to full extent, e.g. Police could have assisted the Response Teams with temporary road blocks.	a) Raise with the Group Controller, the need to implement the ' Emergency Movement Control ' Director's Guideline across Canterbury. b) Regional Office to conduct a workshop to implement the guideline (potentially through the RPG).	a) Head of CDEM b) Regional Office	a) 22 Dec 2017 b) 30 June 2018	



#	Issue	Action	Owner	Target date	Outcome
52.	There is no formal contract with Aurecon regarding meteorological advice before and during weather events. It was very useful to have a locally based meteorologist on hand to discuss forecasts with and to undertake bespoke analysis for Council.	a) Establish a meeting with interested CCC parties. b) Evaluate who will provide the best service (across Christchurch and Banks Peninsula).	a) CDEM Business Support Administrator b) Planning Coordinator/ ORC	22 Dec 2017	Complete – there is a formal contract between Aurecon and the following CCC Units: - Land Drainage - Transport - Three Waters & Waste
Interaction with the community					
53.	There is no clear way for members of the public to share photos of what they are experiencing, e.g. inundation. 'Crowd sourcing' photos is essential to be able to plan better.	Investigate the 'snap, send, solve' app (in conjunction with Sarah Numan, Jarrod Bates).	CDEM Planning Coordinator	28 Feb 2018	
EOC support					
54.	There was not adequate food for EOC staff for all shifts (especially at the beginning).	Process to be included in the EOC Activation SOP (under Logistics).	CDEM Planning Coordinator	28 Feb 2018	
55.	There is no clear process for obtaining IT support in an EOC activation.	a) Process to be included in the EOC Activation SOP. b) Discuss with IT staff their availability for the EOC roster.	a) CDEM Planning Coordinator b) CDEM Business Support Administrator	28 Feb 2018	a) b) Complete
56.	There is no clear process for ensuring staff safety during after hour access, in terms of parking and travel.	Investigate options for afterhours travel and car parking.	ORC	28 Feb 2018	
Rostering					



#	Issue	Action	Owner	Target date	Outcome
57.	There is not a comprehensive up-to-date list of personnel (with contact details) who can staff various EOC functions (links to issue #1).	Update the spreadsheet with EOC personnel and training details.	Head of CDEM, ORC	22 Dec 2017	Underway
58.	As the July floods was seen as a small event, it was difficult getting staff into the EOC (including those on the roster). It was not seen as a priority.	a) Develop PR options for the CDEM Unit and for involvement in civil defence events. b) Contact Unit heads for EOC staff recommendations.	a) CDEM Planning Coordinator b) Head of CDEM	28 Feb 2018	
59.	Shift planning and rostering was often disjointed, leading to staff turning up when they were not required in the EOC.	Review rostering process.	ORC, Logistics team	28 Feb 2018	
60.	When personnel were contacted to come into the EOC following the activation, no thought had been given to who would need to cover a night shift. As a result, people were sent back home to try and get some rest before a night shift.				
61.	A couple of shifts had only a few EOC roles rostered on because it was envisaged that these should be lighter shifts. This led to key functions (which were needed, including Logistics) not being staffed appropriately.				
62.	The PIM function (which was the exception to the rule) had some staff that missed out on the opportunity to participate in the EOC. This was a missed opportunity to mentor/train personnel.	Discuss with PIM Managers/Di Keenan about future events and rostering new members on for a training opportunity.	Community Resilience Coordinator (Emma Hunt)	28 Feb 2018	



#	Issue	Action	Owner	Target date	Outcome
Data management					
63.	There isn't a clear understanding of geo-enablement capability for the EOC.	Consider this within the CDEM Geo-Enablement programme.	Community Resilience Coordinator (Kate Oliver), CDEM Planning Coordinator	30 June 2018	
64.	There isn't a standard approach to using GIS in the EOC.				
65.	There isn't a standard approach (with appropriate tools) to capture data, including mobile data, in the EOC.				
66.	EMIS was not used at all during the response.	a) Evaluate what parts of EMIS we could utilise. b) Obtain a decision from the Canterbury CDEM Group as to whether or not EMIS will be used.	ORC	28 Feb 2018	
67.	There is no clear process for document management in the EOC.	a) Develop a process in conjunction with Lyn Ferris. b) Incorporate process into activation SOP (have structure displayed in EOC).	CDEM Planning Coordinator	28 Feb 2018	
68.	Due to various systems being used, including CSR, it was unclear whether all tasks were actioned.	a) Clarify with Customer Services that all requests for service during a civil defence emergency, are to remain under BAU areas until actioned. b) Consider whether or not a Customer Services rep could sit with the Intelligence team.	CDEM Planning Coordinator	28 Feb 2018	
Response Teams					
69.	It is unclear whether or not Response Team personnel had the right vaccinations for conditions experienced.	Review vaccination requirements with Health and Safety.	Volunteer Coordinator	22 Dec 2017	



#	Issue	Action	Owner	Target date	Outcome
70.	There isn't a clear understanding of Response Team capability (who can do what).	a) Develop a fact sheet outlining Response Team capability. b) Communicate this with EOC functional managers.	Volunteer Coordinator	28 Feb 2018	
71.	Coordination and communication between Response Teams and emergency services wasn't optimal, i.e. regarding the surf boats.	Clarify what EOC function, the Response Teams should be reporting to.	Volunteer Coordinator	28 Feb 2018	Complete – this has been clarified (Operations).
72.	Response Teams were held up going into the field for a considerable amount of time due to waiting for key messages and other information to be developed.	Ensure a process for determining key messages is undertaken as soon as possible.	Community Resilience Coordinator (Emma Hunt), Volunteer Coordinator, PIM.	28 Feb 2018	
Recovery					
73.	The permanency of the landscape feature (bund) in Southshore needs to be resolved with respect to legislation outside of the declared state of emergency.	Matter forwarded to the Land Drainage team to address and report back to Council as necessary.	Keith Davison	31 October 2017	Complete – matter forwarded
74.	Will areas affected still continue to flood after the completion of the Land Drainage Recovery Programme?	Model the July event against the completed Land Drainage Recovery Programme mitigation parameters to assess if flooded properties will continue to flood.	Keith Davison	28 Feb 2018	Under action – Report to ITE and Council in Nov 2017 to seek approval and funding to address most vulnerable properties (Peter Christensen)



#	Issue	Action	Owner	Target date	Outcome
75.	Flood Defence Fund – this was established in 2014 following the heavy flooding in the Heathcote, Flockton Basin and Little River areas. The amount was for \$750,000 (\$250,000 per year for three years). To date no firm plans exist for utilising this money.	Develop a plan, in conjunction with Land Drainage and other relevant units, to utilise this fund. NB: This has previously been assigned to the Head of Civil Defence.	Head of Civil Defence	28 Dec 2017	
76.	Some affected residents may require further psychosocial support, especially if they are unable to return to their homes in the next couple of months.	Affected residents will be referred to the CDHB.	CDHB	As required	Complete
77.	Some affected residents may require further financial support, for example for accommodation.	Affected residents will be referred to WINZ.	WINZ	As required	Complete