
Review of the Actions Taken by the Whakatāne District Council in the Response and Early Recovery Phases of the District's Flooding Events of April 2017

Main Report

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Document Information

Prepared by:

Kestrel Group Ltd
Building Engineering and Emergency Management Consultants
Level 1, 116 Lambton Quay, Wellington
www.kestrel.co.nz

Report Authors:

Dave Brunsdon
Director

Carol Hinton
Consultant

Reviewed By:

John Hamilton
Consultant

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Executive Summary

Background to the Report

This review report has been prepared in response to a request by the Chief Executive of the Whakatāne District Council (WDC) to review the actions taken by the Council in relation to the adverse weather and flooding events affecting the district in April 2017.

The objectives of the review were:

- To provide a summary of the actions taken by WDC in activating and responding to the flooding event when the Rangitāiki river breached its stopbank wall on 6 April 2017.
- To establish the extent to which WDC's systems, processes and capability are aligned with the requirements and expectations of a district council in an adverse flooding event.
- To identify opportunities for improvement to strengthen the ability of WDC to respond to and manage any future significant flooding event.

This review is separate from but complementary to the review commissioned by the Bay of Plenty CDEM Group of the Group's response to the April 2017 weather events, undertaken by John Hamilton of Kestrel Group. It is also separate to the Rangitāiki River Scheme Review commissioned by the Bay of Plenty Regional Council, and chaired by Sir Michael Cullen.

This review was undertaken against Civil Defence Emergency Management arrangements and practices current at the time of the event, noting that a Ministerial Review of civil defence emergency management had been convened prior to the April 2017 weather events to consider the most appropriate operational and legislative mechanisms to support effective responses.

The April 2017 Flooding Events and Response

In early April 2017, the Whakatāne district was hit by ex-Tropical Cyclone Debbie. The cyclone brought with it prolonged torrential rain, resulting in rising river levels across the district's three principal rivers – the Whakatāne River, Rangitāiki River and Tarawera River. Towns in the eastern Bay of Plenty bore the brunt of the cyclone. At just after 0830hrs on Thursday 6 April 2017, the Rangitāiki river breached its stopbank wall at College Road, Edgecumbe, causing extensive flooding across the town and its surrounds. A local state of emergency was declared at 0845hrs, and the whole of Edgecumbe was evacuated.

A second adverse weather event, Cyclone Cook, struck the district a week after Cyclone Debbie, bringing with it further rain and strong winds which caused major power outages. To ensure the Bay of Plenty region could respond effectively, a regional state of emergency was declared in the afternoon of Tuesday 11 April. The region-wide declaration was terminated on 14 April, and simultaneously a second local state of emergency was declared for the Whakatāne District to provide for ongoing response efforts in Edgecumbe. On 21 April the local state of emergency expired, and was replaced by a Notice of Local Transition Period.

The floods and the associated complex weather events of April 2017 required a significant response from WDC over an extended period, with the declaration and Emergency Operations Centre (EOC) operation continuing for more than two weeks. The event changed rapidly in nature and tempo, from a local watch to a declared state of emergency, to a region-wide declaration and then back to a local emergency. The recovery efforts for those most affected in the community will continue for many more months, and need continuing leadership and support from Council.

Emergency Operations Centre and Key Response Functions

The EOC operations were well-led and organised, and generally effective throughout the duration of the response and early recovery phase. The nature and scope of this flooding event however severely tested the ability of the WDC EOC to operate effectively for an extended period.

Maintaining a local presence within the EOC teams proved difficult for WDC, and created ongoing challenges for rostering the EOC teams. It is considered that all teams in any shift of the EOC must include WDC personnel, and that the EOC should have access to sufficient trained personnel for a minimum of two shifts. Consideration needs to be given as to how this is achieved and maintained for responses that continue over an extended period of time, and the associated prior training requirements and readiness.

The scale and geographical extent of the impacts required the involvement of essentially all business units of WDC in the first week of the response. Given the relatively small size of the Council, this created many challenges in delivering emergency response, recovery and 'business as usual' activities, and prioritising the application of resources between them. The priority given to maintaining other Council activities requires specific consideration, both before an emergency event occurs and during the response. An organisation-wide Business Continuity Plan that identifies the critical business functions corresponding to different scales and durations of disruption and emergency response is needed to inform this planning.

Given the challenges in resourcing the core functions of a local EOC with suitably trained personnel, it is suggested that consideration be given by MCDEM to establishing a national team of operationally experienced specialists in areas such as Logistics, Planning, Intelligence, PIM and Operations to provide the ability to support the leaders of EOC functions by 'shadowing' them during a response.

The response benefitted greatly from the extensive support and leadership provided by the Bay of Plenty CDEM Group Office (EMBOP), including the strategic oversight from the Group Controller. The input from the Ministry of Civil Defence and Emergency Management (MCDEM) and experienced emergency management professionals from other regions was another key feature of the support provided to WDC. There were many benefits from having the Group Emergency Co-ordination Centre (GECC) operate alongside the EOC. This proximity did however lead to some role confusion (particularly their areas of difference and overlap), and clarification for people both within and interfacing with the respective centres would have assisted.

The EOC was regarded by some sectors as being somewhat of an internally focused and process-driven facility. Comments were made that the EOC needed to be more adaptable to support community needs, rather than just those of the EOC. As well as the need to connect more effectively with the community, the core products of the EOC (Situation Reports and Action Plans) would have benefited from review and re-focusing as the response continued.

Overall, the co-ordination and provision of Welfare services was a successful aspect of the overall response. The limited local welfare resources available required considerable support from the GECC, MCDEM and other agencies to achieve this. It is however noted that the scale of the welfare response required across the district would have overwhelmed most district councils. It is important that WDC has sufficient locally-based and appropriately trained resources to undertake the initial response, and to form the core of the Welfare team in the EOC. Clearer documentation of how welfare services are delivered locally is also required. The preparedness of designated Civil Defence Centres by WDC for quick and early activation also needs further commitment.

The Public Information Management (PIM) function also faced internal resource challenges early in the event, with one staff member having left the organisation the week prior and another being directly affected by the flooding. In the early stages of the response, this affected the level of support given to the Welfare function and to the efforts of the Mayor and Chief Executive in communicating with the affected sectors of the community.

Plans and Operational Documentation

The scope and currency of plans relating to the response to flood in the Whakatāne District is of concern. The context for this concern is that the 2012-2017 Bay of Plenty CDEM Group Plan lists flooding of the Rangitāiki River as the one of the highest rating risks affecting the region, having due regard to consequence. A sudden breach of the stopbanks was however not included in the 2013 WDC Flood Response Plan as a specific potential scenario outcome. It is observed that this is not an uncommon shortcoming of flood response plans generally, with there typically being a high level of dependence on engineered protection structures.

The Whakatāne Flood Response Plan is in need of urgent revision, with all relevant agencies needing to provide input. A key aspect that requires further development is how the agencies interact during a response to a flood event, particularly the operational relationship between the Bay of Plenty Regional Council Flood Room and the EOC. Greater attention also needs to be paid to the usability of the flood response plan and related operational plans in an EOC environment, and their ongoing maintenance.

Connection with the Community

The WDC EOC needs to improve mechanisms for monitoring the effectiveness of its output and connection with the different sectors of the community. The Mayor, elected members and Chief Executive provide one of these mechanisms, and in this event provided a very effective linkage with the community.

Engagement with iwi is a component of community engagement that requires particular consideration, given the traditional but often unrecognised capacity and capability they bring to

responses in rural and remote locations, in addition to urban areas. The rural sector is another key sector that requires more specific engagement.

The effectiveness of the connection with different sectors of the community in a response is a function of the time spent with them on an ongoing basis prior to emergency events. How this 'readiness' is to be resourced and achieved in and across Whakatāne District and integrated with regular Council community interactions and processes needs specific consideration by WDC and EMBOP as the delivery agents for Civil Defence in Whakatāne.

Local Resourcing of CDEM Functions

The centralised model for CDEM that was adopted by the Bay of Plenty CDEM Group in 2015 provides a baseline service provision to each territorial authority (TA). There is nevertheless a corresponding requirement for each TA including WDC to commit to undertake or facilitate locally-focused CDEM tasks, such as liaison with the community. In turn, this operating model requires EMBOP to be actively monitoring the preparedness of each TA, and putting plans in place to address any evident shortcomings.

The requirements and expectations on district councils under the centralised CDEM Group model for preparing for and responding to an emergency should be more clearly stated, along with the arrangements for monitoring by EMBOP.

Understanding the Roles of the Mayor, Elected Members and Chief Executive in an Emergency

The experiences in this event have highlighted the important roles that the Mayor, elected members and the Chief Executive have in communicating with and supporting the affected sectors of the community.

It is however observed that there continues to be a lack of national guidance on these roles, and the associated provision of appropriate induction and training for newly elected Mayors and councillors.

Early Recovery Tools and Initiatives

Consideration of recovery arrangements was outside the scope of this review. While it is understood that the recovery operation did take some time to become established, positive comments were made about the range and effectiveness of outputs from the Recovery Office.

Some early initiatives by WDC focused on community outcomes, following a recovery theme of 'People First'. This included facilitating early engagement with insurers, and the development of tools and frameworks such as process flowcharts for the steps to be worked through for the re-occupancy of damaged houses, and the process map for the disposal of hazardous waste from flood-damaged properties. It is suggested that these initiatives should be considered for wider adoption as good recovery practice in flood events.

Key Findings and Recommendations

The April 2017 weather events and consequential flooding Whakatāne District represented a significant emergency event. This review has found that the response by WDC was generally well-organised and effective. The EOC operations were well-led by the Local Controller, supported by the other controllers from outside WDC. The Mayor of Whakatāne, elected members and the Chief Executive provided a very effective linkage with the community, working closely with the EOC.

The response was well supported by EMBOP and the other CDEM Group member organisations, and MCDEM.

The many forms of volunteer input following this event played a significant part in firstly, reducing the impact of the event on people and property, and secondly, hastening the early stages of the recovery.

Several areas for improvement have been identified, including revision of several operational plans that relate to flood response, increasing the presence of local resource in the EOC and improving the early connection with some sectors of the community.

This report makes a total of 16 recommendations under the above headings to improve processes and arrangements (refer Table 2 on page 66). Many of these recommendations are local in nature; others are regional and some national. It is suggested that the allocation of responsibility for their implementation requires further consideration by WDC, EMBOP and the CDEM Group, and MCDEM.

The principal recommendation is that WDC's Flood Response Plan should be revised as a matter of urgency, and should include the potential breach of stopbanks as a specific scenario.

1. Introduction

1.1 About Whakatāne District

The Whakatāne District in the Eastern Bay of Plenty covers approximately 433,000ha, and is one of the seven districts that form the Bay of Plenty region.

The district has a resident population of approximately 34,000 people, 43% of which have Māori ancestry. This population ranks Whakatāne as 31st in size out of the 67 districts in New Zealand.

Farming and forestry activities are the dominant industry sectors in the district; tourism, agriculture, horticulture, fishing and manufacturing are also all well-established.

Central areas of the district include fertile lowlands and farming areas on the Rangitaiki Plains and Galatea Plains through to Murupara. Te Urewera in the south comprises 41% of the area of the district.

The location of Whakatāne District within the context of the Bay of Plenty region and the relevant features of the district are shown in Figures 1 and 2 respectively.

The Rangitaiki Plains cover some 30,000 ha of flat land between the Whakatāne River to the east and the Tarawera River to the west in the Eastern Bay of Plenty. The Rangitaiki River traverses the Plains to the sea at Thornton. At 155 km long, the Rangitaiki is the longest river in the Whakatāne District, with a catchment area of 2,927 km². Where the Rangitaiki River crosses the Plains below Te Teko it is elevated above the surrounding land by natural levees.

A particular feature of the area is the alluvial pumiceous soils which provide poor foundation conditions for stopbanks. Compounding this situation is the lowering of the land at Edgecumbe by up to 2 metres in the 1987 earthquake. Local failure of a section of the stopbank on the Rangitaiki River upstream of Edgecumbe occurred in July 2004, causing extensive flooding of rural and urban areas. A programme of work to protect the four quadrants of Edgecumbe from rainwater falling on adjacent farmland washing back towards low-lying sections of the town commenced in 2010.



Figure 1: Map of the Bay of Plenty region

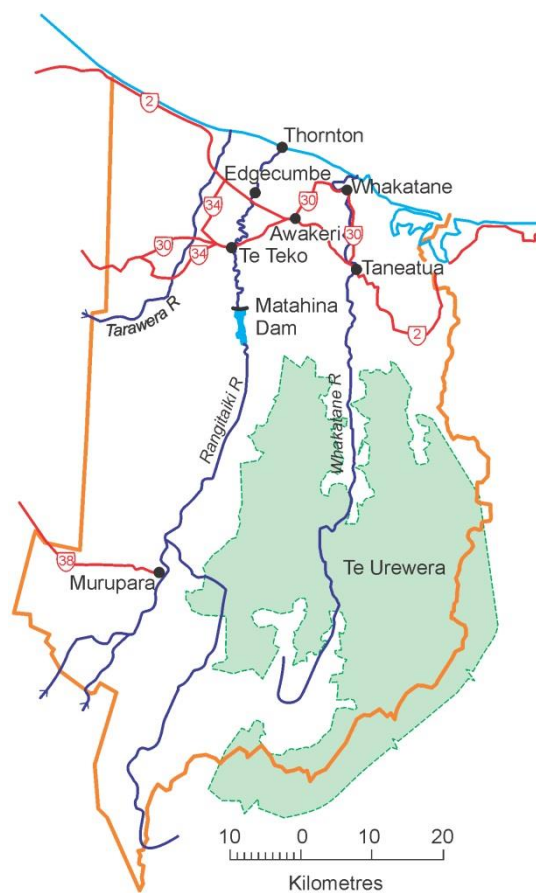


Figure 2: Map of Whakatāne District

1.2 Overview of the April 2017 Weather Events

In early April 2017, the Whakatāne district was hit by ex-tropical Cyclone Debbie. The cyclone brought with it prolonged torrential rain, resulting in rising river levels across the district's three rivers – the Whakatāne River, Rangitaiki River and Tarawera River. Towns in the eastern Bay of Plenty, including Edgecumbe, Whakatāne and Tāneatua, and rural areas such as Rūātoki, Galatea, Waimana and Ruatahuna, bore the brunt of the cyclone.

At just after 0830 hrs on Thursday 6 April 2017 the Rangitaiki river, which flows through Edgecumbe, breached its stopbank wall at College Road, causing extensive flooding across the town and its surrounds. A state of emergency was declared in Edgecumbe at 0845 hrs.

The whole of Edgecumbe was evacuated, meaning some 1,600 people were displaced from their homes in that town for several days. Across the District a further 300 people were also displaced from their homes and many others were isolated when roads became impassable. Many of those displaced required support through the Welfare services function.

A second adverse weather event, Cyclone Cook, struck the district a week after Cyclone Debbie, bringing with it further rain and strong winds which caused major power outages. To ensure the Bay of Plenty region could respond effectively, a regional state of emergency was declared proactively mid-afternoon on Tuesday 11 April before the arrival of this cyclone.

1.3 Review Objectives, Focus and Interfaces

This report has been prepared in response to a request by the Chief Executive of the Whakatāne District Council to review the actions taken by the Council in relation to the above adverse weather and flooding events.

The objectives of the review were:

- To provide a summary of the actions taken by the Whakatāne District Council in activating and responding to the flooding event when the Rangitāiki river breached its stopbank wall on 6 April 2017.
- To establish the extent to which the Whakatāne District Council's systems, processes and capability are aligned with the requirements and expectations of a district council in an adverse flooding event.
- To identify opportunities for improvement to strengthen the ability of the Whakatāne District Council to respond to and manage any future significant flooding event.

Assistance was also sought by the Whakatāne District Council (WDC) with regard to the structured management of debriefs.

Review of the actions and responses by organisations other than WDC are outside the scope of this review and report.

Two other separate reviews have been initiated following the flooding event at Edgecumbe and ex-tropical cyclones Debbie and Cook:

1. The Bay of Plenty CDEM Group has commissioned John Hamilton of Kestrel Group to undertake a review of the Group's response to the April 2017 weather events. It is separate from but complementary to this review of the WDC response to the flooding events.
2. The Bay of Plenty Regional Council has commissioned an independent review of the infrastructure and the circumstances that led to the breach of the flood wall of the Rangitāiki River and associated flooding through Edgecumbe on 6 April 2017. Matters to be considered by the Rangitāiki River Scheme Review, chaired by Sir Michael Cullen, include the design, engineering, maintenance and management of the assets that the Regional Council manages on behalf of the community.

1.4 Approach Taken

Interviews were carried out with 29 people during May and June, comprising representatives from Whakatāne District Council (WDC), Emergency Management Bay of Plenty (EMBOP), the Bay of Plenty Regional Council (BOPRC), the Ministry of Civil Defence and Emergency Management (MCDEM) and six other agencies. A debrief workshop of 11 people from WDC and EMBOP who played key roles in the EOC operations was held on 17 May.

A full list of those interviewed and/ or participated in discussions as part of this review is included in Appendix 1.

Relevant plans and documents that prescribe and guide the planning and delivery of CDEM nationally, in the Bay of Plenty and in Whakatāne were reviewed.

Key WDC and Regional Council documents and records relating to the events which resulted in the 6 April 2017 declaration of a State of Emergency in the Whakatāne District were also reviewed, including the input to and output from the EOC.

1.5 Structure of Report

This report has been structured to reflect the objectives of this review.

Following an overview of civil defence emergency management arrangements in Whakatāne and the Bay of Plenty (Section 2), and the adverse weather and flooding events of April (Section 3), the actions taken by WDC and supporting agencies are summarised (Section 4). Consideration is given to WDC planning documents, systems, processes and capability in the light of these actions, and the expectations and requirements of a district council for an event of this nature (Section 5). Opportunities for improvement to arrangements and processes are discussed in these two sections.

The recommendations made in these sections are summarised in the final section, along with a brief discussion of key observations and themes arising (Section 6).

2. Overview of Emergency Management Arrangements in Whakatāne and the Bay of Plenty

2.1 National CDEM Framework

The Civil Defence Emergency Management Act 2002 (the CDEM Act) sets the framework for emergency management in New Zealand. A core purpose of the CDEM Act is to improve and promote the sustainable management of hazards in a way that contributes to the social, economic, cultural and environmental well-being and safety of the public and the protection of property.

The CDEM Act reflects the principle that emergency management is undertaken locally, co-ordinated regionally, and supported from the national level.

Local authorities (district and city councils, and regional councils) are the primary agents responsible for civil defence emergency management. Under the CDEM Act, every local authority within a region must form a Civil Defence Emergency Management Group (CDEM Group) and must plan for and provide civil defence in their respective areas, in conjunction with the emergency services, lifeline utilities and other agencies.

CDEM Groups work in partnership with emergency services to undertake CDEM functions within their respective regions. Responsibilities include:

- identifying and understanding local hazards and risks and implementing cost-effective risk reduction measures; and
- providing or arranging to provide suitably trained people and an appropriate organisational structure, to conduct effective CDEM.

In planning for their response approach to emergency incidents, CDEM Groups and local authorities may also have regard to the following:

- Director's Guidelines on specific aspects of CDEM – as issued by the Director of Civil Defence Emergency Management from time to time.¹
- The Co-ordinated Incident Management System (CIMS) – which provides for a scaled approach to response management having regard to the nature and scope of the incident, and the response required to manage it.

¹ Guidelines have been issued in a range of areas or roles including CDEM Group plans, Welfare services, Group and Local Controllers, Mass Evacuation Planning and Lifeline Utilities.

2.2 Bay of Plenty CDEM Group

The seven councils in the Bay of Plenty make up the Joint Committee of the Bay of Plenty Civil Defence Emergency Management Group (BOP CDEM Group):

- Bay of Plenty Regional Council
- Kawerau District Council
- Ōpōtiki District Council
- Rotorua Lakes Council
- Tauranga District Council
- Western Bay of Plenty District Council
- Whakatāne District Council

Supporting the BOP CDEM Group is the Co-ordinating Executive Group (CEG), a statutorily-mandated committee comprising the chief executive from each local authority (or their representative), the Fire Service, Police, District Health Boards, Medical Officer of Health and the CDEM Group Controller. Other agencies or sector representatives can be co-opted into the CEG. As an example of this, the Chair of the Bay of Plenty Lifelines Group represents lifeline utilities on the CEG. Also, at the 8 April 2016 CEG meeting, the co-option of a Māori representative on CEG was endorsed.

In July 2013, the seven members of the BoP CDEM Group signed a Constitution to agree the basic principles of how each will contribute to emergency preparedness in their region. This document revised the founding constitution, and:

- sets out the purposes, functions, powers, and duties of the Group and its members
- provides for the administrative arrangements of the Group, and
- sets out the rules relating to the conduct and operation of the Group.

Other documents incorporated by reference by the Constitution include:

- The Policy for the Appointment and Development of Controllers (January 2013)
- The Service Level Agreement between the Bay of Plenty Regional Council and the Bay of Plenty CDEM Group relating to the provision of administrative functions to the Group by the Bay of Plenty Regional Council ("Service Level Agreement").

With respect to the Bay of Plenty's Group Emergency Management Office (GEMO), the Constitution states that it will co-ordinate technical expertise, planning and operational functions, performance monitoring, co-ordination of Group-wide projects, and any other functions assigned to it by the Group.

The Bay of Plenty CDEM Group Plan 2012-2017 provides the framework for civil defence and emergency management decisions to be made across the Bay of Plenty. It identifies the region's risk profile and provides guidance for risk reduction, readiness, response, recovery and evaluation and governance activities. It also provides the authority for controllers to carry out actions in the event of a declared emergency in the Bay of Plenty.

Table 3 of the Plan lists flooding of the Rangitāiki River as one of the highest rating risks affecting the region, assessed qualitatively against likelihood and consequence.

The Bay of Plenty CDEM Group Plan has been subject to a revision, and a draft has been prepared for public consultation, but had not yet been released at the time of this review.

The expectations of the Bay of Plenty CDEM Group Plan regarding response activation and co-ordination arrangements in its region (p.24) are that:

- Local Emergency Operations Centres (EOCs) will provide a base from which the Local Controller will exercise their functions to co-ordinate and support response operations within territorial authorities and provide co-ordination between Incident Control Points (ICPs) and the Group Emergency Co-ordination Centre (GECC).
- The GECC will have capacity to support the Group Controller in directing and co-ordinating all activities, and in exercising the Group Controller's powers for the whole of the Bay of Plenty or for any lesser area.

In July 2015, *Emergency Management Bay of Plenty* (EMBOP) was established by six of the seven councils in the Bay of Plenty Region (including Bay of Plenty Regional Council). EMBOP's purpose is to provide operational service delivery of CDEM activities for member councils. Rotorua Lakes Council is not a member of EMBOP, but is still a member of the Bay of Plenty CDEM Group, and receives GECC support via EMBOP.

This current operating model acknowledges that many councils have limited capacity and capability to fill all the operational roles in addition to 'business as usual' beyond the first day or two of a civil defence emergency event. It seeks to ensure support from GECC to help those working in local EOCs to perform their functions.

2.3 Whakatāne District

The key planning document for CDEM in Whakatāne is the *WDC Civil Defence Emergency Management Plan 2012*. This is a high level document, intended to guide implementation planning rather than to guide implementation.

It is noted that this plan was due for review in 2014. We have been advised that a decision was made to await the review of the CDEM Group Plan before reviewing local plans.

As floods are identified as a major risk in the Whakatāne District, another key document is the *WDC Flood Response Plan 2013*. This plan outlines actions to be taken by WDC to prevent loss of life and minimise property damage as a result of flooding incidents in the district.

A series of eight Standard Operating Procedures guide the establishment and operation of the Emergency Operations Centre (EOC) and the management of the response to emergency events in the District:

- SOP 1 – Notification and Activation
- SOP 2 – Emergency Operations Centre

- SOP 3 – Record Keeping and Information Flow
- SOP 4 – Communications
- SOP 5 – Civil Defence Emergency Declaration
- SOP 6 – Warning and Informing the Public
- SOP 7 – Resource Management
- SOP 8 – Debriefing

WDC had reviewed its Standard Operating Procedures in 2015 to reflect the framework and expectations of the CDEM Act. All were amended, and the SOPs relating to Welfare and Facilities were withdrawn.

In terms of EOC operational preparedness and training, more than 90% of the designated EOC roles were filled prior to the April 2017 floods. There has also been a high level of participation by WDC personnel in CDEM training and exercising as delivered by EMBOP. Of the staff with designated CDEM roles, 95% were trained to the foundation level of the MCDEM Integrated Training Framework. 14 of the designated EOC personnel had been trained to CIMS4 level, including nine of the designated EOC function managers.

3. The April 2017 Weather and Flooding Events

During April 2017 the Bay of Plenty faced two significant weather events. Ex-Tropical Cyclone Debbie affected the region during the period from 3 to 7 April and was followed by ex-tropical Cyclone Cook which passed over the region on 13 April.

3.1 Cyclone Debbie

Ex-Tropical Cyclone Debbie dropped considerable rainfall over the entire region which produced record high river levels and flows in the Rangitaiki and Whakatāne/Tauranga catchments. In the Rangitaiki, flows reaching the Matahina Dam were 20% higher than ever recorded previously. Flows in the Whakatāne River were recorded as 34% higher than previously recorded.

The Whakatāne District was impacted most significantly with flooding and landslides damaging and isolating some of the small rural communities. The Whakatāne River overtopped its banks south of the township flooding properties around Poroporo. Flooding and evacuations on a smaller scale also occurred at Ruatoki, Te Teko and Thornton.

On Thursday 6 April, the Rangitaiki River breached the stop bank at Edgecumbe, flooding a large part of the town, damaging more than 265 dwellings and requiring the town's 1,600 residents to be evacuated. The aerial photograph in Figure 3, taken on 8 April, shows the extent of inundation of the town.

A local state of emergency was declared for the Whakatāne District at 0845hrs on 6 April. Other parts of the region were also impacted including flooding on the lower reaches of the Kaituna River and several landslides affecting properties in Ōmokoroa.



Figure 3: Aerial view of Edgecumbe Township on 8 April 2017

3.2 Cyclone Cook

Tropical Cyclone Cook was assessed to be a Category 3 cyclone as it crossed New Caledonia on Monday 10 April. A state of emergency was declared for the entire Bay of Plenty region on 11 April in anticipation of the impact of ex-tropical cyclone Cook. Low lying coastal communities were evacuated in anticipation of the storm generating significant storm surges.

By Wednesday 12 April, Cook was re-classified as an ex-tropical cyclone and was forecast to pass over the Bay of Plenty region from the north on 13 April. It was expected to combine with a complex depression moving towards the North Island from the Tasman Sea and to produce heavy rain into the west and north of New Zealand during 11 and 12 April. However the depression in the Tasman Sea and its frontal bands stalled to the west of the North Island during 12 April, but still produced a humid north-easterly flow and periods of rain onto the North Island. On 13 April ex-tropical cyclone Cook tracked south towards the Bay of Plenty. It crossed the coast between Te Puke and Whakatāne on 13 April and continued south during that night producing strong winds and heavy rains.

When the cyclone hit, power cuts were widespread and many roads were cut off as a result. Landslides in Omokoroa forced the evacuation of six properties. The region-wide declaration was terminated on 14 April, and simultaneously a second local state of emergency was declared for the Whakatāne District to provide for ongoing response efforts in Edgumbe. On 21 April the local state of emergency expired, and was replaced by a Notice of Local Transition Period.

4. Summary of Actions Taken by Whakatāne District Council and Supporting Agencies

In this section, the actions taken in response to the weather event, flooding across the district and subsequent breach of the flood wall of the Rangitaiki River in Edgecumbe are summarised with respect to the time frames of prior to and subsequent to the declaration of a Local State of Emergency for Whakatāne district on 6 April 2017.

The actions of the Whakatāne EOC are summarised, and the areas of effectiveness and opportunities for improvement commented on.

More detailed consideration is then given to the following specific CDEM functions:

- Welfare
- Public Information Management (PIM)
- Management of access to evacuated and cordoned areas

Additional discussion is then provided in relation to other WDC initiatives during the response and early recovery phases.

4.1 Activation and Response Prior to the Declaration of a State of Emergency

4.1.1 Initial activation

A severe weather warning was received from MetService via EMBOP at 0958hrs on Tuesday 4 April. The Bay of Plenty Regional Council Flood Team (BOPRC Flood Team) issued their first Situation Report (SitRep) at 1700hrs, and activated their Flood Room at 0920hrs on Wednesday 5.

The designated WDC Local Controller (Alternate) commenced preparatory actions, and sent an email to key managers in the infrastructure team at 1800hrs on Tuesday 4 to set up a meeting at 0900hrs on Wednesday 5 to begin to prepare for a likely response.

The National Crisis Management Centre (NCMC) in Wellington was initially activated by MCDEM at 2000hrs on Tuesday 4th April as they became aware of heavy rain and rising river levels in Taranaki and Whanganui. The NCMC refocused on Whakatāne on Thursday morning upon being informed of the evacuation of Edgecumbe and the declaration of the local state of emergency.

The WDC's Executive Team had been at a management retreat at Lake Tarawera on Tuesday 4 and Wednesday 5 April, and were actively monitoring weather developments. Given the

weather forecast, the potential for flooding to isolate key parts of the district, and concerns about developments in the district, they returned early to Whakatāne on the Wednesday morning.

The GECC was activated in Tauranga at 1000hrs on Wednesday 5 April in response to a call from the EMBOP Duty Officer.

Following the receipt of further weather updates, actions to set up the EOC were initiated at 1300hrs on 5 April. A meeting of senior Council personnel was called by the Controller at 1630hrs, and the EOC was formally activated. The Whakatāne EOC operated out of the Council Chambers on the first floor of the Civic Centre, the venue designated in WDC SOP 2.

Having due regard to the trigger points identified in the WDC Flood Response Plan (including a high volume of calls and concerns about roads), we consider that these actions by WDC's Controller, including the decision to activate the EOC, represented an appropriate initial response to a significant emerging situation.

In the early hours of the morning of Thursday 6 April, the GECC despatched an experienced staff member to provide relief Controller services to WDC, who had only one Local Controller designated and available. The Group Welfare Manager, who was covering the role of Local Welfare Manager in Whakatāne as the designated WDC person was on leave, was also despatched. Further discussion on the Welfare function is set out in Section 4.3.

4.1.2 Actions prior to the breach of the Rangitāiki River floodwall section

At 1800hrs on Wednesday 5 April, the WDC EOC received advice from the BOPRC Flood Team that Reid's Central Canal was likely to be needed as a spillway for flood waters from the Rangitāiki River. This situation was likely to require the closure of Hydro, McLean and McCracken Roads.

The EOC produced the first SitRep and Action Plan at 1930hrs. At this stage, the forward projection was for *Rain expected to continue for another 12 hours with periods of intensity within that time with high tide peak at 2.22 am and river peak at 14.52*. The river peak reference was actually a high tide reference that applied to all rivers in the district. A full briefing of the EOC on the current and projected situation for the night ahead was held at 2000hrs, attended by the Police and NZ Fire Service.

BOPRC Flood Team SitRep #4 at 1930hrs noted that significantly increased spilling was underway from the Matahina dam in order to 'mitigate the very significant Rangitāiki flood peak' that was anticipated.

During the evening, water flows in various parts of the Plains near Edgecumbe were reported to the EOC, and specifically in Rata Ave and Puriri Crescent. Concern about water flowing towards Edgecumbe from Otakiri and Powell Roads was also conveyed to the BOPRC Flood

Room at approximately 2000hrs. A request was made at this time by the Local Controller to the BOPRC Flood Team for a liaison representative to be present in the EOC. BOPRC Flood Team staff advised they didn't have enough people available on that shift for a full-time representative to attend the EOC, due to Flood Room manning requirements and the need to monitor stop banks. A senior BOPRC Flood Team member did however attend the EOC debrief at 2040hrs. WDC and EOC staff made numerous requests for information to the BOPRC Flood Team subsequently during the night, reflecting the level of anxiety about the potential for stopbanks overtopping on the Whakatāne River; and unusual water movements noted on the Rangitāiki Plains.

The BOPRC Flood Team SitRep #5 at 0130hrs on Thursday 6 noted that the Rangitāiki and Whakatāne/ Tauranga Rivers were predicted to reach record levels, and that the peak dam inflow to the Matahina Dam was due at 1200hrs. Reference was made to staff continuing to monitor stop banks and spillways in relation to Reids Central floodway, and that inspections of the Whakatāne River stop banks were scheduled for daybreak. While no specific reference was made to the stopbanks of the Rangitāiki River, it is understood that they were being monitored by Flood Team along with the floodway spillway.

At this stage the primary concern was the Whakatāne River, which was continuing to rise above predicted peak levels. At the time of high tide early on Thursday morning, Whakatāne River levels were only approximately 40 cm below the top of the concrete flood wall near the Sports fishing Club and Army Hall in the township. After this time the levels of the Whakatāne River reduced slightly. At the handover of EOC teams at 0700hrs on Thursday 6, the main concerns related to rural areas and several families near Tāneatua and Ruatoki who needed to be evacuated. Overtopping of the Whakatāne River floodbank occurred at Poroporo near Rewatu Road into the Te Rahu Ponding Basin shortly after this time, and evacuations of this area began.

A team from the Edgumbe Volunteer Fire Brigade arrived at College Road at 0751hrs in response to a call in relation to concerns regarding water flowing up on the town side of the stop bank. A second truck from the brigade arrived in the same location at 0806hrs. Both trucks had been responding to 'flooding' calls since earlier that morning with one despatched to (but unable to reach) Fosters Road, where several people were stranded, and the other to Rewatu Road.

Concerns about the piping of water near the stopbank at College Road were also raised to the EOC at 0800hrs by a WDC Councillor, who had been actively observing the river levels and stopbanks for both the Whakatāne and Rangitāiki rivers during the night, and communicating information back to WDC. Vibration was being felt on the walkway on top of the Rangitāiki stop bank when vehicles passed by. Police were also present, and worked with the Edgumbe Volunteer Fire crews to self-evacuate houses on College Road and Rata Ave, working down from State Highway 2.

At 0806hrs a message came to the EOC with reports of water coming through the stopbank at Westbank Road. At 0811hrs a BOPRC Flood Team representative confirmed that this report

was correct, and indicated that Edgecumbe township was at risk. The decision was made by the Controller to evacuate Edgecumbe, and the Police Area Commander was tasked with implementing this decision.

Simultaneously, the Police and Fire representatives at the scene determined that properties in Edgecumbe township should be evacuated, and this was conveyed to the EOC. Members of Edgecumbe Volunteer Fire Brigade crews, Police and other responders continued to bang on the doors of houses in the College Road and Rata Avenue area to make sure people were aware of the situation, and within a short while people in houses in Rata Avenue and College Road and from the State Highway down to Tanekaha Street had voluntarily evacuated.

A contractor who arrived at 0830 to work on the stopbank at College Road for BOP Regional Council observed the water coming out of the grass and from around the wall, and told those in the immediate vicinity to leave immediately. The flood wall along a section of College Road breached less than a minute later.

Following the issuing of SitRep #5 by the BOPRC Flood Team at 0130hrs, it does not appear that there was a specific discussion amongst the parties who received the SitRep – namely the EOC, GECC, BOPRC Flood Team controllers and Police and Fire representatives - to discuss precautionary measures for the immediate operational period, or to determine the information or criteria to be established in daylight.

In this respect, it is observed that the physical separation of the Flood Response Team and EOC activities did not assist timely and collective forward planning in relation to potential event developments.

It is our understanding that no-one was aware that the College Road stopbank was at any risk of failure, hence the EOC did not receive specific technical information about the vulnerability of the stopbanks in that area prior to 0811hrs.

It is acknowledged that the BOPRC Flood Team and others were monitoring many kilometres of stopbanks on multiple river systems. The question of the effectiveness of the monitoring of the stopbanks of the Rangitāiki River in the lead up to the breach is outside the scope of this report, and is understood to be addressed by review commissioned by the Bay of Plenty Regional Council.

4.1.3 Actions immediately following the breach of the Rangitāiki River floodwall section

Evacuations continued, led by the Police and Fire representatives present, with a greater sense of urgency given the extremely hazardous situation that existed due to rapidly flowing water and rising levels.

At 0845hrs a Local State of Emergency was declared, signed by the Mayor of Whakatāne.

4.2 Whakatāne Emergency Operations Centre Following the Declaration

General comments and observations in relation to the delivery across the various functions of the EOC are set out in this section. The delivery of Welfare Services, Public Information Management and Management of Access to Evacuated and Cordoned Areas are covered separately in sections 4.3, 4.4 and 4.5 respectively.

4.2.1 EOC Operations

Following the declaration, the EOC focused on supporting the evacuation of Edgecumbe township by activating Civil Defence (Welfare) centres in the Whakatāne War Memorial Hall and Kawerau. The evacuation of Edgecumbe is understood to have been largely completed by 1400hrs on 6 April.

At the EOC shift handover at 1700hrs, the Flood Team representative advised concerns about the stopbank at Thornton, and suggested evacuation of Thornton residents. The Police evacuated this area as a precaution. The Thornton school is understood to have self-evacuated as a precautionary measure earlier in the afternoon.

The Group Controller elected to move the GECC from Tauranga to Whakatāne at 2300hrs on Thursday 6 April, where it operated from rooms in the Civic Centre adjacent to the EOC in the Council Chambers.

The EOC continued operations on a 24 hour basis through until 21 April 2017. This represented one of the longest continuous activations of a city or district EOC in New Zealand apart from the events in the Canterbury Earthquake Sequence of 2010/11.

This was an event that changed its nature throughout, moving rapidly from a local watch to a declared state of emergency, to a region-wide declaration and then back to a local emergency. Several people commented on how challenging it was at times to maintain the focus and direction of the EOC in the face of new developments.

4.2.2 Areas of effectiveness

We consistently received feedback that the overall activation and operation of the EOC was well-managed. Action was taken early, the environment was positive, people operated as part of a team, and the quality of the handover processes between shifts was commented upon favourably.

Additional comments in relation to particular aspects of the EOC operations are as follows:

- **Competence of Controllers**

There was wide acknowledgement from both government agencies, other councils and partner agencies that all of the Controllers in the EOC were competent and definitely 'up for the job'. The lead Local Controller was regarded by all people interviewed as being

extremely competent and well trained, with a good understanding of the role, and of the community. She led her team competently and had their confidence. The other Controllers from EMBOP and the other districts who undertook shifts as the Local Controller were similarly well-regarded for their knowledge and contribution in this critical role.

- ***Commitment of WDC staff***

There was universal recognition for the enormous levels of commitment and focus displayed by all members in the EOC in their efforts to help their community. This was described as working 'well over and above' what would have reasonably been expected.

- ***EOC Establishment and Facilities***

The EOC followed the process set out in WDC SOP 2 (Emergency Operations Centre) and established itself in the Council Chambers as designated. This location, prior experience in its use and the ready access to other council infrastructure generally worked well for this operation.

The scale of the operation and subsequent influx of resources into the EOC from outside the region did however lead to some overcrowding, with associated challenges with respect to layout, servicing and technology capacity. We received a number of suggestions as to how to address these issues, including having a dedicated 'office manager' to oversee the overall running of the EOC.

- ***Interaction with and support from the Group Controller and GECC***

The strategic oversight and supportive leadership from the Group Controller was commented upon by a number of people as an important factor in the overall effectiveness of the EOC. An early example of this is the prompt despatch to Whakatāne of an experienced relief controller and the Group Welfare Manager while the EOC was still in its initial 'precautionary action' mode. We also understand that the later decision to elevate the State of Emergency to a Group declaration in anticipation of Cyclone Cook was taken following a recommendation of the Group Controller.

The active support to the EOC from the GECC was also noted by many as being key to the effectiveness of the EOC, both initially in response to the major evacuation operation and subsequently as the nature of the event continued to change with the advent of Cyclone Cook. The capability and capacity of any relatively small district council would have been significantly challenged if required to manage an event of the same scale and complexity.

The close proximity of the EOC and GECC in the Council building, along with functions such as Welfare and PIM being run essentially as joint operations, did lead to a lack of clarity between the two centres. This was commented upon both by those working in the EOC and others who only visited.

- ***Support from MCDEM***

MCDEM deployed four staff to Whakatane – three Regional Emergency Management Advisers to support the Controller, Chief Executive and Mayor and to assist with recovery planning. A fourth MCDEM member with specialist welfare process knowledge was also deployed to support the Welfare function.

This early input and continued presence in the following weeks provided good support to WDC and the GECC, and worked closely with the Group Controller in finding and co-ordinating supplementary operational resources from other regions.

- ***Establishment of Four Zones – responding to the needs of particular communities***

This involved identifying the four core communities within the WDC and allocating resource to ‘portfolio manage’ each – i.e. to identify and co-ordinate the key needs in each community, which differed between the zones, and to facilitate work on the responses.

The four zone areas adopted were:

- Edgecumbe
- Taneatua
- Thornton
- Murupara Plains

This was a positive initiative, as it ensured that the particular needs of the communities could be better identified and taken into account. There were however challenges in implementing the zones, including allocating and resourcing their leadership. We understand that the initial approach of setting up the emergency services as zone leaders proved only partially successful in terms of alignment with EOC processes and objectives. The subsequent bringing in of operationally experienced CDEM leaders from other regions led to more consistent approaches being adopted between the zones, and a more effective connection with the EOC.

4.2.3 Challenges and Opportunities for improvement

Based on comments made by those interviewed, we have identified a number of areas where changes could be made to improve the effectiveness of the EOC and the overall ability of the Controller to lead the response.

- ***Human resourcing and rostering***

The lack of WDC personnel in some shifts for the various EOC functions was commented upon by many external agencies and others. This lack of local knowledge hampered the effectiveness of some EOC functions, most notably Welfare.

The lack of local people for some roles in various shifts in the days following the local declaration was however compensated by resources from EMBOP and other districts, and from people outside the region. While this was important for the continued functioning of the EOC, some WDC staff reported that they sometimes felt a bit overwhelmed by the number of external people present.

The use of 12 hour shifts did not suit many who were not used to working in an operational environment. While early rosters were developed with insufficient notice given to those affected, subsequent rosters were then developed and posted two shifts at a time, allowing staff to plan.

A number of challenges arose with respect to resourcing the EOC as the operational response continued into the second week. This centred on the question of balancing the resourcing of the EOC with progressively resuming normal day to day Council activities. It is understood that some decisions were made that left key EOC functions short of local resource, thereby hindering effective rostering. Issues were faced in endeavouring to provide rosters that balanced health and safety expectations with the need to ensure the response effort was manned.

As a relatively small council, there is a need for WDC to plan more carefully for how it applies staff resources for the emergency response and day-to-day (or Business as Usual) functions respectively during an extended response. In acknowledging the challenges involved, delivery of CDEM services is a statutory obligation on a local authority, which must therefore apply an appropriate level of resourcing to manage and respond to emergency events. It is unlikely that any council managing and responding to a declared state of emergency will be able to continue to deliver all Business as Usual functions uninterrupted.

Council's Business Continuity Plan (BCP) should provide the basis for this planning. A BCP should establish the critical business functions corresponding to different scales and durations of disruption. Business Continuity Planning enables identification of critical Business as Usual functions which must continue to be provided during a state of emergency and allow for targeted resource decisions to be made.

We were advised that WDC does not currently have a BCP.

- ***Training of EOC personnel***

While the level of training of those with designated EOC roles as summarised in section 2.3 was good, a number of other Council staff that were required to work in key roles in the EOC had no training in CDEM. They were not familiar with key operational plans and other documents, noting that most of the relevant documents were out of date with incorrect references to SOPs.

WDC should consider introducing foundation-level training in CDEM for all personnel, in order to provide support to those with designated operational roles in the EOC, and thereby additional capacity. The foundation level course within the national Integrated Training Framework typically involves up to four hours time. An early focus could be new staff as part of their induction, progressing through others considered most likely to be required to assist in the EOC during an extended response.

In addition to prior training, a short induction/ familiarisation module should be prepared for delivery by the Response Manager prior to the commencement of each shift. As well as a refresher for those who have only had foundation or other training, this would cover the situation of others required to assist in the EOC without prior training.

There was also an apparent lack of training to ensure familiarity with the use of the Emergency Management Information System (EMIS). Training had been provided for some people, but this was only for status reporting and situation reports, and not the wider range of EMIS functions. We were advised that EOC staff tried to log on to EMIS on the first day, but password issues did not enable access for some personnel.

The subsequent use of the welfare registration module was the only use of EMIS by the EOC.

- ***Intelligence and Planning***

The role of the Intelligence function is to collect and analyse information from a range of sources to assist development of plans to manage and mitigate the event. The EOC Intelligence function needs to ensure that it is getting timely and appropriate information that contributes to situational awareness. A number of people advised us that they consider the EOC didn't always have timely information.

Similarly, the Planning function needs to achieve the timely dissemination of information to all levels, with a focus on looking well ahead of the current situation. Observations from several interviewees were that the Action Plans were often not looking far enough ahead of the current situation. This is usually caused by inadequate "strategic" direction, a tendency to focus on the immediate calls for assistance, or a lack of ability (due to inadequate training) to be able to think about long term goals and how they might be achieved.

Given the challenges in resourcing the core functions of a local EOC with suitably trained personnel, it is suggested that consideration be given by MCDEM to establishing a national team of operationally experienced specialists in areas such as Logistics, Planning, Intelligence, PIM and Operations to provide the ability to support the leaders of EOC functions by 'shadowing' them during a response.

- ***Lack of wider understanding and awareness of the event by the EOC***

Several of the people interviewed for this review – covering perspectives from both inside and outside the EOC – noted that EOC was sometimes ‘caught up in its own process’ and found it difficult to see what was actually happening ‘on the ground’. This sometimes made it hard to anticipate the necessary actions or respond effectively to developments in a timely manner. As one EOC staffer said, “we had no idea how big the scale of the welfare operation was until someone came in and said it was bigger than Kaikoura”.

Further comment about the EOC connection with the community is made in section 5.3.

- ***Process quality control***

Effective management of an emergency event depends heavily on the availability of timely, accurate information, provided to those who need it, as the event evolves. Some process errors were noted, including an instance of an early EOC Action Plan being over-saved and sent out as the previous version. It is of interest that none of the agencies receiving the out of date/ erroneous Action Plan drew this to the attention of the EOC, suggesting that this element of the output from the EOC may not in fact have been taken on board or utilised.

SitReps issued in the days following the declaration tended to accumulate information and repeat information from earlier in the event. A SitRep is a report on the situation experienced at that location or by that unit, at that point in time. It does not have to record what has gone before, as this distracts the reader from the updated situation. More effort to cull older and less relevant information would have highlighted the new (and hence more important) information, thereby making the SitReps more digestible. As a minimum, new information should be highlighted, with the use of red text being a suggestion that has been made.

The same observation applies to SitReps from the BOPRC Flood Team, noting that this is a commonly observed phenomenon in extended response operations.

- ***Uncertain relationships with key field operations***

Comments were made that the operational connections between the EOC and key field operations such as the Incident Control Point (ICP) for the Edgecumbe cordon and the Civil Defence Centres were not always clear.

The Edgecumbe ICP involved several agencies, and while it appears that Police were the lead agency, some considered that WDC were. There was a similar lack of connection between the EOC and the Civil Defence Centres during their establishment, and with the Edgecumbe Contact Centre.

In each case, there did not appear to be an operational plan or protocol in place, with the associated lack of clarity around reporting in to the EOC.

- ***Obtaining and maintaining adequate input and resource from national agencies***

The difficulty in obtaining and maintaining effective input from some national agencies was commented upon. A contributing factor is that some national agencies do not have a significant regional presence normally, and this means they may not have had the opportunity to develop relationships in the district prior to the event.

We were also advised that some of the representatives from national agencies only spent a few days in the district before leaving and the resulting lack of continuity caused some frustration for local agencies.

- ***The role of the Chief Executive***

The Chief Executive maintained a strong focus on supporting the affected communities, and supporting the EOC in this regard. Some of his initiatives were however implemented in parallel with activities being co-ordinated by the EOC. The priority for directing activities and the application of resources remains with the Controller, noting that an important role for the Chief Executive is to ensure the EOC and Controller have the resources required for the response.

It is acknowledged that partitioning the role of the Chief Executive from that of the Controller becomes more challenging in smaller councils such as WDC, when the Chief Executive has direct relationships with many sectors of the community and Council staff. Furthermore, when a small district experiences an event of this scale and duration, most of its operations must focus on dealing with the impact.

- ***The role of the Mayor and Elected Members***

Throughout this event, the Mayor, supported by the Chief Executive, focused outwards to the community, addressing the media, and fronting public meetings to ensure that members of the community were able to voice frustrations and discuss issues with their elected leader on a 'face-to-face' basis. This engagement provided valuable support to the work of the EOC.

The WDC CDEM Plan (p.25) does set out the role of the Mayor, but this appears to be what would be expected during 'business as usual', such as presiding over council meetings etc. However, the plan also contains a section on "Emergency Governance", which states that the Council will decide the nature of governance it wishes to take during an emergency. This plan identifies three governance options:

- Full Council retains oversight
- An existing Council Committee takes oversight
- A special purpose Committee is formed.

The WDC CDEM Plan recommends that decisions about emergency governance should be taken early in the recovery phase to ensure swift decision-making and enable effective action by the Recovery Manager. Our interviews with elected members suggest that they were unaware of this provision.

We also spoke to several other elected members from the Whakatāne District and a Community Board member. All had been involved during the event response, and were keen to assist further, but in the early stages of the response none had a clear idea of what their role might be. The Deputy Mayor and another councillor advised that they provided assistance setting up and operating the Civil Defence Centre in Whakatāne, and the others were out in the community providing information and observations to the EOC about developments. Community Board members were proactive in assisting at the Edgecumbe Contact Centre.

A meeting involving all Councillors and members of the four Community Boards was held on 10 April. The purpose of the meeting was to provide them with an update on the state of the emergency, and to set up a process for managing Councillor and other elected member queries. A contact person for elected members was nominated, who could be contacted to record and manage issues, and to provide information back to them. These liaison arrangements are understood to have been effective in directing all elected queries to a single person.

This was clearly a productive meeting; it would have been more effective if held earlier in the response.

Further discussion on the roles of the Mayor, elected members and the Chief Executive is provided in section 5.3.

- ***Lack of use of radio communication***

It is understood that the operational preference of the BoP CDEM Group is to use landline and cellular phone and email communication, with VHF radio as a secondary communication system (refer section 5.9 of the CDEM Group Plan). As a result, radio communication was not enabled in the EOC.

Some of those interviewed questioned whether optimal communication was maintained with operational personnel from WDC and other agencies in the field in the lead up to and following the breach of the stop bank in Edgecumbe.

Also, we were advised that shortly after the floodwall breach, there was a significant telecommunications failure whereby cellphone connection with the EOC went down for approximately half an hour. This left the EOC with compromised communications channels to the floodwall breach ICP.

Recommendation 1:

- ***Consistent resourcing of the EOC with trained local presence***

The EOC should have access to sufficient trained personnel for a minimum of two shifts.

All of the operational groups within the EOC should have local council personnel present in each shift.

Council should consider introducing foundation-level training in CDEM for all personnel, in order to provide more effective support to those with designated operational roles in the EOC.

Recommendation 2:

- ***Ensure that everyone asked to work in the EOC is given an induction covering the functions and protocols***

A short induction/ familiarisation module should be prepared for delivery by the Response Manager prior to the commencement of each shift.

Recommendation 3:

- ***Ensure that staff with critical 'business as usual' roles are not assigned to roles in the EOC***

WDC should develop a Business Continuity Plan that establishes critical business functions corresponding to different scales and durations of disruption and emergency response.

To provide clarity with respect to resource availability and to support effective rostering and ongoing delivery from the EOC, staff who hold critical business functions should not be assigned to roles in the EOC.

Recommendation 4:

- ***Ensure that EOCs have access to sufficient experience to support the key functions***

Consideration should be given to establishing a national team of operationally experienced specialists in areas such as Logistics, Planning, Intelligence, Operations and PIM. This would provide the ability to support the leaders of key EOC functions by 'shadowing' them during a response.

Recommendation 5:

- ***Convey the difference in objectives and activity scope between the EOC and GECC***

The roles of the EOC and GECC (particularly their areas of difference and overlap) need to be actively explained to people both within and interfacing with them during a response. This should include which activities have been integrated (eg Welfare in this event).

Recommendation 6:

- ***Clearer connection between the EOC and operational activity 'cells' that interface with the community***

When a community-based activity centre (eg Civil Defence Centre, Incident Control Point or Contact Centre) will foreseeably function for several days or more, a brief protocol outlining the operational linkages with the EOC should be prepared.

This protocol should as a minimum cover the agency/ people responsible for the centre, and the method and frequency of interface with the EOC

4.3 Welfare Services

4.3.1 Context

Collectively, welfare services are those services necessary to restore community services and provide for the welfare of the public. They include registration of people who may need to receive support, needs assessment, psychosocial support, shelter and accommodation, financial assistance and animal welfare².

The national framework for the provision of emergency welfare services (National CDEM Plan) outlines that welfare services are delivered at the local level and co-ordinated and supported at the CDEM Group and national levels. MCDEM is responsible for providing the CDEM Welfare registration system via a module of the Emergency Management Information System (EMIS).

The co-ordination of Welfare services is a CDEM Group level function and CDEM Groups are each required to establish a Welfare Co-ordination Group. During the response and recovery phases following declaration of either a regional or a local state of emergency, the CDEM Group Welfare Manager is responsible for co-ordination of the welfare services function. Some of the arrangements described in this section are therefore out of the scope of this review. However, because CDEM Group actions are integral to the effective local delivery of Welfare services, relevant Group governance and SOE implementation issues during the flooding event are discussed for completeness.

² MCDEM Plan Order 2015 r.67

The WDC CDEM Plan forms the basis of service delivery during an emergency event, and provides that a Welfare team will be established within the EOC. It identifies a Job Description 6 as applying to members of the Welfare Team and also identifies Welfare as one of the delivery areas for which a standard operating practice (SOP 9) has been developed.³ We note however that this SOP was discontinued at the time of the review of all WDC SOPs in 2015.

We were unable to locate any other current document that provides detailed guidance to the Welfare function operating within a WDC-based EOC. We did locate a web-based version of the *Bay of Plenty Civil Defence Emergency Management Group Welfare Plan 2006*. While we note that this was prepared before the refocussing of the CDEM Group in 2012, it nonetheless provides detailed checklists and other useful operational information – including in relation to activating and operating a Civil Defence Centre.

We understand that two WDC staff have responsibility for welfare matters in an emergency event, including a recently appointed Welfare manager.

4.3.2 How Welfare services were delivered

The delivery of Welfare and related services to members of the WDC community in the period immediately following the evacuation of Edgumbe and other areas affected by the heavy rainfall or flooding was made more complex by the number of homes that were significantly damaged (more than 300) and the potentially significant level of under-insurance.

The observation was made that the Whakatāne welfare response was more complicated than the delivery of the corresponding services following the Kaikōura earthquake in November 2016.

Consistent with the expectations of the centralised CDEM model in the Bay of Plenty, Welfare services to support those affected by the flooding event were co-ordinated regionally. The Group Welfare Manager, who had been deployed to Whakatāne, established the Welfare team in the EOC, calling in representatives from the key agencies who have statutory roles to deliver services.

While the scale of the Welfare response required across the district to this event would have overwhelmed most district councils, we understand that WDC struggled to provide any resource for this function. Their Welfare Manager was on leave at the time of the event, and the other designated person was required in her day-to-day role. The Group Welfare Manager filled the local leadership role as well as the GECC function.

³ The Review team has not viewed this job description.

4.3.3 Areas of effectiveness

- ***Early response by the GECC***

The Welfare co-ordination function in the EOC was convened early, with the Group Welfare Manager arriving in the EOC from Tauranga at about 0730hrs on Thursday 6 April. We understand that this was in response to the contact made to EMBOP by WDC the evening prior.

The breadth of experience of the Group Welfare Manager in similar emergency events was instrumental in the successful delivery of Welfare services in this event. Her knowledge of the requirements and form of the National CDEM Plan was also of considerable value in putting welfare services in place promptly.

- ***Strong national agency support***

The networks and good relationships already held by the Group Welfare Manager with key national agencies, plus the efforts of MCDEM, enabled a good national agency presence in the EOC early on in the response.

MCDEM provided strong support to the Welfare operation, with a key member of their National Planning Team assisting in the EOC as a subject matter expert and mentor.

- ***Use of EMIS module for Welfare registration***

The EMIS registration module worked well for the registrations. There was however a need for most of those involved to be better trained in its use.

Some registration-type activity is also understood to have occurred for a period at the Civil Defence Centres. This was well-intentioned but done by hand, and so created re-work.

4.3.4 Challenges and opportunities for improvement

- ***Plans for local delivery***

As noted in section 4.3.1, we were unable to locate a document which clearly indicated how CDEM Welfare services were to be delivered in Whakatāne. While the processes worked very effectively due to the knowledge, experience and networks of the Group Welfare Manager and the depth of assistance from MCDEM and experienced personnel from other CDEM Groups, the lack of specific WDC operational plans that also reflected the complex interfaces between local, regional and national levels is of some concern.

- ***Readiness and early establishment of Welfare facilities***

The Welfare function identified that two Civil Defence Centres should be activated. These were the Whakatāne District War Memorial Hall and Rautahi Marae in Kawerau.

Despite it being noted at the EOC activation meeting on 5 April that the War Memorial Civil Defence Centre was on standby, it was not able to be swiftly and effectively set up when the need arose the following day. We were advised that the keys for the Hall were not readily accessible, and the basic facilities for making drinks and serving food needed to be brought in.

The ability to access people who were trained in operating a welfare centre ahead of a rapid influx of evacuees was also understood to be lacking.

We were subsequently advised that WDC was under the mistaken impression that the Red Cross would provide trained personnel and all of the provisioning capabilities for the centre. We note that the MCDEM Director's Guidelines *Welfare Services in an Emergency* (p.65) state that "... the decision to activate a Civil Defence Centre is generally the responsibility of the Local Welfare Manager, in consultation with the Local Controller..." A decision to activate a Civil Defence Centre, and the welfare services offered, should be made based on sound action planning and informed by a good understanding of local needs".

The Director's Guidelines state that the Red Cross has a supporting role in the provision of a number of the functions that comprise welfare services. These include supporting community-based needs assessment (door knocking), care and protection services for children and young people, psychosocial support, and household goods and services. As noted on the previous page (Plans for local delivery), operational plans would help to clarify this interface.

- ***Inconsistent terminology in relation to Civil Defence Centres***

There continues to be significant confusion between the terms Civil Defence Centre, Registration Centre and Welfare Centre, and variations on those themes.

The Police noted that the lack of a consistent naming convention caused confusion amongst operational groups, and the public.

- ***Supporting the Welfare function in the EOC***

The Welfare team at the EOC set itself up in an office adjacent to the Council Chambers. Access was restricted to protect the privacy of the personal information provided by individuals seeking to access services. While this appears to have been an appropriate arrangement, it was noted that the restrictions on access to the Welfare room were not always understood or supported.

Due to the scope and complexity of matters to be communicated, we understand that on several occasions, Welfare asked for a dedicated PIM from the EOC, but this was not able to be provided. The occurrence of an incorrect media release that everyone had to register resulted in a run on the phone lines whilst everyone, including those not needing emergency assistance, tried to register. More effective connection between Welfare and

PIM, including appropriate resourcing of the PIM function would have avoided this situation.

- ***Connections and communication with the Community***

Effective welfare planning and service delivery is based on a good understanding of affected communities, including their cultural and demographic makeup, which in turn requires trusted relationships to have been developed. Some operational aspects of this may not have been fully developed with some stakeholder groups, and this is explored further in Section 5.3.

Many of those who self-evacuated sought refuge with whanau or friends but still required varying levels of welfare assistance. We are also aware that several marae voluntarily used their own resources to provide refuge for not only iwi, but anyone who needed support (refer further discussion in Section 5.3.2).

- ***Animal Welfare***

The NZ Fire Service, the Ministry for Primary Industries and SPCA New Zealand were actively involved in rescuing pets and farm animals. It is understood that approximately 230 domestic animals were reunited with their owners within five days, which was clearly a valuable contribution.

The EOC became aware of the possibility that some owners had left pets in houses when they evacuated. SPCA has responsibility for mitigating animal suffering in emergencies under the National CDEM Plan, so deployed people to assist the local Whakatāne team, where they made a valuable contribution in locating and rescuing trapped animals.

While they were clearly working in the interests of the welfare of domestic animals, we were advised that some early actions taken by some SPCA representatives in accessing properties were excessive. This suggests that they need to better understand the levels of appropriate action. In addition to security concerns, if the volumes of rain forecast to have come from Cyclone Cook had eventuated, some houses with broken windows could have suffered further damage.

Suggestions have subsequently been made to us about a more structured process for future events, including evacuees registering their missing pets at the time of registration, and either providing keys or going in with the SPCA teams.

Recommendation 7:

- ***The Welfare team in the EOC must have access to appropriately trained local resources throughout the duration of the activation***

Ensure that sufficient locally-based and appropriate trained resources are identified to provide the core of the Welfare team in the Whakatāne EOC to deal with foreseeable events resulting in a major evacuation of residents.

Recommendation 8:

- **Clear documentation of the basic elements of welfare services is needed**

An operational plan for the delivery of welfare services in an emergency in Whakatāne should be prepared, including the following aspects:

- Clarifying regional and local responsibilities
- The process for activation and ongoing operation of Civil Defence centres and method of interface/ liaison with the EOC

4.4 Public Information Management

4.4.1 Context

In an emergency, the effective delivery of public information is critical. Timely, accurate and dependable information, conveyed through a wide variety of channels and media, supports emergency response and recovery and ensures that members of the public know what actions to take to protect themselves and others.⁴ Public information is therefore a critical part of rebuilding public confidence following an emergency event.

The Controller, through the Public Information Management (PIM) function, is responsible for ensuring that appropriate information is provided to support the response and recovery effort.

At the time the PIM function was established, the EOC was in 'severe weather watch' mode. However, the changing nature of this event – which moved very suddenly into a local state of emergency, then to a regional state of emergency and finally back to a local state of emergency - meant that it was unlikely that WDC would be able to meet the diverse PIM requirements from within its own resources.

In respect of PIM, the WDC CDEM Plan 2012 briefly contemplates how information may be provided and by whom, but otherwise refers to SOP 8 (Public Information and Media) for further detail. The Review Team notes that SOP was superseded by SOP 6 (Warning and Informing the Public) in 2015.

SOP 6 sets out operational detail to guide delivery of the EOC PIM function across a range of PIM activities. It suggests use of multiple media to convey information and acknowledges that 'door to door' may be a practical mechanism in an evacuation situation. Appendices to the SOP comprise a suite of pro-forma media releases relating to a civil defence emergency situation. The Review Team notes that SOP 6 is silent on the existence of the Flood Response

⁴ The Guide to the National Civil Defence Emergency Management Plan 2015, New Zealand Government, Wellington New Zealand. Section 28, p.1.

Plan and, subject to the recommendation below, suggests that this would be a useful cross-reference.

4.4.2 How Public Information Management was delivered

The PIM function was established following activation of the EOC on Wednesday 5 April. This is consistent with the WDC expectations for an emergency event.

The early focus was three-fold – the provision of real time information via WDC’s social media platforms, responding to local and national media information requests, and generating media releases. The PIM function was also assigned responsibility for organising public meetings, and co-ordinating the visits by the Prime Minister, the Minister of Civil Defence and local Members of Parliament.

4.4.3 Areas of effectiveness

- ***Use of social media***

The use of more ‘modern’ means of communicating with the community, including social networking sites, is consistent with the expectations of the WDC CDEM Plan (p.21) and is essential to reach a wider audience.

In the three week period from 5 to 25 April, the WDC website traffic was four times higher than normal monthly demand, with nearly 60% of visits to the website on mobile devices (normally between 30% and 40%). Facebook reach, usually between 500 and 1,000 people per day with occasional peaks of up to 2,500 views, increased significantly to a total post reach of 115,652 on 6 April, with the post about the evacuation of Edgecumbe reaching 60,100 people. Prior to the arrival of Cyclone Cook on 13 April, the post reach was 105,919.

4.4.4 Challenges and opportunities for improvement

- ***Resourcing the PIM function***

We have been advised by several parties that the function struggled for resources during the initial phase of the event to cover the breadth of the above tasks, with one staff member having left the organisation the week prior and another directly affected by the flooding.

It is understood suggestions that additional resource be obtained from outside the region were not followed up until just prior to the escalation from a local to a regional state of emergency, when additional resource from neighbouring regions was drawn upon. This enhanced the PIM function’s agility and flexibility, leaving them better able to meet communications needs.

- ***Delivering dedicated PIM support for Welfare Services***

The evacuation of an entire town is rare in the history of emergency events in New Zealand. The displacement of some 1,600 people from their homes for several days, combined with the high proportion of people who were potentially under-insured, placed considerable demands on the response effort from multiple angles and particularly the Welfare Service response.

We were also advised that because Welfare services were co-ordinated at Group level, any external communications relating to Welfare Services had to go through the GECC's sign-out process rather than the EOC sign-out process. A dedicated PIM resource was requested several times but not provided. Whilst the Welfare function is widely regarded as having delivered very successfully, a dedicated resource as part of the PIM team would have better enabled it to carefully target its communications to greatest effect.

We understand that the locations of the Civil Defence Centres that opened on 6 April to support those evacuated from Edgumbe were not able to be communicated in a timely way.

We were also advised that some early communications relating to Welfare Services were erroneous – for example an “all people must register” message resulted in an influx of calls from residents, whether or not they required support. The origins of this communication are not known.

- ***Preparedness of community leaders***

A number of those spoken to during our interview process commended both the Mayor of Whakatāne and the Chief Executive of WDC for their obvious willingness to hear their community's perspectives, address concerns as well as they were able, and talk to every attendee who wanted a voice, in spite of the challenging nature of the situation.

We were advised that the community meeting held at Kawerau on 8 April was well-organised, well-attended and well-received. However the subsequent meeting in Whakatāne at the War Memorial Hall saw the community leaders (ie. the Mayor and Chief Executive) not having the critical information and support necessary to confidently face their community and the media. The issues encountered related to the size and needs of the likely audience and their participation, and the associated venue preparations and arrangements.

The comment was made that the EOC PIM function needed someone assigned to look after and support the local politicians – the Mayor, the councillors and Community Board members. It is evident that there were significant gaps in this support at the War Memorial Hall public meeting.

- **Other opportunities for improvement**

Other comments we received also provide an insight for opportunities to strengthen communications processes in any future event:

- Local media are a critical component of effective response communications. We were advised that local media felt ‘ignored’ for a period of time and did not always get the information they needed. Some of those who worked in the EOC advised us that in a future situation, they would ensure that the PIM function included a dedicated media resource. We support this suggestion.
- Quite a lot of time had to be spent correcting ‘bad information’. Some of this came from the EOC (e.g. the communication requiring everyone to register). Other ‘bad information’ did not originate within the EOC (e.g. Facebook posts) but nonetheless drew on resources to correct.
- “It’s one thing to brief people at a Civil Defence Centre – but not everyone is at a CD Centre. There are still a lot of other residents who need to be communicated with.”

We consider that the WDC Flood Response Plan does not achieve sufficient clarity between ‘business as usual’ and the ‘civil defence’ function, giving rise to potential confusion regarding responsibility for some aspects of the PIM function. Examples are the role of the Chief Executive in issuing media releases that ‘warn and inform’ as indicated by the plan, and the mechanism (press release) for releasing certain pre-scripted information to the public. The Flood Response Plan was the only local document we located that gave advice on processes to support evacuation situations.

Recommendation 9:

- **Ensure public information is communicated in a timely and effective way**

Where event involves a mass evacuation, the messaging around where people should go and how to get there must be promptly conveyed via multiple channels. This information must go to WDC’s Civil Defence partner agencies, in addition to the public and media.

Recommendation 10:

- **Ensure that community leaders are fully supported in their leadership role**

The Mayor, elected members and other community leaders need to be regularly briefed and provided with key messages and information that enables them to engage with the community in an informed manner that promotes community confidence.

4.5 Management of Access to Evacuated and Cordoned Areas

4.5.1 Nature and extent of the evacuated areas

The evacuation of the township of Edgecumbe involved approximately 600 houses, and was completed by mid-afternoon on Thursday 6 April.

Thornton was also evacuated by 2200hrs. An area of Poroporo near Rewatu Road, on the western side of the Whakatāne River opposite the town had also been evacuated earlier that morning.

The representation of evacuated areas (in blue) and closed roads (in red) is shown in Figure 4 following, taken from WDC SitRep #7 at 1000hrs on Friday 7 April. This map was updated in the extract in Figure 5, taken from the subsequent WDC SitRep #8 at 1400hrs on Friday 7 April, with the cordoned area being indicated in yellow.

Various roads throughout the District had been closed from the evening of 5 April due to slips and washouts, with the rural communities of Te Whāiti, Ruatāhuna, Rūātoki having no road access.

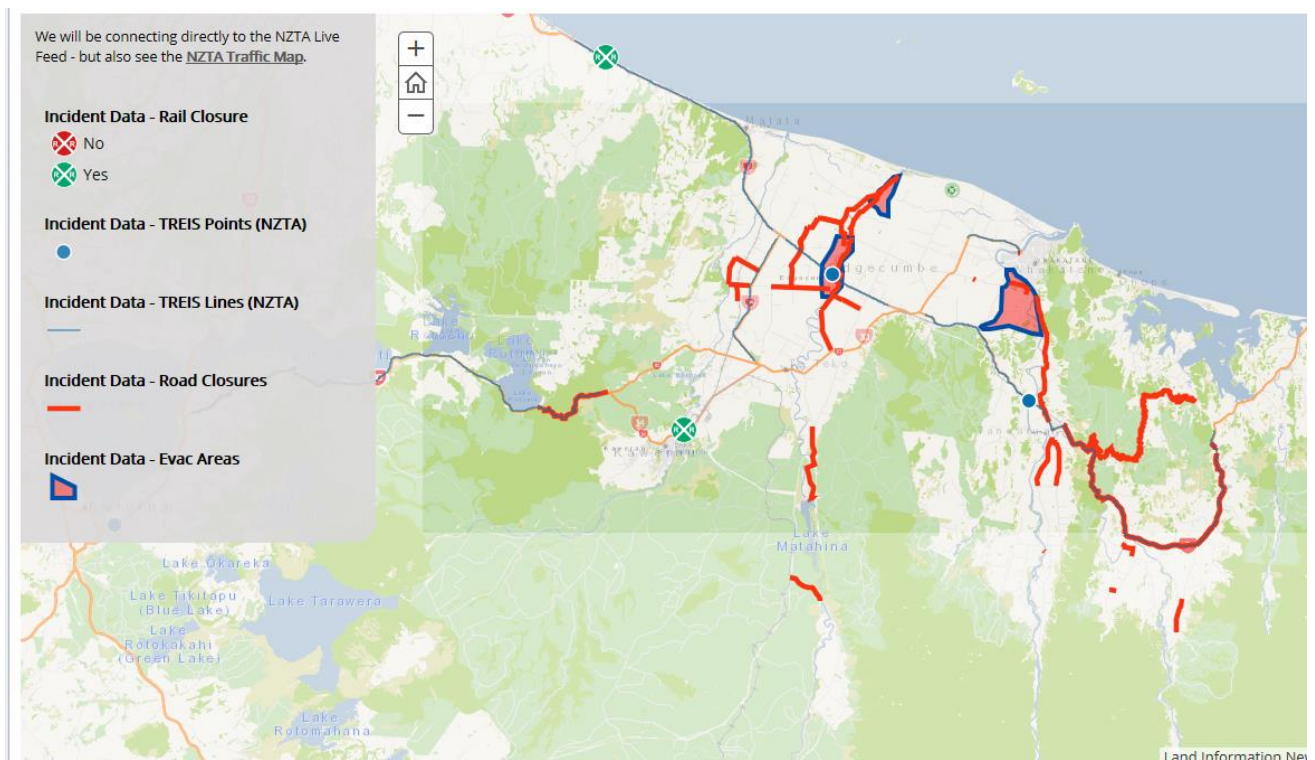


Figure 4: Extract from WDC SitRep #7 showing road closures and evacuated areas



Figure 5: Extract from WDC SitRep #8 showing cordoned area of Edgumbe

4.5.2 Management of the cordoned areas

The Whakatāne and Edgumbe Fire crews established the initial Safe Forward Point for the Edgumbe evacuation area at the junction of State Highway 2 and College Road shortly after 0835hrs on Thursday 6 April. Police established the Incident Control Point at the Edgumbe Fire Station at approximately 1000hrs.

The perimeter of the evacuated area was established by the Police through the closure of seven roads. The early focus in relation to the cordon was excluding people for safety reasons. The army subsequently assisted with the process of managing access to the cordons.

The process of escorted visits to damaged properties by owners and occupants commenced on Sunday 9 April. The purpose was to give them the opportunity to quickly get valuables and other items needed in the short-term, as well as an appreciation of the nature of the impacts. A process of issuing entry passes was established by the Edgumbe Contact Centre (refer following section).

Dwellings within the evacuated area were subject to rapid building assessments in accordance with the MBIE Field Guide⁵. Assessments were undertaken by NZ Fire Service USAR teams, the Whakatāne Emergency Response Team (WERT) and WDC personnel, and commenced on Sunday 9 April. It is understood that all affected dwellings were inspected and placarded by 12 April.

⁵ MBIE Field Guide: Rapid Post Disaster Building Usability Assessment – Flooding (2014)

A total of 556 placards were issued, with the placard types that were issued in the three areas summarised in Table 1 below. It is understood that while most of the houses that received White placards didn't necessarily need them from a process perspective (ie. they were in sections of the evacuated area that didn't have significant flooding), this was done to give the public confidence that their houses could be occupied and hadn't been left out from the process.

Table 1: Summary of Placards Issued by WDC (from WDC Recovery SitRep 25 July 2017)

Area	Placard Type		
	White <i>Can be Used</i>	Yellow <i>Restricted Access</i>	Red <i>Entry Prohibited</i>
Edgecumbe	221	257	15
Plains (incl. Poroporo)	9	41	-
Taneatua and Ruatoki	2	11	-

4.5.3 Establishment of the Edgecumbe Contact Centre

The Edgecumbe Contact Centre was set up as a result of a meeting of the WDC Chief Executive and the Group Controller on the afternoon following the evacuation. The objective of the centre was to provide a facility to enable the interface with members of the community affected by the evacuation. Although set up outside of established CDEM operational structures, this initiative acknowledged the limitations of the EOC in Whakatāne to deliver this interface as it moved into what was clearly going to be a prolonged operational co-ordination role.

Preparations were made on Friday 7 April at Awakeri School, about 6 km outside of Edgecumbe, and the Contact Centre opened on Saturday 8 April, just two days after the evacuation. On Monday 10 April, the centre moved to Awakeri Events Centre.

The Contact Centre was well led by the Eastern Catchment Manager, Bay of Plenty Regional Council, who was seconded into the role on the first day of the response. Coming from a community relationship role, he was well-suited to lead and shape the scope and operation of the centre as it evolved. He was very conscious of the need for centre to be linked to the EOC, and attended the EOC for the morning briefings each day, and provided information and requests to the Welfare, Logistics and Communications teams.

The Contact Centre faced challenges in resourcing, but many people from the community volunteered assistance and resources to the centre, including Community Board members and staff from companies such as Fonterra and FMG Insurance.

One of the early activity focuses of the Contact Centre was the pre-registration of occupants of dwellings within the evacuated area for short-term escorted access to obtain valuables and other items. Part of this process was verifying the addresses of people seeking access to cordoned areas and their reasons for seeking access, and this was done informally by using maps laid out on tables and discussions with centre personnel. Stickers were issued to people

registered for access with their names, addresses and phone numbers, who then went to the appropriate cordon access point.

This process, carried out in the more welcoming environment of the Contact Centre, clearly avoided the transaction time at the cordon access points, and hence reduced some of the inevitable friction at those locations between occupants seeking access and those managing access.

While there were reports of overlaps with Welfare function which introduced a degree of confusion for the public, overall the centre is considered to have provided a good functional interface with the affected community, and was effective in augmenting the EOC operations.

The Contact Centre wrapped up its activities in the third week of April, with the remaining functions being addressed by the Recovery Office.

4.5.4 Areas of effectiveness

- ***Effective work by all agencies and community sectors in achieving the rapid evacuation of a large area in dangerous circumstances***

The Police and Edgecumbe Volunteer Fire Brigade crews undertook vital work in evacuating people from houses in the vicinity of College Road immediately prior to and following the breach of the flood wall.

The assistance of all sectors of the community, including those from farms and orchards with tractors and other vehicles, also played a key role.

Considerable assistance was also provided to the evacuation process as a result of having additional numbers of Police present in the district. Fortuitously, approximately 25 Police personnel were present in Whakatāne for training on Thursday 6 April.

- ***Linkage with the Contact Centre to facilitate the registration of owners and occupants to access the cordon for valuables, etc***

Having the Contact Centre organise and take registrations from owners and occupants of premises within the cordon to have short-term access to obtain valuables etc reduced the pressure on the cordon access points (refer to notes on the Edgecumbe Contact Centre in section 4.6.1).

There were however some challenges with this process of enabling access not being fully joined up across all cordon agencies, as discussed later in this section.

- ***Iwi support for cordon access***

Iwi representatives played a significant role in taking people through the cordons, extending beyond Māori sections of the community. The process of accessing houses needs to acknowledge the spirituality of the home to Māori, and how this is handled is important to the recovery of the people. Viewing a significantly damaged home is a very emotional experience, and is not one that can necessarily be rushed. For Māori, this should involve a karakia blessing with whanau.

On Sunday 9 April, working with the Army controlling access to the cordon, the Deputy Chair of Ngāti Awa introduced a more flexible process in recognition of this. Part of this process involved having local people at the road closure checkpoints. Some of these people themselves had damaged houses within the cordon, and this created a more understanding environment for those who were seeing their damaged houses for the first time.

- **Establishment of criteria for the re-occupancy of houses**

WDC's Strategic Project Manager worked closely with NZFS USAR leaders and others from Council to develop operational flowcharts and decision trees for allowing re-occupancy, and for managing the different placards (refer Figures 6 and 7 following).

These tools are critical to the early stages of recovery from a flood affecting buildings, and should be refined and made available for future events in other districts.

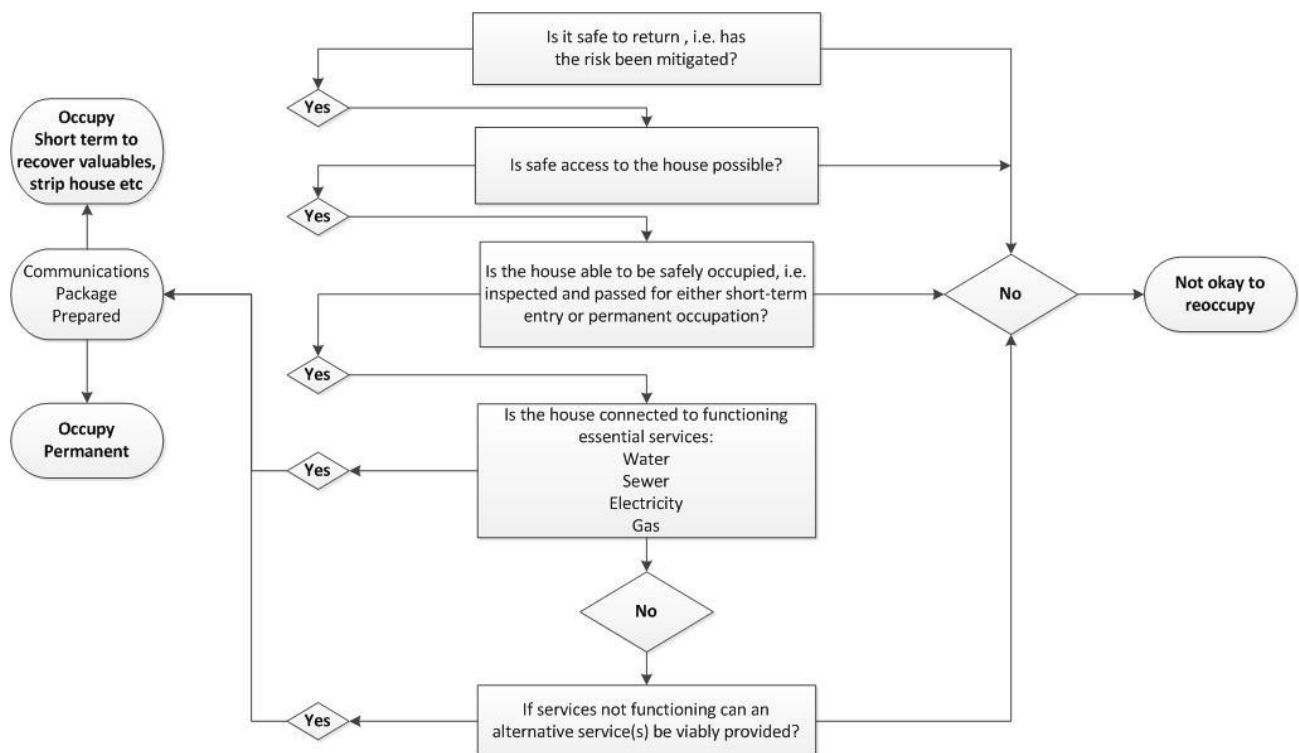


Figure 6: WDC decision tree to allow re-occupancy of buildings within the cordon

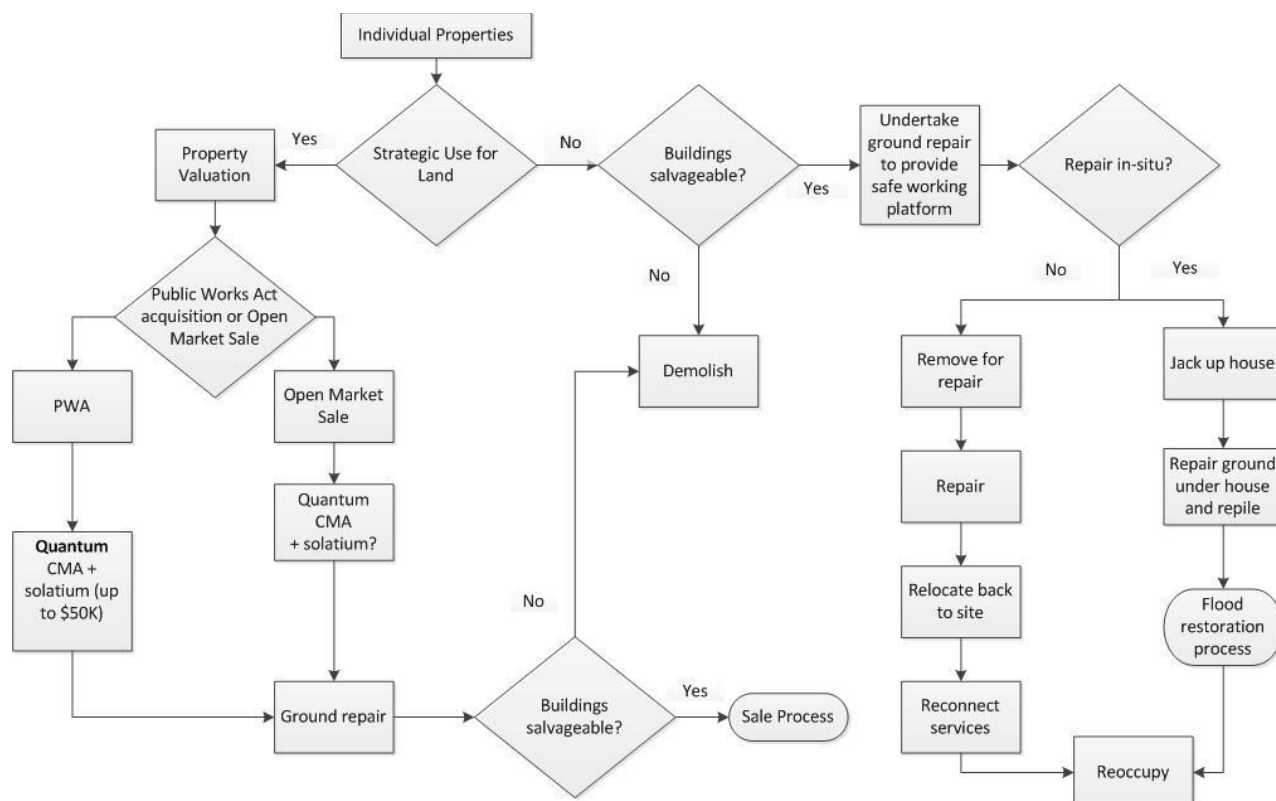


Figure 7: WDC process overview for the management of Red-placarded buildings

4.5.5 Challenges and opportunities for improvement

- **Clarity around the responsibility for the Cordon ICP and linkage back to the EOC**

There was a general understanding that Police were the agency responsible for leading the ICP associated with the cordoned area. However there was a lack of clarity around this, with Police commenting that the arrival of senior Civil Defence personnel at the ICP and undertaking a co-ordination-type role complicated the situation.

Police were also not engaged in the planning of the assisted visits into the cordoned area, and were only made aware of the visits on the morning they were commenced.

Having an agreed plan for the operation of the ICP and the operational linkages back to planning and other activities undertaken at the EOC, including reporting responsibilities, would have avoided this situation.

- **Mechanisms to enable early access within the cordoned area for people with businesses, farms and homes with little or no apparent damage and less safety risk from flood waters**

For any cordon situation, there is a need to plan the move from *preventing access* to *enabling access*. This requires the early development of risk-based criteria to address safety issues, in conjunction with a plan to progressively enable access as the available information and resource inputs allow the risk to be sectorised. A degree of flexibility is

also required with this process, with due recognition for the different purposes of access sought and commercial activities involved.

As an example, it appears that farms and orchards where there wasn't a significant hazard from either the depth or flow rate of flood waters could have been allowed to return at a relatively early stage, even if only for a defined daylight period, to allow key activities such as milk tanker access.

It is important that Controllers plan for and enable this, and avoid becoming unnecessarily risk averse.

Recommendation 11:

- ***Early development of risk- and function-based criteria to support the early access within a cordoned area***

Arrangements should be put in place to enable a timely transition from *preventing access* to *enabling access* within a cordoned area is important to support the recovery of people and businesses in an evacuated or excluded area.

4.6 Volunteer Inputs

Volunteer input into the response and early recovery stages of this event took many forms, and involved many sectors of the community.

Mention was previously made of the valuable contributions from the Edgecumbe Volunteer Fire Brigade at the time of the breach and subsequent evacuations and work within the cordoned area, and the contribution of elected members in Welfare centres and at the Edgecumbe Contact Centre. From the private sector, the contribution of Fonterra in offering staff and facilities was also noted, along with tradespeople assisting as part of the Liveable Homes project. A number of affected residents and others also voluntarily manned the cordons.

The Whakatane Emergency Response Team (WERT – NZRT-17) were amongst the first responders on the ground working in support of the emergency services on 6 April. In addition to assisting with various evacuations, WERT team members helped with escorted visits within the Edgecumbe cordoned area. They also assisted NZ USAR teams in undertaking rapid assessments and supported the SPCA animal rescue efforts.

A meeting of Te Runanga o Ngāti Awa Board members on Sunday 9 April generated the concept of the Ngāti Awa Voluntary Army (NAVA). Working in conjunction with the Volunteer Co-ordinator for the EOC, a call for volunteers to assist with flood response was then generated. This partnership between Ngāti Awa and WDC was a valuable and productive initiative that benefited the wider community. The majority of those who registered to assist NAVA were non-Māori.

It was clear to us that these and the many other forms of volunteer input following this event played a significant part in firstly, reducing the impact of the event on people and property, and secondly, hastening the early stages of the recovery.

4.7 Other Whakatane District Council Actions and Initiatives

Consideration of recovery arrangements was outside the scope of this review. While it is understood that the recovery operation did take some time to become established, positive comments were made about the range and effectiveness of outputs from the Recovery Office following its establishment in vacant retail space in Richardson St, Whakatane on 21 April.

Several WDC initiatives during the early stages of the recovery did provide better opportunities for the community to engage directly with response agencies, and to promote the early return of evacuated residents to their homes. These were initiated by the Chief Executive and senior managers working in conjunction with the Recovery Manager, drawing upon learnings from previous events, and are briefly commented upon in this section.

4.7.1 Early engagement with insurers

In the early stages of the recovery, WDC promoted a philosophy of 'People First' to form the basis of a collective approach where possible.

Facilitating an active engagement with and between council and insurers was one such initiative. Council set up and co-ordinated meetings on 12 April and 18 May with EQC and private insurers. The focus of these meetings was generating a common understanding of the current situation, particularly with respect to the state of essential services and access to affected properties and regulatory processes for repairs and rebuilding. This interface also provided an opportunity to brief the insurers on the functions available at the Edgecumbe Contact Centre.

The initiative was well supported by EQC and the private insurers, and provided a valuable forum for working through complex issues. Shared agreements were established around the processes and procedures for treatment of water damaged furniture, silt removal (internal and external to houses), rubbish removal and structural repairs. This is understood to be the first event where EQC has cleaned out silt from all properties, whether or not they were insured.

WDC implemented a simplified approach to applying for building consents for affected properties. The nature of much of the repair work to flood-damage properties was such that Building Consents were not necessarily required in many cases. However experience from previous flood events had shown WDC that if repairs are recorded and signed off by the Building Consent Authority, less uncertainty and confusion is caused in future, particular with respect to future sale and purchase processes. These considerations led to WDC offering free building consents to owners for the repair of flood-damaged buildings.

WDC also developed a process with the insurers for the disposal of hazardous building waste (refer Figure 8). The Insurance Council of New Zealand has indicated that this process map is of considerable value and will be utilised in future flood response and recovery processes.

The removal of rubbish from houses was also pro-actively co-ordinated by WDC. They worked out the expected amount of rubbish per household and organised for rubbish skips to be delivered accordingly.

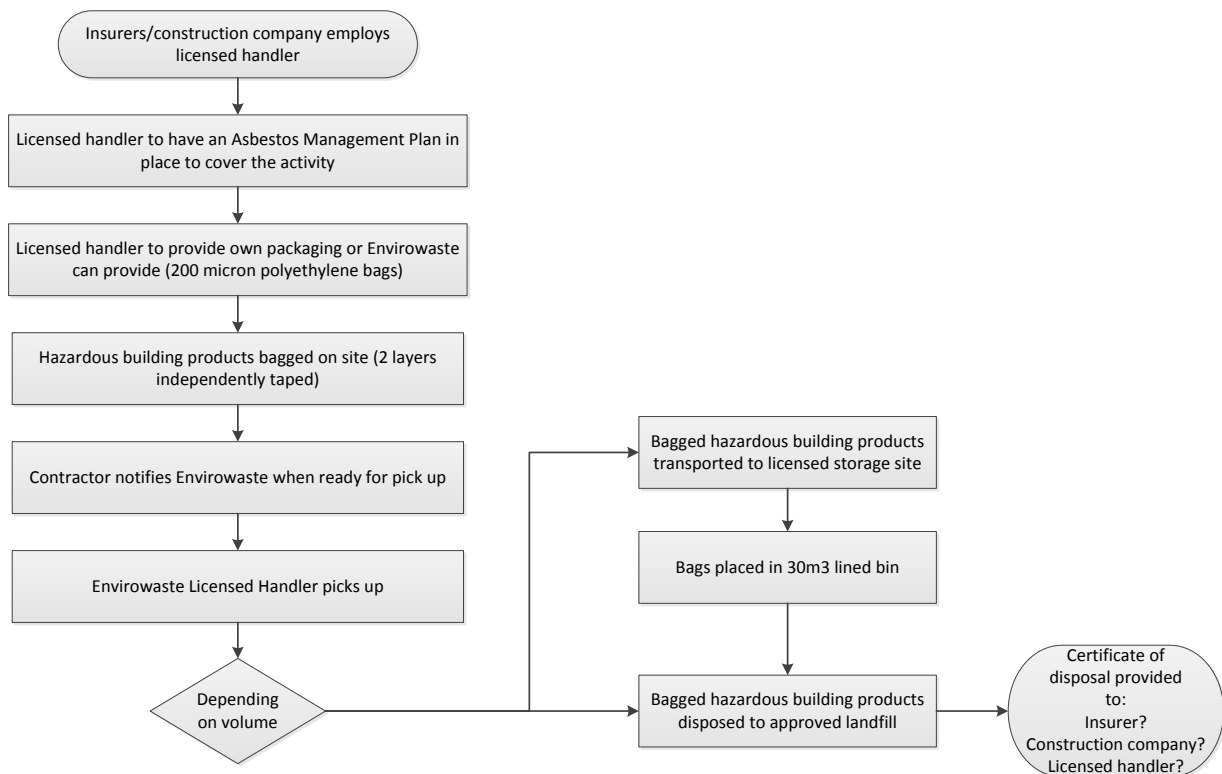


Figure 8: WDC process map for the disposal of hazardous building waste

4.7.2 The Liveable Homes Project

This initiative aimed to get people back into their homes, regardless of their circumstances with respect to ownership and insurance, with a focus on keeping communities viable.

It involved WDC co-ordinating qualified tradespeople and volunteers to provide assistance to uninsured and under-insured homeowners to carry out work to make homes habitable.

This programme had two phases – *preparations and strip-out* and *repairs*, with a drying period in between. The preparation phase involved the engagement with building owners and agreements between the parties, the issue of building consents and the stripping out of affected parts of houses. The owners and EQC would then remove the silt from under the floors. Once acceptable moisture content of framing timber had been reached, repairs would then re-use or replace any items removed. Sub-floor insulation would then be added to existing floors, with new floors where necessary. Walls could then be insulated and re-lined, and electrical and plumbing work undertaken.

The programme benefitted considerably from support provided by community funding agencies, building supply companies and volunteers. Volunteer input from carpenters etc was used as much as possible.

5. Consideration of Whakatāne District Council Systems, Processes and Capability

This section examines the second objective of the brief, namely the extent to which the Whakatāne District Council's systems, processes and capability are aligned with the expectations and requirements of a district council in relation to major flooding events.

5.1 Expectations and Requirements of a District Council for Flooding Events

From a general perspective, the **expectations** of a district council in respect of flooding events can be summarised as follows:

1. The nature of the hazard and potential impacts are identified and understood;
2. The physical measures to mitigate the extent of impacts are identified, prioritised and funded, and delivered as part of an ongoing programme;
3. Actions to be undertaken by the council and various sectors of the community to deal with foreseeable impacts are identified, planned and prepared for;
4. The council's response processes are appropriately resourced and capable of co-ordinating and leading the local response, and connecting effectively with all sectors of the community that are likely to be affected by a major flooding event; and
5. The council's recovery arrangements are structured to enable the steps necessary for the affected sectors of the community to return to a normal state, and to mitigate future risk from similar events.

Although expressed in general terms, these expectations correlate directly to the core CDEM components of Risk Identification, Reduction, Readiness, Response and Recovery.

The **requirements** of a council, both as an individual organisation and as a member of the CDEM Group are set out in sections 17-20, 25-27, 48, 56, 59 and 64 of the CDEM Act. Extracts from sections 17 and 64 are included below:

17. Functions of Civil Defence Emergency Management Groups

- (1) The functions of a Civil Defence Emergency Management Group, and of each member, are to:
- (a) in relation to relevant hazards and risks
 - (i) identify, assess, and manage those hazards and risks
 - (ii) consult and communicate about risks
 - (iii) identify and implement cost-effective risk reduction
 - (b) take all steps necessary on an ongoing basis to maintain and provide, or to arrange the provision of, or to otherwise make available suitably trained and competent personnel, including volunteers, and an appropriate organisational structure for those personnel, for effective civil defence emergency management in its area

- (c) take all steps necessary on an ongoing basis to maintain and provide, or to arrange the provision of, or otherwise to make available material, services, information, and any other resources for effective civil defence emergency management in its area
- (d) respond to and manage the adverse effects of emergencies in its area
- (e) carry out recovery activities

64 Duties of local authorities

- (1) A local authority must plan and provide for civil defence emergency management within its district.
- (2) A local authority must ensure that it is able to function to the fullest possible extent, even though this may be at a reduced level, during and after an emergency.

While the focus of this analysis is on WDC's systems, processes and capability, the linkage with those of neighbouring local authorities and the CDEM Group must be understood and borne in mind, along with the linkages with MCDEM and other national agencies.

As we reflect upon the strengths and weakness demonstrated in the response to this event, the aspects that are examined further in this section with respect to *systems, processes* and *capability* are:

- The scope and currency of plans
- Connection with the community
- Local resourcing of CDEM functions
- Understanding the roles of Mayors, Elected Members and Chief Executives in an emergency.

5.2 Scope and Currency of Operational Plans

Emergency response/ operational plans for flooding and other events need to cover the foreseeable range of scenarios and outcomes, including the failure of engineered structures. The lack of recognition of flood wall failure as a specific scenario to have response arrangements in place for is a notable shortcoming in many local authority flood response plans.

Responsibility for preparing and updating emergency response plans generally should be more clearly defined. All operational response plans need to explicitly state the position(s) in Council responsible for maintaining the plans, and the interface with the CDEM Group office.

The WDC Flood Response Plan clearly needs to be re-written as a matter of urgency, as it:

- assumes that flooding events will only occur if rivers are not already at increased flows or heights (thus allowing time for warning and preparation)
- does not contemplate that a flooding event may happen as a result of the failure of man-made structures (such as flood walls)
- was due for revision by October 2015.

WDC should co-ordinate with BOPRC's Flood Management Team when re-writing this plan. It is noted that the Flood Management Team were unaware of the existence of the current version of this plan.

Emergency response/ operational plans also need to be usable in an operational context. This requires plans to be in an 'operationally digestible' form for use in the EOC during an event response. Some good thinking on this was conveyed to us by EMBOP representatives; this now needs to be progressed with some urgency.

As noted in section 4.2.2 and in Recommendation 2, WDC should also develop a BCP which establishes critical business functions corresponding to different scales and durations of emergency event and response.

Recommendation 12:

- ***A revision of the Whakatāne Flood Response Plan should focus on scope, operational interfaces and plan maintenance provisions***

The Whakatāne Flood Response Plan should be re-written as a matter of urgency, taking particular account of the following aspects:

- Including breach of stopbanks as a specific scenario
- Clearer operational interfaces with the BOPRC Flood Team
- Annual review provisions.

Recommendation 13:

- ***Ensure alignment of all operational documents and their usability in an EOC context***

The revision of the key planning and operational documents (the WDC CDEM Plan, Flood Response Plan and Standard Operating Procedures) should ensure alignment, and usability in an EOC environment.

5.3 Connection with the Community

5.3.1 General observations

The focus of an emergency response is to support the affected sectors of the community. It requires an awareness of the different nature of those sectors, and effective connection with them.

The response to this event has again highlighted that standard EOC processes and outputs can struggle to achieve an effective connection with the various sectors of the community. The sectors that didn't feel they were well connected with in this event included rural and remote communities, and the iwi interviewed, who have different expectations and needs. The EOC is

not regarded as an easy facility to connect into and work with for those that don't have either a detailed understanding of EOC processes or prior relationships. This perception is not unique to WDC, or to this event.

A mutual challenge is the perception that Civil Defence in Whakatāne is something different to and separate from Whakatāne District Council. Several interviewees reflected positively on the response and actions of Council, but were critical of the efforts of Civil Defence, and in particular the difficulty in engaging with 'CD'.

5.3.2 Iwi Perspectives

In the course of this review, we interviewed the Chief Executives of Ngāti Whare (based in Murupara), Ngāi Tuhoe (based in Taneatua), and the Chief Executive and Deputy Chair of Ngāti Awa (based in Whakatāne). These iwi were chosen from the seven iwi across the district as they reflect the range from predominantly urban, predominantly rural and rural/ remote.

While the awareness of Civil Defence processes and arrangements varied across the iwi spoken with, all considered that a much better operational connection was needed. Iwi organisationally and marae as a facility provide a key connection with various sectors of the community (not just Māori).

Concern was expressed around the perception by the EOC of the independent capability of rural iwi, and the presumption that marae would provide for the affected communities.

The need for 'local faces' within the EOC to enable face-to-face dialogue is of particular importance to iwi. The high number of people in the EOC from outside the district at various stages of the response created an unwelcoming environment for their representatives, as did the lack of invitation to 'have a voice' within the EOC environment. In the case of Ngāti Awa, an invitation was obtained four days after the declaration.

The expressions *Kanohi Kitea* (knowing the people) and *Kanohi Kite Kanohi* (face-to-face) were conveyed as being of particular significance to iwi.

There was not a clear linkage for communications from the EOC into marae. The process for making welfare requests was also unclear to iwi.

Most marae are not designated as Civil Defence Centres, and so the process of reimbursing those marae who assisted during the response is understood to have been problematic to iwi leaders, who felt they had to fight to recover some basic costs that were incurred. Moreover, all of the work undertaken at marae was undertaken on a voluntary basis. This was regarded as a significant contribution to the recovery of the people, land and rivers. There does not appear to be a mechanism to value this contribution. As noted in the Government's Review of the 2004 Lower North Island floods, in such circumstances the Mayoral Relief Fund should consider gifting a koha.

The iwi liaison roles of WDC and Te Puni Kōkiri during the response were perceived as overlapping, and not well defined. This was exacerbated by the WDC iwi liaison officer being new in the role. Having the subsequent role of the iwi liaison officer role from the Recovery Office taking responsibility for providing information on a 'one-stop shop' basis enhanced the relationship with iwi.

The eventual inclusion of a Ngāti Whare representative on the working group on the re-instatement of State Highway 38 enabled much needed clarity about the status of the critical access route to the iwi and affected communities.

The difficulties encountered in the response are in contrast to the clearly strong relationships between iwi and WDC in non-emergency times. This normal relationship is typically business-focused and at Chief Executive level, and is locally based. The different nature of this relationship in the emergency situation as perceived by some iwi – namely that Civil Defence is different to Council – contributed to the disconnection.

A key viewpoint in common with iwi leaders spoken with is that they don't consider they are sufficiently engaged by CDEM at any level in ordinary (non-emergency) times, as well as during event responses.

Each of the iwi representatives spoken with agreed that iwi themselves need to be much better organised for emergencies, and have committed to reviewing their iwi management plans to address preparation and response arrangements. They acknowledge that they should take responsibility for developing their own operational plans which link in with CDEM plans, but seek assistance from CDEM to undertake this.

The BOP CDEM Group document *Marae Emergency Preparedness Planning Implementation Strategy* outlines how the CDEM Group aims to engage with hapū, iwi, whanau and ahi kā to undertake marae emergency planning. Released in 2016, the toolkit is intended to lay the foundations for engagement with marae across the region. The view of iwi spoken with is that more practical information is needed on how people on the marae could formalise plans and processes to respond to the likes of flooding, earthquakes etc, noting that this needs to be built around what people do on the marae.

This will require a commitment from CDEM to spend time with iwi to develop the necessary relationships as well as to develop appropriate documentation. The associated benefit for CDEM will be to make more use of the significant response resource capability that iwi represent during an emergency.

Recommendation 14:

- ***WDC should establish an operational relationship with iwi of the Whakatāne District to enable marae to be better involved in civil defence planning and prepared for emergency response***

Iwi should be actively supported in developing practical emergency response plans that meet both Civil Defence requirements and marae protocol.

This in turn will enable Civil Defence to make more use of the significant response resource capability that marae represent during an emergency.

5.3.3 Rural Sector

While this review did not include specific interviews with rural sector representatives, a good indication of the viewpoints from this sector was obtained from the people interviewed.

The rural sector received flood alerts, principally from the BOPRC Flood Team. The Rural Support Trust network, engaged through Welfare operations, also received warnings and event information. These messages are seen as running parallel to the formal processes used by CDEM, and there was no conduit providing the EOC with updates from the primary sector, nor to understand their conditions and needs.

5.4 Local Resourcing of CDEM Functions

In 2015, the Bay of Plenty adopted what can be referred to as a centralised model for the delivery of CDEM, as used by many CDEM Groups across New Zealand (with variations). The creation of EMBOP as the Group Emergency Management Office is the 'home' for all EMOs in the Bay, apart from Rotorua. All of the core emergency management functions across the '4Rs' are co-ordinated by the EMBOP EMOs, with some being delivered by them and others with a more local focus still being required to be delivered by the TA. Each TA contributes funding to EMBOP for the work done by EMBOP on their behalf.

This represents a baseline service provision to each TA, with the corresponding requirement for each TA to commit to facilitate or undertake particular locally-focused CDEM tasks, such as liaison with the community. Furthermore, each TA is still required to have people designated to carry out specific response and recovery tasks, including the roles of Local Controller and Welfare Manager.

Equally, this operating model requires EMBOP to be actively monitoring the preparedness of each TA, and putting plans in place to address any evident shortcomings.

The delivery of CDEM within districts is a partnership between the TA and the CDEM Group Office. We would however observe that many of the 'practical mechanics' and expectations

with respect to local delivery associated with this arrangement are not necessarily well documented.

Following the implementation of this model and the departure of their EMO to EMBOP in July 2015, it is not clear that WDC have fully appreciated the requirement to undertake key 'Readiness' tasks such as maintaining community linkages that are essential during the response to an emergency event. We were told by a number of interviewees that the CDEM focus overall in WDC is seen to have diminished following the implementation of the centralised model for the BOP region.

Recommendation 15:

- ***Resourcing expectations at the local level under the centralised regional model for CDEM should be clarified***

The requirements and expectations on district councils under the centralised CDEM Group model for preparing for and responding to an emergency should be explicitly stated, and actively monitored by EMBOP.

5.5 Understanding the Roles of Mayors, Elected Members and Chief Executives in an Emergency

In this event, the Mayor in his civic leadership role provided very effective inputs to and linkage with the community, supported by elected members and the Chief Executive.

It is however observed that there continues to be a lack of national guidance on these roles, and the associated provision of appropriate induction and training for new elected members.

Under the CDEM Act [s.25(3)] the Mayor and Deputy Mayor of a territorial authority are the people who may make local declarations of a State of Emergency within all or part of a council area. A Mayor may also give notice of a local transition period following a State of Emergency. Aside from these two references, the CDEM Act does not define the role of a Mayor in an emergency event.

It is generally accepted, however, that the core role of a Mayor is to exercise local leadership – both for their council and their communities. Because of their core role, elected leaders are in the position of being able to provide the community with confidence and clarity, delivering strategic messages and assured communications.

With respect to elected members, we note that while councillors have no formal role in the EOC, they nonetheless have a public-facing role with their community which is of considerable value in a declared state of emergency. Providing elected members with key messages relating to the emergency event would enable them to speak confidently with their communities, helping to increase reach and rebuild public confidence.

Other options to better utilise elected members during an emergency event could include:

- Meeting with people at Civil Defence Centres on behalf of the Mayor, noting that one individual can only do so much.
- The allocation of 'portfolios' (e.g. the rural sector) to elected members to help to ensure that the needs of different sectors of the community are understood by the EOC and addressed wherever possible.

The role of the Chief Executive in an emergency event is traditionally thought of as being to ensure the effective running of those other aspects of Council's operations that need to continue in the context of the emergency – that is, the Chief Executive's focus is on the organisation rather than just the emergency. As noted in Section 4.2.3, an important role for the Chief Executive is to ensure the EOC and Controller have the resources required for the response.

The main reason that a Chief Executive does not usually fulfil the role of Controller is the level of specific training that a Controller requires, with the associated skills maintenance. Chief Executives and second tier managers typically struggle to meet this time commitment given the intensity of their day-to-day roles.

The role of the Chief Executive of a local authority in an emergency is not well defined. It is understood that other recent emergency events in New Zealand have also given cause for revisiting this question in other regions.

It is considered essential that both Mayors and Chief Executives have more clearly articulated roles in a CDEM response – and have training to help them to undertake their respective roles during an emergency event. Similarly, elected members need to understand their role and the options for supporting the Mayor in providing community leadership.

Recommendation 16:

- ***National-level guidance on the roles of Mayors, elected members and Chief Executives in declared emergencies is required, along with appropriate training and induction***

The roles that Mayors, elected members and Chief Executives have in communicating with and supporting the affected sectors of the community require national guidance and training.

This guidance should cover how their respective roles interface with the Controller and EOC during a state of emergency.

6. Key Findings and Summary of Recommendations

6.1 Key Findings

Overview

The April 2017 weather events and consequential flooding across Whakatāne District represented a significant emergency event. This review has found that the response by WDC was generally well-organised and effective. The EOC operations were well-led by the Local Controller, supported by the other controllers from outside WDC. The Mayor of Whakatāne, elected members and the Chief Executive provided a very effective linkage with the community, working closely with the EOC.

The response was well supported by EMBOP and the other CDEM Group member organisations, and MCDEM.

The many forms of volunteer input following this event played a significant part in firstly, reducing the impact of the event on people and property, and secondly, hastening the early stages of the recovery.

Several areas for improvement have been identified, including revision of several operational plans that relate to flood response, increasing the presence of local resource in the EOC and improving the early connection with some sectors of the community.

Context

The floods and the associated complex weather events of April 2017 required a significant response from WDC over an extended period, with the declaration and EOC operation continuing for more than two weeks. The event changed rapidly in nature and tempo, from a local watch to a declared state of emergency, to a region-wide declaration and then back to a local emergency. The recovery efforts for those most affected in the community will continue for many more months, and need continuing leadership and support from Council.

A challenge highlighted from a number of interviews is the lack of appreciation by many sectors of the community that 'Civil Defence' is essentially the Council, Emergency Services and other agencies working together, not a separate organisation or process. An associated point is that while the EOC is the focal point of a response in terms of co-ordination and direction, it is only one component of a council's interface with the community.

EOC and Key Functions

The EOC operations were well-led and organised, and generally effective throughout the duration of the response and early recovery phase. The nature and scope of this flooding event however severely tested the ability of the WDC EOC to operate effectively for an extended period.

Maintaining a sufficient local presence within the EOC teams proved difficult for WDC, and created ongoing challenges for rostering the EOC teams. It is considered that the EOC should have access to sufficient trained personnel for a minimum of two shifts. All teams in any shift of the EOC must include WDC personnel (*refer Recommendation 1*). Consideration needs to be given as to how this is achieved and maintained for responses that continue over an extended period of time, and the associated prior training requirements and readiness. All EOC personnel should receive an induction on the functions and operational protocols of the EOC, irrespective of the extent and currency of their training (*refer Recommendation 2*).

The scale and geographical extent of the impacts required the involvement of essentially all business units of WDC in the first week of the response. Given the relatively small size of WDC, this created many challenges in delivering emergency response, recovery and 'business as usual' activities, and prioritising the application of resources between them. The priority given to maintaining other Council activities requires specific consideration, both before an emergency event occurs and during the response. An organisation-wide Business Continuity Plan that identifies the critical business functions corresponding to different scales and durations of disruption and emergency response is needed to inform this planning (*refer Recommendation 3*).

Given the challenges in resourcing the core functions of a local EOC with suitably trained personnel, it is suggested that consideration be given by MCDEM to establishing a national team of operationally experienced specialists in areas such as Logistics, Planning, Intelligence, PIM and Operations to provide the ability to support the leaders of EOC functions by 'shadowing' them during a response (*refer Recommendation 4*).

The response benefited greatly from the extensive support and leadership provided by EMBOP, including the strategic oversight from the Group Controller. The input from MCDEM and experienced emergency management professionals from other regions was another key feature of the support provided to WDC. There were many benefits from having the GECC operate alongside the EOC. This proximity did however lead to some role confusion (particularly their areas of difference and overlap), and clarification for people both within and interfacing with the respective centres would have assisted (*refer Recommendation 5*).

The EOC was regarded by some sectors as being somewhat of an internally focused and process-driven facility. Comments were made that the EOC needed to be more adaptable to support community needs, rather than just those of the EOC. As well as the need to connect more effectively with the community (see below), the core products of the EOC (SitReps and Action Plans) would have benefited from review and re-focusing as the response continued. Partner and supporting agencies should perhaps have more proactively picked up on this; evidence that an Action Plan from the EOC in the early stages of the response was not read and digested by other agencies also raises questions about how the information from the EOC was actually being put to use.

Establishment of the Edgecumbe Contact Centre was a useful initiative aimed at providing a linkage between the community and WDC (refer Connection with the Community below). The operational connection between key facilities such as this and the ICP for the cordoned area should however receive greater attention in future events (*refer Recommendation 6*).

Overall, the co-ordination and provision of Welfare services was a successful aspect of the overall response. The limited local welfare resources available required considerable support from the GECC, MCDEM and other agencies to achieve this. It is however noted that the scale of the welfare response required across the district would have overwhelmed most district councils. It is important that WDC has sufficient locally-based and appropriately trained resources to undertake the initial response, and to form the core of the Welfare team in the EOC (*refer Recommendation 7*). Clearer documentation of how welfare services are delivered locally is also required (*refer Recommendation 8*). The preparedness of designated Civil Defence Centres by WDC for quick and early activation also needs further commitment.

The Public Information Management (PIM) function also faced internal resource challenges early in the event, with one staff member having left the organisation the week prior and another directly affected by the flooding. In the early stages, this affected the level of support given to the Welfare function and to the efforts of the Mayor and Chief Executive in communicating with the affected sectors of the community.

The PIM function also faced internal resource challenges early in the event, with one staff member having left the organisation the week prior and another directly affected by the flooding. The PIM function also needs to be better resourced in the early stages of the response in order to provide the community with timely and effective information (*refer Recommendation 9*) and to provide support to both the Welfare function and the efforts of the Mayor and Chief Executive in communicating with the affected sectors of the community (*refer Recommendation 10*).

Management of Access to Evacuated and Cordoned Areas

The cordoning of the township of Edgecumbe covered a large area with a range of agricultural and commercial activities as well as residential areas. Management of the cordon was a complex task and generally well-managed, including the process of escorted visits supported by the Contact Centre.

Earlier attention to planning the transition from *preventing access* within a cordoned area to *enabling access* may have provided better support to the recovery of farms and businesses in the evacuated or excluded area (*refer Recommendation 11*).

Plans and Operational Documentation

The scope and currency of plans relating to response to flood in the Whakatane District is of concern. The context for this concern is that the 2012-2017 Bay of Plenty CDEM Group Plan lists flooding of the Rangitāiki River as one of the highest rating risks affecting the region, having due regard to consequence. A sudden breach of the stopbanks was however not

included in the 2013 WDC Flood Response Plan as a specific potential scenario outcome. It is observed that this is a not uncommon shortcoming of flood response plans generally, with there typically being a high level of dependence on engineered protection structures.

The Whakatāne Flood Response Plan is in need of urgent revision (*refer Recommendation 12*), with all relevant agencies providing input. A key aspect that requires further development is how the agencies interact during a response to a flood event, particularly the operational relationship between the BOPRC Flood Room and the EOC. Greater attention also needs to be paid to the usability of the flood response plan and related operational plans in an EOC environment, and their ongoing maintenance.

A lack of clear operational guidance material affected all of the EOC functions to varying degrees, noting that plans to be in an 'operationally digestible' form for use in the EOC during an event response (*refer Recommendation 13*).

Connection with the Community

The WDC EOC needs to improve mechanisms for monitoring the effectiveness of its output and connection with the different sectors of the community. The Mayor, elected members and Chief Executive provide one of these mechanisms, and in this event provided a very effective linkage with the community.

Engagement with iwi is a component of community engagement that requires particular consideration, given the traditional but often unrecognised capacity and capability they bring to responses in rural and remote locations, in addition to urban areas (*refer Recommendation 14*). The rural sector is another key sector that would benefit from more specific engagement.

The effectiveness of the connection with different sectors of the community in a response is a function of the time spent with them on an ongoing basis prior to emergency events. How this 'readiness' is to be resourced and achieved in and across Whakatāne District and integrated with regular Council community interactions and processes needs specific consideration by WDC and EMBOP as the delivery agents for Civil Defence in Whakatāne.

Local Resourcing of CDEM Functions

The centralised model for CDEM that was adopted by the Bay of Plenty CDEM Group in 2015 provides a baseline service provision to each TA. There is nevertheless a corresponding requirement for each TA to commit to undertake or facilitate locally-focused CDEM tasks, such as liaison with the community. In turn, this operating model requires EMBOP to be actively monitoring the preparedness of each TA, and putting plans in place to address any evident shortcomings.

The requirements and expectations on district councils under the centralised CDEM Group model for preparing for and responding to an emergency should be more clearly stated, along with the arrangements for monitoring by EMBOP (*refer Recommendation 15*).

Understanding the Roles of Mayors, Elected Members and Chief Executives in an Emergency

The experiences in this event have highlighted the important roles that the Mayor, elected members and the Chief Executive have in communicating with and supporting the affected sectors of the community.

It is however observed that there continues to be a lack of national guidance on these roles, and the associated provision of appropriate induction and training for newly elected Mayors and councillors (*refer Recommendation 16*).

Early Recovery Tools and Initiatives

Consideration of recovery arrangements was outside the scope of this review. While it is understood that the recovery operation did take some time to become established, positive comments were made about the range and effectiveness of outputs from the Recovery Office.

Some early recovery initiatives by WDC focused on community outcomes, following a theme of 'People First'. This included facilitating early engagement with insurers, and the development of tools and frameworks such as process flowcharts for the steps to be worked through for the re-occupancy of damaged houses, and the process map for the disposal of hazardous waste from flood-damaged properties.

The Liveable Homes programme was a further initiative led by WDC that acknowledged the difficulties that many in the flood-affected part of Edgecumbe faced.

It is suggested that these initiatives should be considered for wider adoption as good recovery practice in flood events.

Relevance to Other Districts and Regions

This event and others of recent times in New Zealand provides a clear indication that the preparations for response to and recovery from flood events need to be addressed with greater focus and urgency. This is particularly the case in regions such as Bay of Plenty where flood hazard is already recognised as being one of the highest rating risks from a CDEM perspective.

It is observed that some recommendations from the review of the February 2004 Flood Event⁶ still do not appear to have been fully addressed at local level. Recommendations from the 2004 report that are considered most relevant to this event are:

Recommendation 3: The special nature and requirements of rural residents be given recognition in the operational plans developed by CDEM Groups and their constituent local authorities.

⁶ Review of the February 2004 Flood Event, Reid et al – report prepared under the responsibilities of the Director of Civil Defence Emergency Management

Recommendation 14: All EOCs hold and distribute minimum staffing level guides for their activity cells and identify personnel to fill these for extended operations. SOPs should specifically address processes and frameworks for extended duration operations.

Recommendation 19: Representatives of Marae Committees be involved in CDEM Group Welfare Advisory Committees.

In addition to EMBOP giving consideration to how the recommendations in this report should apply to other districts in the Bay of Plenty, MCDEM may wish to consider how the recommendations in this report should apply to other regions.

6.2 Summary of Recommendations

The review makes a total of 16 recommendations to improve processes and arrangements under the following headings:

- **EOC Operations, Linkages and Support**
- **Welfare Delivery**
- **Public Information Management**
- **Management of Access to Evacuated and Cordoned Areas**
- **Plans and Operational Documentation**
- **Connections with the Community**
- **Local Resourcing of CDEM Functions**
- **Understanding the Roles of Mayors, Elected Members and Chief Executives in an Emergency**

The recommendations are summarised in Table 2 on the following page.

Many of these recommendations are local in nature; others are regional and some national. It is suggested that the allocation of responsibility for their implementation requires further consideration by WDC, EMBOP and the CDEM Group and MCDEM.

Table 2: Summary of Recommendations

EOC Operations, Linkages and Support	
Recommendation 1: <i>Consistent resourcing of the EOC with trained local presence</i>	<p>The EOC should have access to sufficient trained personnel for a minimum of two shifts.</p> <p>All of the operational teams within the EOC should have local council personnel present in each shift.</p> <p>Council should consider introducing foundation-level training in CDEM for all personnel, in order to provide more effective support to those with designated operational roles in the EOC.</p>
Recommendation 2: <i>Ensure that everyone asked to work in the EOC is given an induction covering the functions and protocols</i>	<p>A short induction/ familiarisation module should be prepared for delivery by the Response Manager prior to the commencement of each shift.</p>
Recommendation 3: <i>Ensure that staff with critical 'business as usual' roles are not assigned to roles in the EOC</i>	<p>WDC should develop a Business Continuity Plan that establishes critical business functions corresponding to different scales and durations of disruption and emergency response.</p> <p>To provide clarity with respect to resource availability and support effective rostering and ongoing delivery from the EOC, staff who hold critical business functions should not be assigned to roles in the EOC.</p>
Recommendation 4: <i>Ensure that EOCs have access to sufficient experience to support the key functions</i>	<p>Consideration should be given to establishing a national team of operationally experienced specialists in areas such as Logistics, Planning, Intelligence, Operations and PIM. This would provide the ability to support the leaders of key EOC functions by 'shadowing' them during a response.</p>
Recommendation 5: <i>Convey the difference in objectives and activity scope between the EOC and Group Emergency Co-ordination Centre (GECC)</i>	<p>The roles of the EOC and GECC (particularly their areas of difference and overlap) need to be actively explained to people both within and interfacing with them during a response. This should include which activities have been integrated (eg Welfare in this event).</p>
Recommendation 6: <i>Clearer connection between the EOC and operational activity 'cells' that interface with the community</i>	<p>When a community-based activity centre (eg Civil Defence Centre, Incident Control Point or Contact Centre) will foreseeably function for several days or more, a brief protocol outlining the operational linkages with the EOC should be prepared.</p> <p>This protocol should as a minimum cover the agency/ people responsible for the centre, and the method and frequency of interface with the EOC.</p>

Welfare Delivery	
Recommendation 7: <i>The Welfare team in the EOC must have access to appropriately trained local resources throughout the duration of the activation</i>	<p>Ensure that sufficient locally-based and appropriately trained resources are identified to provide the core of the Welfare team in the Whakatāne EOC to deal with foreseeable events resulting in a major evacuation of residents.</p>
Recommendation 8: <i>Clear documentation of the basic elements of the local delivery of welfare services is needed</i>	<p>An operational plan for the delivery of welfare services in an emergency in Whakatāne should be prepared, including the following aspects:</p> <ul style="list-style-type: none"> • Clarifying regional and local responsibilities • The process for activation and ongoing operation of Civil Defence Centres and method of interface/ liaison with the EOC
Public Information Management	
Recommendation 9: <i>Ensure public information is communicated in a timely and effective way</i>	<p>Where an event involves a mass evacuation, the messaging around where people should go and how to get there must be promptly conveyed via multiple channels. This information must go to WDC's Civil Defence partner agencies, in addition to the public and media.</p>
Recommendation 10: <i>Ensure that community leaders are fully supported in their leadership role</i>	<p>The Mayor, elected members and other community leaders need to be regularly briefed and provided with key messages and information that enables them to engage with the community in an informed manner that promotes community confidence.</p>
Management and Access to Evacuated and Cordoned Areas	
Recommendation 11: <i>Early development of risk- and function-based criteria to support the early access within a cordoned area</i>	<p>Arrangements should be put in place to enable a timely transition from <i>preventing access</i> to <i>enabling access</i> within a cordoned area is important to support the recovery of people and businesses in an evacuated or excluded area.</p>

Plans and Operational Documentation	
Recommendation 12: <i>A revision of the Whakatāne Flood Response plan should focus on scope, operational interfaces and plan maintenance provisions</i>	<p>The Whakatāne Flood Response Plan should be re-written as a matter of urgency, taking particular account of the following aspects:</p> <ul style="list-style-type: none"> • Including breach of stopbanks as a specific scenario • Clearer operational interfaces with the BOPRC Flood Team • Annual review provisions
Recommendation 13: <i>Ensure alignment of all operational documents and their usability in an EOC context</i>	<p>The revision of key planning and operational documents (the WDC CDEM Plan, Flood Response Plan and Standard Operating Procedures) should ensure alignment, and usability in an EOC environment.</p>
Connection with the Community	
Recommendation 14: <i>WDC should establish an operational relationship with iwi of the Whakatāne District to enable marae to be better involved in civil defence planning and prepared for emergency response</i>	<p>Iwi should be actively supported in developing practical emergency response plans that meet both Civil Defence requirements and marae protocol.</p> <p>This will in turn enable Civil Defence to make more use of the significant response resource capability that marae represent during an emergency.</p>
Local Resourcing of CDEM Functions	
Recommendation 15: <i>Resourcing expectations at the local level under the centralised regional model for CDEM should be clarified</i>	<p>The requirements and expectations on district councils under the centralised CDEM Group model for preparing for and responding to an emergency should be explicitly stated, and actively monitored by EMBOP.</p>
Understanding the Roles of Mayors, Elected Members and Chief Executives	
Recommendation 16: <i>National-level guidance on the roles of Mayors, elected members and Chief Executives in declared emergencies is required, along with appropriate training and induction</i>	<p>The roles that Mayors, elected members and Chief Executives have in communicating with and supporting the affected sectors of the community require national guidance and training.</p> <p>This guidance should cover how their respective roles interface with the Controller and EOC during a state of emergency.</p>

Appendices

Appendix 1: List of People Interviewed

Interviewee	Usual Organisation Role	Role during Flooding Event
17 May 2017		
Paul Smith	Civil Engineer, WDC	EOC Operations Team
Russell Orr	Councillor, WDC	Councillor, WDC
Marty Grenfell	Chief Executive, WDC	Chief Executive, WDC
Paula Chapman	Manager, Community Services, WDC	Lead Controller, EOC
Collective Debrief of WDC EOC Function leaders and participants:		
Cashy Bell	Team Leader, Strategic Policy, WDC	Manager Planning, EOC
Melanie Bell	Human Resources Co-ordinator, WDC	Manager Rostering, EOC
David Bewley	General Manager, Planning, Regulatory and Corporate Services, WDC	General Manager, Planning, Regulatory and Corporate Services
Ross Boreham	Manager, Public Affairs, WDC	Manager, Public Information Management, EOC
Paula Chapman	Manager, Community Service, WDC	Lead Controller, EOC
Brian Elliott	Manager Corporate and Information Services, WDC	Manager Logistics, EOC
Tomasz Krawczyk	General Manager Infrastructure, WDC	Manager Operations, EOC
Jono Meldrum	Alternate Group Controller, EMBOP	Relief Controller, EOC
Angela Reade	Manager, Community Resilience, and Group Welfare Manager, EMBOP	Group Welfare Manager; Acting WDC Welfare Manager
Fiona Hennessy	Emergency Management Advisor, EMBOP	Response Manager, EOC
Liisa Tioke	Team Leader, Technical Administration, WDC	Manager Intelligence, EOC
18 May 2017		
Julie Gardyne	General Manager, Strategy and Community, WDC	Recovery Manager Manager Planning, EOC
Matt Harrex	Manager, Planning and Development, EMBOP; Alternate Group Controller, EMBOP	Relief Controller, EOC
31 May 2017		
Te Waiti Rangiwai	Chief Executive, Ngati Whare	Chief Executive, Ngati Whare
1 June 2017		
Simon Stokes	Eastern Catchment Manager, Bay of Plenty Regional Council	Manager, Edgecumbe Contact Centre
Leonie Simpson Tu O'Brien	Chief Executive, Ngāti Awa Deputy Chair, Ngāti Awa	Chief Executive, Ngāti Awa Deputy Chair, Ngāti Awa
Kirsti Luke	Chief Executive, Ngāi Tahu	Chief Executive, Ngāi Tahu
Mayor Tony Bonne	Mayor of Whakatane	Mayor of Whakatane
Mark Townsend Roger Waugh Pete Blackwood	Bay of Plenty Regional Council Flood Team	Bay of Plenty Regional Council Flood Team

2 June 2017		
Clinton Naude	Director, Emergency Management Bay of Plenty	Group Controller, Bay of Plenty CDEM Group
8 June 2017		
Frances Sullivan	Principal Policy Advisor, Local Government New Zealand	
14 June 2017		
David Bewley	General Manager, Planning, Regulatory and Corporate Services, WDC	General Manager, Planning, Regulatory and Corporate Services
Gavin Dennis	Member, Rangitāiki Community Board	Member, Rangitāiki Community Board
Jeff Farrell	Strategic Project Manager, WDC	Operations Manager – Special Projects
Judy Turner	Deputy Mayor, WDC	Setting up and operating the CD Centre at War Memorial Hall, WDC
Julie Jukes	Councillor, WDC	
Adrian Massey	Chief Fire Officer, Edgecumbe Volunteer Fire Brigade	Chief Fire Officer, Edgecumbe Volunteer Fire Brigade
Ron Van der Horst	Assistant Chief Fire Officer, Edgecumbe Volunteer Fire Brigade	Assistant Chief Fire Officer, Edgecumbe Volunteer Fire Brigade
Angela Reade	Manager, Community Resilience, and Group Welfare Manager, EMBoP	Group Welfare Manager; acting WDC Welfare Manager
Inspector Kevin Taylor	Eastern BOP Area Commander, New Zealand Police	Eastern BOP Area Commander, New Zealand Police
27 June 2017		
John Titmus	Regional Emergency Management Advisor Team Leader, MCDEM, Auckland	Regional Emergency Management Advisor Team Leader, MCDEM, Auckland
Suzanne Vowles	Regional Emergency Management Advisor, MCDEM, Auckland	Regional Emergency Management Advisor, MCDEM
Alex Hogg	Team Leader, National Planning, MCDEM, Wellington	Team member, Welfare team

Appendix 2: Glossary of Key Terms and Abbreviations

Term	Description
BCP	Business Continuity Plan
BOP	Bay of Plenty
BOP Region	The Bay of Plenty Region as defined in the Local Government (Bay of Plenty Region) Reorganisation Order 1989
BOPRC	The Bay of Plenty Regional Council
CDC	Civil Defence Centre - a facility in a community that is set up during an emergency to support individuals, families/whānau, and the community
CDEM	Civil Defence Emergency Management
CDEM Act	Civil Defence Emergency Management Act 2002 (the legislation which sets the framework for emergency management in New Zealand)
CDEM Group	Civil Defence Emergency Management Group
CDEM Group Office or GEMO	The regional office where CDEM functions are carried out on behalf of the CDEM Group before an emergency occurs
CDEM Group Plan	The Civil Defence Emergency Management Group Plan (current version 2012 – 2016) developed in accordance with sections 48 and 49 (2) of the CDEM Act
CEG	Co-ordinating Executive Group - a statutorily-mandated group established under section 20(1) of the CDEM Act to provide advice and implementation support to regional CDEM groups
CIMS	The New Zealand Co-ordinated Incident Management System – the framework of consistent principles, structures, functions, processes and terminology that agencies can apply in an emergency response.
Emergency event	An event that poses an immediate risk to life, health, property, or the environment that requires a co-ordinated response
EMBOP	Emergency Management Bay of Plenty – the Group Emergency Management Office for the Bay of Plenty CDEM Group, which provides the operational service delivery of CDEM activities for the six member councils. Rotorua is not a member of EMBOP but is a member of the regional CDEM Group.
EMIS	Emergency Management Information System – the national system used by the Ministry of Civil Defence and Emergency Management to co-ordinate information at local, regional and national levels during the response to emergencies
EMO	Emergency Management Officer
EOC	Emergency Operations Centre – established to co-ordinate the response to a local level emergency event
GECC	Group Emergency Co-ordination Centre
ICP	Incident Control Point – the co-ordination centre for an incident level response under the NZ CIMS Framework
Joint Committee	The regional Civil Defence Emergency Management Group Joint Committee, required under section 12(1) of the Civil Defence Emergency Management Act 2002

MCDEM	Ministry of Civil Defence and Emergency Management - New Zealand's central government agency responsible for emergency management
NCMC	National Crisis Management Centre
National CDEM Plan	The National Civil Defence Emergency Management Plan Order 2015 – which sets out the roles and responsibilities of everyone involved in reducing risks and preparing for, responding to and recovering from emergencies
Guide to the National CDEM Plan	The Guide to the National Civil Defence Emergency Management Plan 2015 – which provides information on operational arrangements and additional information in support of the National CDEM Plan 2015.
SitRep	Situation Report
SOP	Standard Operating Procedure
TA	Territorial Authority
The '4Rs'	Risk Reduction, Readiness, Response and Recovery
USAR	Urban Search and Rescue
WDC	Whakatāne District Council
WERT	Whakatāne Emergency Response Team

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