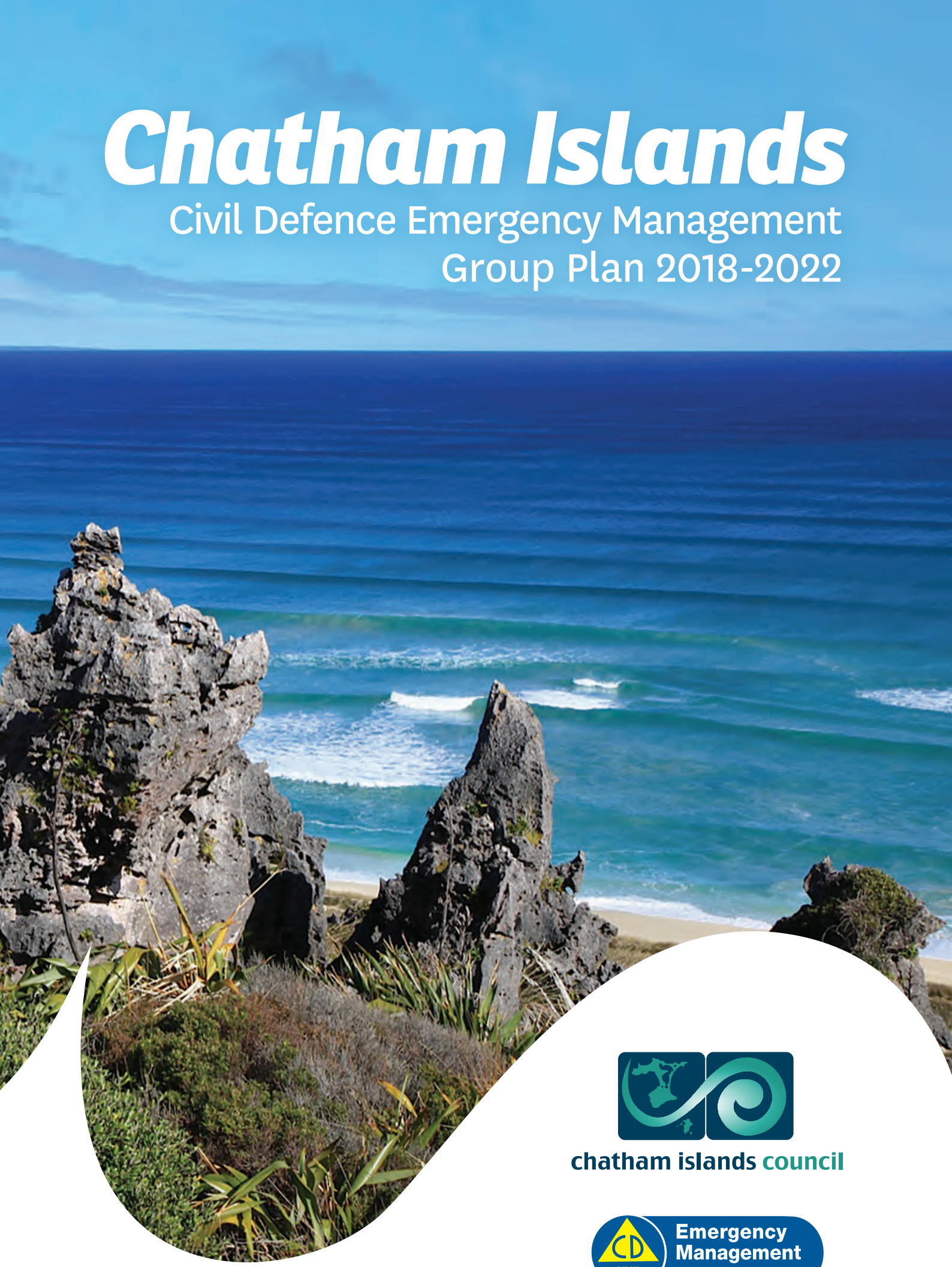
Chatham Islands

Civil Defence Emergency Management Group Plan 2018-2022



chatham islands council

Emergency Management
Chatham Islands

Foreword

It is a pleasure to introduce the Chatham Islands Civil Defence Emergency Management Group Plan. This Plan contains a hazard, risk, and emergency management section identifying hazards and the impacts on the Chatham Islands, allowing the opportunity to eliminate or reduce those risks outlined in the reduction section. This Plan enables both Council and the community to better prepare as the readiness section shows the planning, training and education methods and resources required to achieve these objectives.

The Responses section highlights our operational arrangements and involves local and hazard-specific planning. It also outlines emergency operations centre staff, their roles and responsibilities. The Recovery section takes us through the procedures for what is involved in recovering from an emergency and, where possible, improving the community resilience. The management and governance section directs the reader to the legal and statutory requirements that govern the Council, CDEM and CEG Group mandate.

We recommend that all the community takes the time to read the local arrangements and preparation for the next event.

His Worship the Mayor Alfred Preece

Vision Statement

The Chatham Islands Council provides an efficient and effective system of emergency management that minimises the potential effect of all hazards in the community and the environment.

Author Rana Solomon
Emergency Manager
Chatham Islands Council

Chatham Islands Boundary

Figure 1 CI Boundary

Geographical Description of the Group Area

The area covered by the CDEM Group includes all of Chatham Island, Pitt Island and all coastal marine areas under the jurisdiction of the Chatham Islands Council. The Chatham Islands are not sub-antarctic and lie 862 kilometres east of Christchurch but 772 kilometres south-east of Napier and at about the same latitude (44° south) as Christchurch.

The islands lie between 176 and 177° west longitude, whereas the main islands of New Zealand are situated either side of 175° east longitude, placing the two land areas on opposite sides of the International Date Line. The line, however, has been shifted to allow the islands to observe the same day as New Zealand, but 45 minutes ahead of New Zealand standard time.

Chatham is the larger of two inhabited Islands and was referred to as Rekohu by the original inhabitants (Moriori) and later Wharekauri by Māori. The greatest width is approximately 57km measured east to west across the northern part of the island with a length from north to south of 49km. The two inhabited islands are Chatham (Rekohu/Wharekauri) which has 90,038 ha with Te Whanga as the the predominant geographical feature of the Island covering 20,000 hectares, one-fifth of the Island's size; and Pitt Island (Rangiauria) which has 6,325 hectares and is 9kms southeast of Chatham.

The landscape in the northern half of Pitt is predominately rounded and undulating. The southern area of Pitt is a dissected plateau with several prominent hills of volcanic origin. Chatham and Pitt islands form one of New Zealand's smaller local authorities, both in area and population. Both Chatham's and Pitt's importance is due to their farming and fishing industries, as well as the richness of their plant and bird life.

The Chatham Islands have a high percentage of New Zealand's endangered and rare plant and bird life. The potential exists in the Chatham Islands for the occurrence of disasters, which can lead to a declaration of a State of Civil Defence Emergency. The Chatham Islands Council through its CDEM Group has arrangements to respond to and recover from these emergencies, including programmes for public awareness, education and training exercises.

Section 1: Introduction

This section introduces the Plan, its purpose and structure. It also outlines the CDEM Group and describes the relationship of the Plan to the National Strategy and National CDEM Plan.

Section 2: Risk Profile

This section identifies the hazards and risks facing this area, key issues and outlines a work programme to address them.

Section 3: Reduction

This section guides the CDEM Group with its arrangements, frameworks, structures, roles, responsibilities and processes to achieve long-term comprehensive risk reduction.

Section 4: Readiness

This section identifies and enhances current levels of organisational and community readiness and assures that the CDEM Group has the capacity and capability to respond to and recover from a civil defence emergency.

Section 5: Response

This section provides stakeholders, partner organisations and the community with an outline of response principles, priorities, systems and an organisational framework to be activated, deployed and coordinated during incidents and emergencies within the CDEM area.

Section 6: Recovery

This section provides guidance on planning arrangements including roles and responsibilities, structure and processes implemented to assist the community to recover from a civil defence emergency.

Section 7: Monitoring and Evaluation

This section provides a basis for monitoring and evaluation of the CDEM Group Plan and Group activities and to meet the requirements of the CDEM Act.

Section 8: Management & Governance

This section states the management arrangements for the CDEM Group.

Glossary and Definitions

TABLE OF CONTENTS

SECTION 1: INTRODUCTION

This document is the Chatham Islands Civil Defence Emergency Management (CDEM) Group Plan, prepared by the Chatham Islands Council's Emergency Manager on behalf of the CDEM Group. The CDEM Group is the Mayor and eight Councillors. The Coordinating Executive Group (CEG) consists of the partner agencies and organisations including emergency services.

1.0 Plan Purpose and Legislative Requirement

This Plan is a statutory requirement under the Civil Defence Emergency Management (CDEM) Act, 2002 s48. The CDEM Act requires the Council to take the lead in identifying and reducing hazards. The Act does not, however, replace any legislation or responsibilities given under any other legislation. Instead, it provides the mechanisms for integration and coordination through the principle of comprehensive emergency management.

The purpose of this Plan is to enable the effective and efficient management of significant hazards and risks for which a coordinated approach across the Chatham Islands is required. This Plan seeks to strengthen relationships between agencies involved in civil defence emergency management to encourage cooperative planning and action between the various emergency management agencies and the community and to demonstrate a commitment to delivering effective civil defence emergency management through an agreed 5-year work programme.

This Plan also provides information on the hazards and risks in the Chatham Islands area. It documents the principles of operation within which agencies involved in civil defence emergency management agree to cooperate in areas of reduction (white), readiness (yellow), response (red) and recovery (green) as consistent with other emergency plans, policies or standard operating procedures.

1.1 National CDEM Strategy and National CDEM Plan

The National CDEM Strategy sets out the Crown's CDEM goals, policy objectives and measurable targets. The National CDEM Plan sets out the CDEM arrangements necessary at the national level to manage nationally significant hazards and risks and the coordination of CDEM during a period of national emergency and to provide a basis for local planning for emergency response organisations. The CDEM Group Plan is required to be consistent with the National CDEM Strategy and must take into account the guidelines, codes or technical standards issued by the Director.

1.2 Target Audience

The Plan intends to inform, involve and put mechanisms in place so the community can better understand its hazards and risks to build capability and capacity. By working collectively, the community and emergency response agencies will be able to create a more resilient community.

Section 59 of the CDEM Act requires that every individual or organisation required to perform functions in this CDEM Group Plan must take all necessary steps to do so.

This Plan is operative for five years following its approval by the CDEM Group and is adopted by the Council and Minister of Civil Defence. The Plan is required to start its review in its fourth year of operation.

1.3 Plan Process and Consultation

On island agencies, stakeholders, and emergency services have had the opportunity to contribute to the development of this Plan. The Emergency Manager held a workshop with the Hazard Liaison Group and was followed by the CDEM Group consultation regarding the operational, training and recovery arrangements.

1.4 Goals and Objectives of the CDEM Group

- *Ensure that the community is aware of and understands its risks, hazards and impacts.*
- *Ensure all reasonable steps are taken for the protection of life, and wellbeing of the community*
- *Ensure all reasonable steps are taken to restore social, economic, natural and built environments during an event as early as practical.*
- *Work towards a self-reliant community that has reduced vulnerabilities to emergency events and has the ability to respond and recover from (Goal 2)*
- *Work with a community that plans according to a long-term strategy consistent with known hazards and vulnerabilities (Goal 1)*
- *Work towards cooperation and coordination within and across all partner agencies and organisations (Goal 3)*
- *Ensure that risk management is used as a tool in social, economic and environmental issues and incorporated into planning processes where human activities interact with natural and technological hazards (Goal 2)*
- *Ensure that the community has appropriate financial protection and economic sustainability to enable recovery from emergency events (Goal 4)*

Note* Subscript notations (Goal #) indicate how the goals of the Chatham Islands CDEM Group Plan relate to the 4R's (Reduction, Readiness, Response and Recovery) and the goals of the National CDEM Strategy.

SECTION 2: RISK PROFILE

2.0 Summary

The risk profile section of this plan will provide an evidence base for prioritisation of risk treatments for better use of resources and efforts in planning adequately managed risks. The Group's risk profile is fundamental to guiding the level of activity and effort applied across the 4R's. Consequences and likelihood are used to measure the risk therefore risk = likelihood x consequences. The hazard effects on the Chatham Islands' social, built, economic and natural environments will determine the consequences of hazards. Understanding the diversity of hazards, and how they interact with these environments is vital in establishing a risk profile.

In this section, the hazards that require CDEM management are identified, their risk assessed and each hazard evaluated and assigned a level of priority. This prioritisation provides guidance for directing resources and effort for the treatment of risk across the 4Rs.The purpose of this section is to identify the hazards and risk environments with sound evidence that will allow for greater understanding of the resources and effort needed for the management of the risk.

Hazards are something that may cause or contribute to the cause of an emergency. Therefore by its very nature, a hazard exists if the event adversely affects the community. Keep in mind hazards can be natural or technological in origin with natural hazards occurring when environmental process interacts with a land use activity or vice versa.

Human encroachment into environments often creates a hazard where none may have existed due to social and economic activities being present in the path of environmental processes. Hazards can also be the consequence of human actions which have adverse effects on individuals or communities. These are technological hazards and result from human error, however, they can be triggered by natural hazards.

- *A comprehensive summary of natural, social, built and economic environment*
- *Description of all hazards impacts, likelihood and consequence*
- *Assessment of risks in the Chatham Islands including Pitt Island*
- *Prioritisation of the risks*

2.1 Development Process

The Group's Emergency Manager undertook the development, evaluation, and analysis of hazards and risks based on the Director's Guideline for CDEM Groups (DGL 09/09). A workshop was held with the Hazard Liaise Group, CDEM Group, Council and MCDEM before adoption.

2.2 Risk Management

The nature of the hazard risk profile will influence any decision regarding the best management approach. Consequently an assessment of the components that contribute to risk is required with appropriate management mechanisms that can be identified to manage that component that adds most to the risk. The management of these hazards is achieved through actions to reduce risk and ensure readiness, response and recovery.

Both approaches will be required to obtain an appropriate balance to determine hazard-by-hazard or case-by-case basis. Hazards are predominantly managed through a degree of complexity and coordination.

2.3 Social Structures

The social structures on the Chatham Islands include the hospital, schools, marae, town hall and sports clubs. Consideration must be given for public safety and accessibility during an emergency and the impact of threats which may limit value as a social structure.

2.4 Vulnerable Groups

Vulnerable groups include aged people with physical and mental disabilities, the young including early childhood locations, and primary schools when they are open.

2.5 Ethnic Diversity

As identified in the 2013 Census 73.5% of people living in the Chatham Islands belong to the European ethnic group, and 26.5% belong to the Māori ethnic group. Education in emergency management of minority groups is based on 'as when required' with new immigrants.

2.6 Population and Dwellings

Population, as identified in the 2013 Census, is for the Chatham Islands territory which includes Pitt Island. There is not a breakdown of the individual settlements on main Chatham or Pitt Island but a holistic overview. There is a need to identify the exact numbers in individual settlements for risk management purposes; this was undertaken during the writing of the first CDEM Group Plan but does need updating; therefore, for this document, the 2013 Census was used. Dwellings identified as per the 2013 census relating to private and non-private dwellings.

- *Male 315*
- *Female 285*
- *Private Dwellings 258*
- *Non-private Dwellings 6*
- *Unoccupied dwellings 69*

2.7 Tangata Whenua

Moriori and Māori were identified in legislation for particular attention and involvement in the public sector governance and management. The CDEM Group has a role and responsibility to ensure that Moriori and Māori issues are dealt with appropriately. CDEM is able, when required, to call for assistance and guidance from the Māori Liaison Officer to help manage any engagement CDEM may be required to have with Moriori and Māori.

2.8 Geology

The Chatham Islands have been the focus of thin biogenic and antigenic sediment accumulation punctuated by episodes of localised basaltic volcanism, producing small cones and mounds of volcanoclastic sediments but only negligible volumes of massive volcanic rock. Discussion of economic and applied geological consideration of resources in the Chatham Islands includes brief accounts of peat surveys on the Chathams. The structural trend of the Rise extends west beneath the Canterbury Plains to the foothills of the Southern Alps in the vicinity of Sheffield.

The older rocks that form the Rise are exposed only in the foothills of the Southern Alps, on Banks Peninsula and in the Chatham Islands. The 200m isobaths define a rhomboid area sometimes referred to as the Chatham Islands shelf or Chatham Islands Rise. The Chatham Islands lie approximately in the middle of this upstanding prism.

There have been five exploration wells drilled on the Rise, all at the western end. Four of the wells have provided good stratigraphical control for seismic interpretation of the western part of the Rise. The nearest drill hole is on the south flank of the Rise near the head of the Bounty Trough.

Little seismic activity has been recorded for the Chatham Rise but this could be partly due to a lack of instrument recording stations. It is likely that many small earthquakes (<5 magnitudes) along the Rise are unrecognised by

these stations because their location is too far away to produce a strong enough signal on the recording instruments.

2.9 Geography

The Chatham Islands are located 850km east of New Zealand (approximately 44º latitude and 176º longitude). They lie to the east of 180º longitude but the international dateline was diverted so that it passes east of the islands and therefore are 45 minutes ahead of the standard New Zealand time. Chatham is the larger of two inhabited islands and was referred to as Rekohu by the original inhabitants (Moriori).

The greatest width is approximately 57km measured east to west across the northern part of the island with a length from north to south of 49km. Pitt Island, referred to as Rangiauria, lies 22km south-southeast of the Chatham Islands. It is smaller than Chatham with a width of almost 10km and length approximately 15km.

There are smaller Islands in the group - Southeast Island (Rangatira), Mangere, Little Mangere (Tapuaenuku) and the Castle (Rangiwheau) are all within 6km of Pitt. The Pyramid (Tarakoikoia) is about 9km south of Pitt. Star Keys (Motuhope) are approximately 14km east of northernmost Pitt. The Forty Fours (Motuhara) are 40km east of the Chathams and The Sisters (Rangitatahi) 20km north of the Chathams.

Gross lithological variations of underlying rock largely determine the Chatham Islands. It is low-lying with an elevation at Maungatere Hill of 294mtrs and dominated by a flat or rolling landscape and about 22% of its area is covered by shallow lakes and a lagoon with 6% occupied by unstable dune and beach sands. Peat accumulations form a different thickness veneer over large parts of the island and have been subject to commercial exploration.

Volcanic cones and plugs form conspicuous small hills on an otherwise subdued landscape. Pitt Island and its surrounding islets are similar to Chatham but with even more obvious volcanic features forming a distinctive and more rugged topography. An area (50%) of the Chatham Islands land surface is covered by peat and detailed studies (Macpherson and Hughson 1943) of the peat established that it contains an average of 9.4% of a wax similar to molten wax.

2.1.0 Climate

There is convincing evidence that the global climate is changing; however, there are many uncertainties in predicting the size and effect of future climate changes as is the case when it comes to what might happen in a specific place, such as the Chatham Islands. The most pragmatic approach is to look for a plausible range of what might happen.

The Chatham Islands are already experiencing global warming. The annual mean temperature has increased by about 1.0ºC over the past 100 years and annual rainfall has increased by about 10% with 1998 as the warmest year on record. The mid-range scenario for temperature change at the Chatham Islands suggests a warming rate of about 0.2ºC per decade through the 21st century.

The Chatham Islands are likely to experience stronger westerly winds and increased annual rainfall by the end of the 21st century.

There is likely to be an increase in extreme rainfalls as temperature increases. What is an extreme rainfall in the current climate is likely to occur about twice as often by the end of the 21st century under a mid-range temperature change scenario and 3-4 times as often under a high-temperature change scenario. There is no clear

evidence to indicate whether there will be either an increase or decrease in the size of storm surges in the next 50 years.

Storm tide elevations will rise at the same rate as mean sea level rise. For planning purposes, it is recommended to use a sea-level rise of 0.2m by 2050 and 0.5m by 2100. It is fair to say that the Chatham Islands climate is affected by year-to-year variations in the state of the El Niño and Southern Oscillation.

El Niño periods tend to be colder and drier than average, and La Niña periods warmer and wetter. This variability is on top of the global warming trends. It is not yet possible to say how El Niño events might change in their frequency or severity under global warming.

2.1.1 BUILT ENVIRONMENT

2.1.2 Commercial and Industrial

The Chatham Islands industrial management areas apply to the airport, jetties, wharves and associated activities including industries such as fish processing plants at Waitangi, Owenga, and Port Hutt. These areas are vital to the wellbeing of the residents and as a consequence activities with the airport, industrial or ports are not permitted and, in some cases, the definition of these areas allow for further development. Given the strategic locations and their importance to the islands they need to be managed in a manner that maximises their location without adversely impacting on amenities.

Any activities that conflict with the efficient operation of the airport, ports and associated activities should not be located in the industrial management areas and activities beyond the boundaries of the industrial management area. There is, however, a natural hazard (tsunami) that has a major impact in these areas, affecting the physical, psychological, natural and economic wellbeing of the islands. The Chatham Islands have no processing plants for agricultural or forestry purposes at present but do have fish processing, woolsheds and forestry blocks with rural fire being the major threat.

2.1.3 Natural Gas

Natural gas is supplied to the islands by ship. The gas is carried in large gas bottles and is supplied to the public through two outlets in Waitangi.

2.1.4 Residential

There are a significant number of residential dwellings on the Chatham Islands along riverbanks as well as low-lying and coastal areas which are under threat from a tsunami.

2.1.5 Lifeline Utilities

- *Radio NZ and Television NZ*
- *The entity operating the Airport*
- *The entity operating the Port*
- *The production, supply and distribution of manufactured or natural gas*
- *The generation and distribution of electricity through a network*

- *Supply and distribution of water*
- *Provision of wastewater and storm-water*
- *Roading network*
- *Production, processing and distribution of petroleum products*

2.1.6 Radio, Television

Although these are a key means of disseminating information not all people on the Chatham Islands can receive radio or TV from New Zealand.

2.1.7 Airport

Regular passenger and freight services operate between the Chatham Islands and New Zealand. Significant disruption to the airport runway is possible and as the airport is a vital inlet for emergency relief, there is another option (Hapupu). However, this option is limited to the aircraft that could land there, weather and the road accessibility.

2.1.8 Water

The Chatham Islands Council owns the water system in the main settlement of Waitangi but has contracted all the activities about the operation and maintenance of the water treatment plant and reticulation network. In 2008 with a population of 680 and 310 households, the water source was rain, bores or springs.

There is minimal scope for significant negative effects, and one potential effect could be an excessive demand on the bore causing the aquifer to lose its integrity. The risk management for the operation and maintenance is addressed by the response time for the contractor to attend to power failures and blockages.

2.1.9 Wastewater

The Chatham Islands Council owns the wastewater system but has contracted all operational activities and maintenance of the wastewater reticulation network and the treatment plant. The current infrastructure can accommodate increases in the population and there are no threats that cannot be dealt with as they arise. Attending to power failures and blockages is the responsibility of the contractors.

2.2.0 Electricity

The electricity is generated and supplied by the Chatham Islands electricity company. Electricity is supplied to Waitangi, Te One, Owenga and part way up the Northern and South Coast Roads. The Chatham Islands does experience power outages and most dwellings can provide the basics during these periods (lighting, heating and cooking).

Kaingaroa is now on generated power to the main settlement, which they look after and maintain themselves.

2.2.1 Petroleum Products

Fuel is delivered by ships to two significant suppliers on the Chatham Islands and distributed through their outlets. Fuel is transported from Napier and Timaru in tanks, pumped into bulk tanks or tankers at the wharf and transported by trucks to the outlets for sale or the electricity company's storage tanks for the generators. There is also petrol which comes via the ship in dolphins. There are apparent hazards involved with carting and transferring fuel, and every care needs to be taken to reduce these hazards.

2.2.2 Roading Network

The Chatham Islands Council is responsible for all public roads on the Chatham Islands. There are no State Highways but as owners of the roading network Council have legal requirement to provide roads to a certain standard. Also, Council is responsible for all roading related assets, footpaths, kerbs, street lighting and signs. This activity is sustainable, so the movement of people and goods within the territory can be convenient.

Safe transport is part of the essential infrastructure of the territory and is vital to wellbeing and development. Despite providing great benefits as a whole, the development of a roading network can also cause adverse effects. These include local air pollution, road run-off (rainwater that becomes polluted on the road surfaces) to adjacent land and waterways, traffic noise and vibration, visual impact, traffic accidents, loss and damage of land and natural environment, separation of neighbours and emission of greenhouse gases.

These impacts can also hurt public health and wellbeing. The most significant of these on the Chathams is road safety and contamination of natural waters. Roading run-off has the potential to affect the water quality of adjacent streams. Activities in the beds and margins of lakes, rivers, and wetlands such as the erection of structures, excavation, and deposition of material and the removal of vegetation and drainage can result in some adverse effects on ecological and amenity values.

Adverse effects could include the reduction of fish passage, bank stability of water courses, amenity and recreation values, Iwi/Imi values, the stability of existing structures and public access.

2.23 Kopinga Marae

Kopinga Marae is a meeting place for Moriori to celebrate, hold hui or wananga and be together. Kopinga Marae is an essential step in re-establishing Moriori identity on Rekohu. Kopinga is also an important facility for the islands and utilised as a Welfare Centre/Civil Defence Centre during emergency events.

2.2.3 Economic Environment






The Chatham Islands, located in the South Pacific Ocean and isolated from New Zealand, have a unique cultural, social and administrative history. The Chatham Islands have strategic importance and add significant sea area to New Zealand's exclusive economic zone. The Chatham Islands face recurring issues around the economic viability and funding of transport and necessary infrastructure, as well as delivery of social services.

Some issues around distance from New Zealand cannot change, however, over time some innovative solutions have been attempted to deal with apparently difficult problems. There is an ongoing economic development that involves initiatives in farm productivity, development of new fish species, consolidated fish quota, the formation of tourism organisation, new housing, on island skill development, enterprise support, improved internet access and facilities for elder care.

2.2.4 Growth

The population fluctuates and has decreased by 15.1% since the 2006 census.

2.2.5 Employment

The unemployment rate in the Chatham Islands is 1.4% compared with 5.1% for all New Zealand with the most common occupational group being 'Labourers' and 'Professionals' which is the most common occupational group in New Zealand.

2.2.6 Income

- *For people aged 15yrs and over, the income is $24,200. Compared with $24,400 for all of New Zealand.*
- *40.6% have an annual income of $20,000 or less, compared with 43.2% of people in New Zealand.*
- *16.7% have an annual income of more than $50,000 compared with 18% of people in New Zealand.*

- *For Māori, the income is $24,600 compared with a median of $20.900 for all Māori in New Zealand.*
- *38.8% of Māori have an annual income of $20,000 or less compared with 48.3% for Māori in New Zealand.*
- *16.5% of Māori have an annual income of more than $50,000 compared with 10.2% of all Māori in New Zealand.*

2.2.7 Tourism

In 2002 a review found that tourism had grown with tremendous potential. The industry has some potential strengths and opportunities but is hindered by distance, shortage of seasonal labour and accommodation. Significant assets to the Chathams include its history, culture, wildlife, fishing and isolation. Since 2002 tourism has continued to grow based on the number of tourist businesses, the number of visitors and the development of associated infrastructure. By 2008 capacity remained limited by the availability of flights and numbers of beds, even though there was an increase from 85 beds in 2002 to 115 beds in 2008.

2.2.8 Risk Assessment

The risk is analysed based on the likelihood and consequences of the hazard and then evaluated and prioritised for treatment. Some hazards may pose a significant risk occurring frequently or affecting a large area while other hazards pose the same risk, but because of the consequences that result, the affected community may be vulnerable, and for the appropriate management option, are evaluated. The modified version of ANZS3000:2009 applies to the hazards.

In-depth evaluation of each hazard is based on the following;

- *Seriousness - The relative impact of human, economic, social, infrastructural and geographic factors.*
- *Manageability - How severe hazard risks are to manage and the level of effort currently applied.*
- *Growth - The rate at which the risk is likely to increase through the heightened probability of the event occurring, an increase in the exposure of the community to the hazard, or a combination of both.*

The risk evaluation process utilised information from various sources including information previously included in existing local Civil Defence plans, event scenarios, historical and recent events, general and specific knowledge, experience and research undertaken by Crown and tertiary institutions. The hazard assessment forms the basis for the strategic component of the Group Plan.

2.2.9 *Risk Analysis Hazards*

Overall the top 16 hazards for the Chatham Islands identified in the table below are yellow (high) and green (medium).

TABLE 1 RISK ANALYSIS

HAZARDS	RISK ANALYSIS			RISK EVALUATION										GROWTH	TOTAL
DOC #1351593				SERIOUSNESS					MANAGEABILITY						
	LIKELIHOOD	CONSEQUENCE	RATING	SOCIAL	BUILT	ECONOMIC	NATURAL	SUB-TOTAL	REDUCTION	READINESS	RESPONSE	RECOVERY	SUB-TOTAL	SUB-TOTAL	
NATURAL															
Tsunami-local	Likely	Major	VH	5	4	3	3	8.5	2	3	3	2	2.5	5	16.0
Tsunami-distance	Likely	Moderate	H	4	4	3	3	7.5	2	3	3	2	2.5	5	15.0
Storm surge	Possible	Minor	M	3	2	2	2	5	4	4	3	3	3.5	4	12.5
Wind storm	Possible	Minor	M	2	2	2	1	3.8	4	4	3	3	3.5	5	12.3
Fire-rural	Likely	Moderate	M	4	3	2	1	6.3	3	3	3	3	3	4	13.3
Earthquake	Unlikely	Minor	L	2	2	2	2	4	4	4	3	3	3.5	4	11.5

Volcanic	**Rare**	**Minor**	**VL**	**2**	**2**	**1**	**1**	**3.5**	**4**	**4**	**3**	**3**	**3.5**	**4**	**11.0**
Erosion-lagoon	**Certain**	**Minor**	**M**	**1**	**2**	**1**	**3**	**2.9**	**4**	**4**	**3**	**3**	**3.5**	**2**	**8.4**
Erosion-coastal	**Certain**	**Moderate**	**M**	**1**	**2**	**1**	**3**	**2.9**	**4**	**4**	**3**	**3**	**3.5**	**2**	**8.4**
Drifting sand dunes	**Certain**	**Minor**	**M**	**1**	**1**	**2**	**3**	**2.7**	**2**	**4**	**3**	**3**	**3**	**3**	**8.7**
Land slide	**Rare**	**Very minor**	**M**	**1**	**1**	**2**	**3**	**2.7**	**3**	**3**	**3**	**3**	**3**	**3**	**8.7**
Sea level rise	**Possible**	**Insignificant**	**L**	**1**	**1**	**1**	**1**	**2**	**4**	**4**	**3**	**3**	**3.5**	**1**	**6.5**
River flood	**Likely**	**Minor**	**M**	**1**	**2**	**1**	**2**	**2.7**	**2**	**3**	**3**	**3**	**2.75**	**2**	**7.5**
Drought	**Possible**	**Minor**	**M**	**1**	**1**	**2**	**2**	**2.5**	**4**	**4**	**4**	**4**	**4**	**2**	**8.5**
Slope stability	**Rare**	**Insignificant**	**VL**	**1**	**1**	**1**	**1**	**2**	**4**	**4**	**3**	**3**	**3.5**	**3**	**8.5**

Power failure	**Unlikely**	**Major**	**M**	**3**	**1**	**2**	**2**	**4.5**	**3**	**3**	**3**	**4**	**3.25**	**3**	**10.8**
Water failure	**Unlikely**	**Minor**	**H**	**2**	**1**	**3**	**1**	**3.6**	**3**	**3**	**3**	**3**	**3**	**3**	**9.6**
Wastewater failure	**Likely**	**Minor**	**M**	**1**	**1**	**2**	**2**	**2.5**	**3**	**3**	**3**	**3**	**3**	**3**	**8.5**
Communication	**Likely**	**Minor**	**M**	**3**	**1**	**3**	**1**	**4.6**	**3**	**3**	**3**	**3**	**3**	**4**	**11.6**
Air transport	**Possible**	**Catastrophic**	**VH**	**4**	**3**	**4**	**1**	**6.9**	**3**	**3**	**3**	**3**	**3**	**4**	**13.9**
Road transport	**Possible**	**Catastrophic**	**VH**	**4**	**3**	**4**	**1**	**6.9**	**3**	**3**	**3**	**3**	**3**	**4**	**13.9**
Civil unrest	**Rare**	**Insignificant**	**VL**	**4**	**2**	**2**	**1**	**5.8**	**3**	**3**	**3**	**3**	**3**	**4**	**12.8**
Fire urban	**Possible**	**Moderate**	**M**	**3**	**2**	**2**	**3**	**5.2**	**4**	**3**	**3**	**3**	**3.25**	**4**	**12.5**
Criminal damage	**Rare**	**Insignificant**	**VL**	**3**	**2**	**3**	**1**	**5.1**	**3**	**3**	**3**	**3**	**3**	**2**	**10.1**
Hazards substance	**Possible**	**Minor**	**M**	**3**	**2**	**2**	**2**	**5**	**4**	**4**	**3**	**3**	**3.5**	**2**	**10.5**
Biological															
Public health	**Possible**	**Moderate**	**M**	**3**	**1**	**3**	**1**	**4.6**	**4**	**3**	**3**	**3**	**3.25**	**3**	**10.9**
Pandemic	**Possible**	**Moderate**	**M**	**3**	**1**	**3**	**1**	**4.6**	**4**	**3**	**3**	**3**	**3.25**	**4**	**11.9**

Plant & animal pests	**Possible**	**Moderate**	**M**	**1**	**1**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**9.0**
Marine oil spill	**Possible**	**Moderate**	**M**	**3**	**2**	**3**	**4**	**5.7**	**3**	**3**	**3**	**3**	**3**	**1**	**9.7**

The risk from hazards is evaluated to determine priorities for management. This evaluation considered the consequences of the hazards and the difficulty and effort currently being applied to managing each hazard. It also highlighted the priority where additional resources should be assigned to manage the hazards better.

2.3.0 Current and Future Management Mechanisms

- *Tsunami distance/local*
- *Research (hazard & risk assessment)*
- *Event monitoring*
- *Public education & awareness*
- *Warning systems*
- *Sea level monitoring*
- *Evacuation planning*
- *Welfare planning*
- *Recovery planning*
- *Historical tsunami research*
- *Inundation modelling*
- *Contingency planning for response*
- *Signage*
- *Land use*
- *Update and review all relative plans*
- *EOC Planning*
- *Response Planning*
- *Activation of NZ deployment planning, public education and awareness*

2.3.1 ASSESSMENT SUMMARY

2.3.2 Slope Stability

The Chatham Islands have no slope stability problems; there are, however, numerous instances of rockfall and cliff collapse along with most cliff coastlines throughout the islands. These features are due to normal coastal erosion processes and in general do not indicate any weakness or stability problems in rock materials. Steep slopes, tectonic movement and rainfall are the main causes of slope failure but can be caused by inappropriate use, thereby exposing people, property and infrastructure to increased risk.

As part of advancing New Zealand's resilience to natural disaster damage it is important to understand how slope stability considerations exist in current land and planning practices.

Likelihood - There are some spectacular landslides present in Waihere Bay North-western Pitt Island and along the Southern coast of the Chatham Islands.

Consequences - These areas are remote and limited for potential development.

2.3.3 Landslides

Along the southern coast of Chatham Islands are sizeable coastal cliff slumps involving failure of southern volcanos. They are likely to have failed along weathered clastic horizons between lava flows within the volcanic pile but their dimensions suggest that some larger scale structural weakness may be involved. A landslide is the downward movement of rock, soil or vegetation but the type of movement, the amount of material moved and the speeds at which they move vary. A landslide may be a few falling rocks or it may be the rapid failure of many cubic kilometres of debris.

Shallow soil slides sometimes referred to as regolith slides involve the movement of the upper soil layer including vegetation or rock debris. These can occur over large areas of grass-covered slopes during intense rain but can also happen on steep, bush-clad slopes. More massive, deep-seated slides involve translational sliding or rotational slumping within weak rock and soil and can happen slowly or accelerate into a fast-moving landslide.

Deep-seated slides can also form along the boundary of two different rock types. Deep-seated creeping earth-flows occasionally happen in saturated clay-rich sediments and are slow moving, travelling a few metres each year. On steep slopes such as cliffs or terraces, rock and soil may fall and accumulate at the bottom of the slope as debris. Rock falls often comprise large boulders and can be particularly damaging.

Likelihood – Many landslides occur rapidly with little or no warning, giving little opportunity for people or assets to move or be evacuated. Signs that often indicate the onset of land sliding are cracks in the ground or building, subsidence or bulging of the land, and tilting trees or seepage. There have been significant landslides in the southern parts of the island such as Te Awatapu which has resulted in a large basin forming.

Consequences - There is potential for landslides,however, if they were to occur in the main settlement of Waitangi, i.e. above the hotel, then there could be more significant consequences as there would be if it were to happen in Kaingaroa.

2.3.4 Accelerated Lagoon Erosion

Rapid erosion is occurring due to a combination of factors including water depth, prevailing wind and readily erodible nature of the rock in parts of central Chatham Islands, in particular along the Western shore of Te Whanga. Water depth varies depending on whether or not the lagoon outlet is closed off from the open sea by a natural sandbar.

Accelerated coastal erosion is caused by activities that disturb or expose the soil to the erosive forces of gravity and rain-water. Climate or weather conditions combined with human activity can accentuate soil erosion, i.e. severe and intense storm events may increase the rate of accelerated erosion. Wet winters may saturate the ground increasing its susceptibility to accelerated erosion.

Likelihood - The eastern shore of the lagoon is aggrading and the thin land area which separates Te Whanga from Hanson Bay is actively growing.

Consequences - If high standing sand develops and is followed by significant rain, the water level in the lagoon can rise to three or four metres above sea level. Waves driven by winds from the North-Northeast erode the Western shore of the lagoon. The sediment derived from this erosion would be transported across the floor of the lagoon under the influence of prevailing wind conditions from the southwest.

2.3.5 Accelerated Coastal Erosion

Coastal erosion is the retreat of the shoreline caused by water currents, waves and wind. It is part of a natural process of shoreline movement that can be influenced by human activities. Most coastal erosion occurs in large increments during storms when heavy swells, sometimes accompanied by storm surges, buffet the coast. Eroded beaches are sometimes gradually rebuilt during intervening calm periods.

Underlying factors can, however, contribute to the location and severity of coastal erosion. These include the local geology, the supply of sediment to and along the coast, and the presence of artificial structures such as breakwaters and sea walls. Human activities can disrupt sediment supply and increase erosion.

Building port breakwaters alter sediment transport along the coast. Stormwater discharge across beaches can also contribute to localised erosion. Large-scale coastal erosion is a gradual process occurring over many storm events and areas susceptible to coastal erosion can be identified in advance.

There are periods when coastal erosion is more rapid and severe than average, and significant damage can occur.

Likelihood – Deaths not anticipated but land and assets on it, i.e. houses or roads can be damaged or destroyed. Rising sea levels contribute to coastal erosion as each successive storm can encroach further inland. Climate change is also likely to cause other changes in coastal erosion drivers such as wave patterns, storminess and other factors affecting coastal sediment supply like sediment input from rivers.

Consequences – Managing coastal hazards is a complex issue with different approaches to coastal hazards management, involving a combination of measures. Setbacks from the coast are the best way to reduce risk from coastal inundation and erosion in the undeveloped areas which is more about managing human activities than beaches.

2.3.6 Tsunami

Tsunamis are a natural phenomenon consisting of a series of waves. Tsunami characteristics are long wavelengths and extremely high velocity (up to 700km or more). Behaviour is similar to rapidly rising and falling tides with greater force than surf waves, not normally as breaking waves, and the third-fourth wave are often the highest, not the first. Tsunamis are generated when a large volume of water in the sea or lakes are displaced. As tsunamis move into shallow water they slow down, the distance between wave crests lessens, and the waves increase in height to perhaps tens of metres.

The size of a tsunami is judged by its maximum height above sea level and the amount of damage depends partly on the run-up and partly on the slope of the land. Significant tsunamis may inundate low-lying land such as river flats for many kilometres inland from the coast; waves may come ashore as steep breaking walls of water or as fast-rising water levels. Eighty percent of all tsunamis occur in the Pacific Ocean, and local source tsunamis usually affect limited stretches of coastline while those from distant sources may affect the entire coast.

Local source tsunamis generated less than one hou’rs travel time from the nearest New Zealand coast and around one-third of New Zealand’s earthquakes are capable of producing large 7-10m or greater tsunamis along tens to hundreds of kilometres of coastline. The most significant potential local tsunami source from earthquakes is the Hikurangi subduction zone along the east coast of the North Island. It is capable of producing a magnitude 7.5-8.5 earthquake, large enough to generate a tsunami which would affect many kilometres of coastline along the east coast of the North Island, upper South Island and the Chatham Islands.

There are also many faults along the continental shelf off New Zealand’s east coast which are capable of generating tsunamis. Regional source tsunamis are those that are generated one to three hours of travel time from New Zealand. The most significant regional tsunami sources for New Zealand are earthquakes in tectonically active areas to the north of New Zealand.

The Southern Kermadec trench is the most significant regional tsunami source with wave run-ups of up to 13m possible. Distant source tsunamis generated more than three hours' travel time from New Zealand. These tsunamis that are large enough to cause damage in New Zealand originate from subduction zones around the rim of the Pacific Ocean, particularly those along the coast of South America.

The most significant recorded in New Zealand history was in 1868, 1877 and 1960 which originated in this area. Earthquakes of magnitude 8.5 or higher on the South American coast have an average return period of 50 years. Since European settlement in the Chatham Islands, there have been three tsunamis that have exceeded 10 metres in 1855, 1868 and 1947 but only one tsunami that has officially recorded a death in New Zealand was in 1868 in the Chatham Islands. This tsunami was a magnitude 9.1 earthquake off the Peru/Chile coast, an area oriented in a manner which directs tsunami waves towards the Chatham Islands. Māori tradition also records several tsunamis in pre-European times that have caused large numbers of deaths.

Meteors can also cause a tsunami with the discovery of an enormous meteor crater on the New Zealand continental shelf south-west of Stewart Island. The cavity is 20km wide and 150 metres deep and lies 300 metres below the sea. This meteor impact would have generated a mega-tsunami more than 50 metres high. Scientists have also found tsunami deposits dated at around 1500 AD and at heights of over 130 metres on Australia's east coast.

Likelihood - Tsunamis can be generated by earthquakes or landslides that result in the displacement of water mass and are constituted as an ever-present potential threat to the Chatham Islands and can be generated from a local or distance source at any time.

Consequences - Wave height at the shore depends on the initial displacement of the sea floor at the source. The impact on land from water flow at one metre is life-threatening on the coast and can quickly wash people off their feet, cause injury and drowning, especially to young or elderly, and cause minor damage to buildings and infrastructure. At two metres it is a significant risk to life with injuries and drowning, damage to buildings and infrastructure, but not disastrous.

At four metres it is highly destructive with many injuries and fatalities and moderate to significant damage to both built and natural environments. Reinforced concrete buildings will suffer damage and water can penetrate one kilometre inland. At 10 metres (which has happened in the past) it would be a catastrophe with few people surviving. The natural environment would be changed with only the most durable buildings surviving. Water can run one to two kilometres or more inland in most low lying areas.

2.3.7 Earthquakes

An earthquake is the sudden release of slowly built up strain along a fault in the earth's crust. The strain accumulates when the Pacific and Australian tectonic plates move past each other. Most seismic activity, including its major historical earthquakes, occurs within a broad zone of deformation about 100km wide that runs along the plate boundary from offshore East Cape to Fiordland.

However; there is no evidence of active faulting within the Chatham Islands and very little seismic activity recorded from the eastern end of the Chatham Rise but there is sufficient seismicity to indicate ongoing tectonic activity within the Chatham Rise. In fact, two earthquakes were recorded in the Chathams in 1964 to 1989. Both events were 4.6 magnitudes, one 25km SW of Waitangi and the other 180km SE of Waitangi. According to collected statistics, small to moderate earthquakes can be expected to be felt in the Chatham Islands every few years.

Likelihood - Ground shaking due to earthquakes constitutes a potential hazard in the Chatham Islands, but the risk is minor.

Consequences - Any structures built on land underlain by water-saturated unconsolidated sediments would be at risk from liquefaction effects generated by potential ground-shaking earthquakes.

2.3.8 Volcanism

There are no known active volcanoes on the Chatham Islands or Chatham Rise. The nearest active volcanoes are Ruapehu and Ngauruhoe in the central North Island. It is evident from the stratigraphic record that significant volumes of air-borne volcanic ash were deposited on the Chatham Islands on numerous occasions during the late Pleistocene. These deposits were interpreted to be derived from massive eruptions in the central North Island.

Likelihood - It is not unreasonable to expect further such events in the geological future. The Central North Island volcanoes are a minor potential hazard to the Chatham Islands as are the chances of a volcanic eruption on the Chatham Islands or Chatham Rise.

Consequences - The consequences of this happening, however, would still have the potential to impact on the economy on the Chathams, affecting the fish processing plants, tourism and farming industries.

2.3.9 Drifting Sand Dunes

In some areas, dune movement is a problem and constitutes a potential hazard. The wind is so persistent and robust that previously stabilised dunes erode and sand drift occurs. Dune fields are formed above the beach as dry sand blows inland.

Wide, gently sloping beaches are framed by dunes, which are formed by windblown beach sand, with more dunes developing in front of the original. The vegetation Spinifex and pingao produce dunes with low, regular profile and influence the shape of the dune. However, clumps of marram produce higher irregular dunes.

Likelihood - Sand drifts happen now and can become a problem where the sand covers the road and stops traffic.

Consequences - Consequences are minor and any road blockage can be cleared within hours but can become a problem for farmers regarding feed for stock.

2.4.0 Fire and Emergency New Zealand

A wildfire is any unanticipated fire in an open space such as gorse, grassland or forest. Hazards are generated when wildfire threatens lives, properties, commercial plantations or areas of natural or cultural significance. Fire is not a natural part of our ecosystem as it is in North America and Australia and so native species have not developed adaptive traits to cope with fires. People start most wildfires, either deliberately or unintentionally when land clearing gets out of control. Only 2% of wildfires in New Zealand including the Chathams were ignited naturally.

Conditions conducive to wildfire ignition and spread depend on the amount of fuel available, temperature, humidity and wind speed. Topography also has a significant influence on fire spread - the steeper the slope, the faster the fire will advance. There is a considerable variation in these factors and therefore in the wildfire hazards across New Zealand.

Wildfires are a significant concern especially during the dry season as 50% of the Chatham Islands land surface is peat. Peat fires are slow burning and when combined with dry surfaces and persistent winds can burn underground and come up to the surface and continue burning. These fires are a constant threat to rural settlements.

However, fire as land management tools, are used and the Chathams are not lush, green vegetation covered islands. Its' fuel types are considered the most flammable fuel type anywhere in the world with old-man gorse, peat, wax, compress native forest and fern. Along with dangerous fire behaviour these fuel types make it physically difficult to fight.

Likelihood – It is anticipated that FENZ will have at least 1-2 fires per year. Wildfire hazards are increasing with climate change in eastern areas as it is becoming drier. Wildfire can have a devastating impact on forests particularly exotic, which are more flammable than native forests. Wildfires also cause damage to rural development and lifestyle blocks including farm buildings, fences and stock.

Consequences - In a rural settlement, it is a high consequence as there are no fire response facilities or equipment available within 30-50 minutes response time, by which time several homes or a factory could be burnt down. Rural communities are at increased risk of wildfire because of their isolation and difficulty with the evacuation. Wildfires also have impacts on biodiversity, conservation and tourism.

Urban fires are also of significant concern as significant damage to a range of buildings is entirely possible, affecting people's homes and business alike. As with rural fire people, resources can be a problem with volunteers on the islands.

Likelihood - There can be significant damage to a range of buildings, especially if there is a hazardous substance kept on site. There is a likelihood that this type of fire will occur but is more likely to be in the rural settlement.

Consequences - If the loss is one of the fish processing plants this could have a high impact affecting owners, employees, fishers, exporters, freighters and the power company (if they are on main supply).

2.4.1 Drought

The risk of drought in the Chatham Islands is more of a nuisance than a primary concern; however, there is a probability that dry seasons will be drier. With global warming, events are expected to become more intense and last longer. Drought is most likely to occur where soils have low moisture-storage potential and have little or no irrigation available.

The severity of a drought is often described using potential evapotranspiration deficit (PED), a measure of the gap between the water demand of plants and what water is available. PED is measured in millimetres and is the amount of water that would need to be added, by rainfall or irrigation, to keep pasture growing at an optimum rate. El Nino cycles influence the occurrence of droughts and the Interdecadal Pacific Oscillation.

Likelihood – Climate hazards result from extremes in the distribution of the climate events including drought.

Consequences – Shortage of water for both stock and human consumption. Wildfire risk increases during dry periods and drought when a sudden dry period follows a period of good rainfall, as the vegetation that has grown well dries out and becomes readily combustible. Wildfire hazards can increase during prolonged droughts as the amount of vegetation available to fuel fires increases.

2.4.2 Sea Level Rise

Any potential rise in sea level would have a profound effect on the Chatham Islands and in particular on low-lying areas of Chatham Islands. A rise of one to two metres in sea level would significantly alter conditions in Te Whanga, leading to enhanced erosion of all lagoon shores and substantial modification of the current morphological configuration of the Northern and Eastern Chatham Islands.

Likelihood - Any rise in sea level due to global warming would be slow allowing ample time to respond and adjust.

Consequences - Harbours, low-lying settlements and properties would also be affected.

2.4.3

Abnormally high tides, storm waves or tsunami may cause inundation of low-lying land, affecting buildings and housing. Flooding of this type is not frequent and as long as hazard risks consideration happens when development does occur then the impact may remain low. A flood also occurs when the amount of water in a river exceeds the capacity of the river channel and inundates adjacent land.

Floods are an integral part of a river's natural cycle transferring sediment through the river system to floodplains and offshore. The size of a flood in a river depends on the intensity, duration and total amount of rainfall and the characteristics of the catchment and floodplain. New Zealand lies in the zone of strong westerly winds which flow

around the southern hemisphere where warm, moist air of tropical or subtropical origin meets cold, dry air from high latitudes.

Topography and the angle at which the airstream hits New Zealand's ranges, along with the temperature and humidity of the air, dictate the distribution of rainfall over the country and, consequently, heavy rainfall can occur at any time of the year in any part of the country.

Likelihood – Global warming indicates that changes to the sea-levels are most likely to rise 30-50cm by 2100. This rise will accelerate coastal erosion, inundation and flooding from storms. Weather events are likely to become more frequent and intense. Heavy rainfall will become more common.

Consequences - Warnings of large events should be sufficient to avoid any loss of life; however, the main human impact will be displacement, accommodation issues and distress through loss of possessions. Loss of infrastructure will be significant, especially roads, bridges and loss of pasture for farming and horticulture. There would be noticeable disruption to some aspects of normal social functions like education, employment and business interruption. The financial implications are major,particularly for those with no insurance.

2.4.4 Tsunami

The Chatham Islands are vulnerable to tsunamis from New Zealand, other Pacific Islands and from across the Pacific Ocean, most notably South America. Chatham Islands Council has modelled potential tsunami inundation and used this information, along with historical and pre-historic tsunami records, to develop tsunami evacuation zones for the Chatham Islands. The most significant potential local tsunami source from earthquakes is the Hikurangi subduction zone along the east coast of the North Island. It is capable of producing a magnitude 7.5-8.5 earthquake, large enough to generate a tsunami which would affect many kilometres of coastline along the east coast of the North Island, upper South Island and the Chatham Islands. There are also many faults along the continental shelf off New Zealand's east coast which are capable of generating tsunamis.

Regional source tsunamis are generated one to three hours of travel time from New Zealand. The most significant regional tsunami sources for New Zealand are earthquakes in tectonically active areas to the north of New Zealand. The Southern Kermadec trench is the most significant regional tsunami source with wave run-ups of up to 13m possible.

Distant source tsunamis are generated more than three hours travel time from New Zealand. These tsunamis that are large enough to cause damage in New Zealand originate from subduction zones around the rim of the Pacific Ocean, particularly those along the coast of South America. The largest recorded in New Zealand history were in 1868, 1877 and 1960 which originated from this area. Earthquakes of magnitude 8.5 or higher of the South American coast have an average return period of 50 years.

Since European settlement in the Chatham Islands, there have been three tsunamis that exceeded 10 metresf in 1855, 1868 and 1947 but only one tsunami that has officially recorded a death in New Zealand and that was in 1868 in the Chatham Islands. This tsunami generated by a magnitude 9.1 earthquake off the Peru/Chile coast, an area oriented in a manner which directs tsunami waves towards the Chatham Islands. Māori tradition also records several tsunamis in pre-European times that have caused large numbers of deaths.

Meteors can also cause a tsunami with the discovery of an enormous meteor crater on the New Zealand continental shelf south-west of Stewart Island. The crater is 20km wide and 150 metres deep and lies 300 metres below the sea. This meteor impact would have generated a mega-tsunami more than 50 metres high. Scientists have also found tsunami deposits dated at around 1500 AD and found at heights of over 130 metres on the Australian's east coast.

Likelihood - Tsunamis can be generated by earthquakes or landslides that result in the displacement of water mass and tsunamis constitute an ever-present potential threat to the Chatham Islands and can generate from a local or distance source at any time.

Consequences - Wave height at the shore depends on the initial displacement of the sea floor at the source. Impact on land from water flow at one metre is life-threatening on the coast and can easily wash people off their feet, cause injury and drowning, especially to young or elderly with minor damage to buildings and infrastructure. At two metres it is a significant risk to life with injuries and drowning, damage to buildings and infrastructure, but not disastrous. At four metres it is highly destructive with many injuries and fatalities and moderate to significant damage to both built and natural environments. Reinforced concrete buildings will suffer damage and water can penetrate one kilometre inland. At 10 metres (which has happened in the past) it would be a catastrophe with few people surviving. The natural environment would be modified with only the most robust buildings surviving. Water can run one to two kilometres or more inland in most low lying areas.

2.4.5 Power Failure

The risk analysis centred around whether a fire or tsunami event interrupted the main power supply at its point of origin. However, it did not consider power loss at a settlement, i.e. power lines were taken down during a tsunami, windstorm or rural fire. Therefore the risk analysis will remain as has been identified for the likelihood and consequence.

Likelihood - Loss of power is likely to be from wind storms such as cyclone damage or fire.

Consequences - A major fire at the generation plant could potentially take out the power supply for an extended period. Until emergency generators or temporary supply power are available, the Chathams would be dependent on resources from New Zealand.

2.4.6 Water Failure

The Chatham Islands Council is required to carry out a water supply service assessment under the Local Government Act 2002. The legislation states that council must assess water and sanitary services and give specific details as to the scope of the assessments and processes used. There is currently no demand management strategy for the Waitangi reticulation system.

There is, however, a flow meter, which is fitted to each residential property during the upgrade in 2004/05 which means that water demand, can be monitored on a regular basis and strategies implemented to reduce demand to an acceptable level if required. There is the potential for infrastructure damage caused by flooding, tsunami, erosion/stability or earthquake. Risks arise from any number of sources and are grouped into two main areas:

- *Management - Those risks that are primarily concerned with the way the water network is managed including funding, resourcing, programming of work and interaction with the public; and*

- *Environmental - Those risks that are concerned with the impact of the environment on the physical assets, including natural and human-made disasters.*

Likelihood - Storage and distribution system fails because there is not enough water in post-treatment storage to meet the demand is unlikely but is expected to occur every 5-10 years.

Consequences - If this were to happen, the consequences would be significant, but the overall risk would be medium. May need to consider making bottled drinking water available.

2.4.7 Wastewater

Wastewater treatment aims to achieve a water quality that can support the public economic recreational and cultural needs and safeguards life-supporting capacity ecosystems. The plant operation must manage the impact of natural and physical resources in a manner which enables the community to be sustainable and operational but must control adverse effects to minimise effects on the environment.

If the wastewater treatment plant stopped working, the septic tank would fill up and flow out the overflow pipe to the old sand filter beside the works depot. If the risks have been mitigated and are a reasonably low risk, management for the operation and maintenance is addressed by the response time for the contractor to attend to power failures and blockages.

The contractor has two trained operators for the wastewater activity and the electrical service has maintenance staff to assist in the event of an emergency. Also, the mainland-based staff can be on the island within a day or

two. The connection of a diesel generator could also provide electricity for raw wastewater pumps and a treatment plant to ensure continuity of supply of service.

Likelihood - The likelihood that the treatment plant was to fail is possible at some stage.

Consequences - If it were likely to fail the consequences would be short-lived before it was up and running again, therefore, the consequences would be low. Portable loos would need to be made avaialble for public use.

2.4.8 Telecommunication

Communication off the Islands is still of concern as the limited phone lines continue to become overloaded. However, this issue is presently begin addressed and in the event of an emergency, the Emergency Operation Centre has access to a satellite phone and a BGAN which can give them access to the internet, phone and fax. There is also access to the Police HF radio.

Likelihood – The likelihood of losing communication is quite high and does happen.

Consequences – Losing communication with the New Zealand mainland and locally is a concern during an emergency event limiting options.

2.4.9 Roading

Several sections of the islands' road networks along coastal or lagoon fringes may be susceptible to flooding from the tsunami, surge, sand drifts or landslips. It is possible to render the roads impassable for hours, days or longer. The loss of bridges can take out other services, causing access problems and affecting the restoration process of other utility owners. It is possible that an event will damage the infrastructure at the same time with broader consequences for communities that become isolated, one route in and out. There is also the possibility of a bus crash somewhere on these roads with 20 or more passengers.

Likelihood – It is possible for one of the hazards named above to happen at any time.

Consequences – The impact of the different hazards outlined would need to be dealt with separately. The incidents would be dealt with on the same lines as an air crash and would have the same emotional impact.

2.5.0 Air Transport

Due to the islands' geographical isolation regarding sea, the airport is a valuable asset and vital link to New Zealand. During normal times and times of an emergency, any failure of the airport infrastructure could affect the airport's ability to function. There is a backup runway at Hapupu; however, the use of this would largely depend on road access at the time.

Likelihood – There have been reported incidents of air crashes on or around Chatham and Pitt, so the reality of it is happening again is entirely possible.

Consequences – The impact would depend on the type of crash, the smaller the plane, the smaller the level of impact, fewer passengers, less casualty, fewer deaths. The larger the plane, the more casualties or deaths. The islands emergency services capacity would be exceeded and would need assistance from New Zealand.

2.5.1 Civil Unrest

Crime is a breach of rules or laws for which some legal systems can ultimately prescribe a conviction. Modern societies regard crimes as offences against the public or its communities, distinguished from torts (offences against the private party) that can give rise to a civil cause of action.

Likelihood – The likelihood of criminal unrest on the Chatham Islands is low. There is no organised crime and the island's culture and isolation act as a natural deterrent to overall crime. The crimes likely to be committed during a severe natural event are theft presented by opportunity and assault as the result of a volatile dynamic situation. Emotions are likely to be high and it is possible personal injury may occur.

Consequences – The consequences of breaching the law remain the same and if needed, the Police may authorise someone else to exercise powers under the CDEM Act 2002 or other Acts as required to assist in maintaining law and order to protect life and property.

2.5.2 Hazardous Substances

Hazardous substances by their very nature present a risk to people and the environment. The degree of risk is dependent on the substance, its state, concentration, quantity and also the conditions surrounding it. The degree of risk can increase with a change in its state or the conditions surrounding it. It may in itself present a risk by way of a leak, explosion or may be in association with another hazard event, e.g. fire, traffic accident.

Most hazardous substances are stored, used, and transported in relatively small quantities but still have the potential to cause damage to life. Petrochemicals include petrol, diesel, aviation fuel and natural gas-based products and solvents. Pesticides are stored and used in antifouling treatments for boats, agriculture and horticulture. Domestic products such as cleaners and detergents that include hazardous substances are also widely used such as industrial chemicals.

Likelihood – No readily available data gives the precise extent of these impacts, but there is sufficient information to show that death and illness from acute and chronic exposure to hazardous substances affect many thousands of people each year in New Zealand. Most adverse health effects arise from exposure to hazardous substances in the workplace. Common incidents result from LPG use and children swallowing household products.

Incidents caused by a natural hazard could affect a production and storage site, transport vehicle or end-user site, a transportation accident, lack of care during use, criminal activity or inadequate storage or disposal. However, large-scale hazardous substance incidents that would require mass evacuation and coordinated CDEM involvement on the Chatham Islands are uncommon.

Consequences – A hazardous substance incident is an unplanned or uncontrolled release of hazardous substances such as fuels, flammable substances, toxic chemicals, pesticides, microorganisms, including contaminated waste products. The consequences of hazardous substance incidents can include death, illness, evacuation, environmental contamination and economic losses for businesses involved. The effects of a hazardous substance release can be worsened if two hazardous substances stored near each other trigger a chemical reaction.

2.5.3 Public Health

During an emergency, essential services disruption will occur, e.g. power, household water supplies, sewerage and wastewater, refuse collection and food supply. Houses may become uninhabitable and people may need to relocate to temporary accommodation which may become overcrowde leading to unsafe, unhealthy or unsanitary conditions, increasing public health nuisances and the risk of disease already present in our communities. Some excellent websites to refer to are www.gethru.govt.nz from the

Ministry of Health about protecting health in an emergency and WHO water, sanitation and health http://www.who.int/.

Likelihood – A public health emergency may occur in the future but there is no certainty about when or how or even where it will originate. Given the isolation of the Chathams, the effects will be significant.

Consequences – Many Chatham Islanders are self-sufficient regarding power generation, water storage, septic tanks, food and supply storage. Depending on the disaster, the impact may lessen because of this. Regardless there are a significant number of people dependent on town supply that may well be affected. Sustainable support services required in an emergency will be a challenge given the community's isolation in comparison to the rest of New Zealand.

2.5.4 Pandemic

Infectious disease pandemics are characterised by the global spread of a new type of virus that can cause unusually high rates of illness and mortality for an extended period. Most people are not immune to a new virus and are therefore susceptible to infection. A pandemic can only start under certain conditions such as when a new strain of influenza virus emerges. It infects humans causing severe illness, it spreads quickly and is sustainable from human to human. Some pandemics have comparatively mild effects while others may have incredibly harsh impacts.

Virus subtypes have caused three pandemics last century, all of which spread around the world within a year of being clinically recognised. The 1918/19 Spanish flu A (H1N1) was the most severe pandemic causing between 50 and 100 million deaths worldwide with a significant impact in New Zealand. Viruses containing a combination of genes from a human influenza virus and an avian influenza virus with the 1918 pandemic virus appearing caused the 1957 and 1968 pandemics to be utterly avian in origin.

Likelihood – Another pandemic will occur in the future but there is no certainty about when or how, or even where it will originate. Because of our isolation, it may be possible to delay the impact but the effects would still be significant.

Consequences –The relative impact on each aspect of society would be moderate. Services and supplies including food, electricity supplies, educational facilities and postal services could be affected. It is standard business activities, regardless of their nature, that will suffer during a pandemic.

2.5.5 Biosecurity

Biosecurity is a set of preventive measures designed to reduce the risk of transmission of infectious diseases, quarantined pests, invasive alien species and living modified organisms. Biosecurity helps to prevent the use of dangerous pathogens and toxins for malicious use and the spread of biological agents. Although security is regarding "Guards, Gates, and Guns", biosecurity encompasses much more than that and requires the cooperation of scientists, technicians, policy makers, security engineers and law enforcement officials.

Animal biosecurity is the product of all actions undertaken by an entity to prevent the introduction of disease agents into a specific area. It is a comprehensive approach encompassing different means of prevention and containment. A critical element in animal biosecurity, bio-containment, is the control of disease agents already present in a particular area and works to prevent new transmissions. Animal biosecurity may protect organisms from infectious agents or non-infectious agents such as toxins or pollutants and execute in areas as large as a nation or as small as a local farm.

Likelihood –Transmission of pathogens can occur in various ways including physical contact, contaminated food, bodily fluids, objects, airborne inhalation or through vector organisms. Infectious diseases that are especially infective are contagious and can transmit by contact with an ill person or their secretions. Infectious diseases with more specialised routes of infection, such as vector transmission or sexual transmission, are regarded as contagious but do not require medical quarantine of victims.

Consequences – The Chatham Islands are unique because they have relatively few pests. The establishment of infectious diseases is possible but unlikely and would, if contagious, require medical quarantine of humans or animals.

2.5.6 Marine Oil Spill

The marine oil spill is an actual or probable oil spill into the internal or marine waters of New Zealand. It must be either directly into the sea or ultimately reach marine water and have arisen from activities covered by the Maritime Transport Act. When oil is spilt at sea, it undergoes some physical changes some of which lead to its disappearance from the sea surface, while others cause it to persist.

Although the marine environment eventually assimilates spilt oil, the time involved depends upon such factors as the amount of oil spilt, its initial physical and chemical characteristics, the prevailing climatic and sea conditions, and weathering and how to identify the window of opportunity for dispersant application.

Likelihood – Possible due to the high number of fishing vessels used and the fact that they fuel up in the water alongside the wharf.

Consequences – This would be moderate as the type of fuel used is mainly diesel.

**Reference GNS Cretaceous-Cenozoic geology and biostratigraphy of the Chatham Islands*
**reference Niwa report mefo5307 Chatham islands climate change*
**reference formidable forces "Geoff Hicks and Hamish Campbell*

SECTION 3: REDUCTION

3.0 Introduction

The reduction section of this Plan relates to the goals set out in the National CDEM Strategy. The National Strategy defines reduction as "activities and measures are taken to analyse long-term risks to human life and property from natural or man-made hazards and to eliminate or reduce those risks, as practicable". Risks from hazards pose a significant threat to the Chathams' social, economic and physical environments.

Risk reduction is an effective strategy for addressing those types of risks. This section introduces different approaches, methods and tools for reduction of some of the significant risk threats to the region.

3.1 Principles

- *Any event that has the potential to cause harm or injury to human life and safety will, therefore, take precedence over all other risk priorities*
- *Risks that have the potential to cause severe economic losses, substantial damage to buildings or infrastructure including lifeline utilities, will also have a high priority*
- *Integrated planning and risk management at all Council levels*
- *Multi-agency and all of the government approach*
- *The focus on impact effects and outcomes*

Statutory and non-statutory instruments govern hazards management policy. The link between these is relevant for risk reduction activities.

3.2 Risk Management

Risk management is a critical tool to ensure that social, economic, built and environmental issues are incorporated into the planning processes where human activities interact with natural and technological hazards. As part of describing and ranking the risks, key issues are identified along with the actions, targets and objectives identified in this Plan.

3.3 Key Elements of Risk Management

- *Communicate and consult with internal and external partners as appropriate at each stage of the process.*
- *Identify and analyse the risks as per the Risk Profile Section of this Plan.*
- *Evaluate the risks to consider the balance between potential benefits and adverse outcomes.*
- *Treat risks by developing and implementing strategies for increasing potential benefits and reducing potential risks.*
- *Monitor and review the importance of continuous improvement - it is necessary to monitor the effectiveness of all the risk management processes and the effectiveness of treatment measures to ensure changing circumstances do not alter priorities.*

3.4 Reduction Goals

- *Build on community awareness risks and hazards.*
- *Reduce the potential for hazard in the community.*
- *Plan for a managed approach to restoring social, economic, natural and built environments.*
- *Implement where possible cost-effective risk reduction*

3.5 Reduction Objective

TABLE 2

Reduction issues	Relationship to National CDEM Strategy	Reduction objective	Method	Action
#1 Need for annual revision of hazards consequences and impact.	Goal 2 " reducing the risks from hazards to New Zealand."	Continue to develop and review plans that are consistent with known hazards and vulnerabilities.	Review plans that relate to known hazards.	Continue to maintain and review strategic plans that relate to hazards, ensuring they are compliant with all statutory requirements and linked to the appropriate documentation.
#2 Ensuring "risk management" is used as a tool	Goal 2	Ensure that "risk management" as a critical tool is not only used but incorporated into the planning processes where human activities interact with natural and technological hazards.	Establish internal processes to ensure any matters impacted by natural or technological hazards have regard to the overall emergency management strategy.	Ensure local authorities incorporates emergency management and hazard risk management.
#3 Resourcing the work plan to complete the actions identified	Goal 2	A strong focus on reducing risks with comprehensive planning and methods to ensure that the highest priority risks are identified and targeted first.	Evaluate, monitor and review all emergency management plans as outlined in the annual work plan.	Ensure that all CDEM Plan actions identified are included in the annual work plan over a five year period.
#4 Annual staff training in areas that they may be required to assist	Goal 2	Ensure emergency staff and volunteers are trained and adequately resourced.	Continue to develop and train in areas of emergency management across the 4r's	Ensure that adequate training is developed and implemented for CDEM, CEG, EOC, staff and volunteers
#5 Not all lifeline utilities have continuance plans in place	Goal 2	Ensure that lifeline utilities are prepared and able to operate during an emergency at some level.	Ensure that all lifeline utilities have continuance plans in place.	Keep copies of all continuance plans with standard operating prodecudres (SOP) in the emergency office.

3.6 Acts, Plans & Mechanisms

3.7 Legislation

- *CDEM Act 2002*
- *CDEM Act Amendment 2016*
- *National CDEM Plan 2015*
- *Local Government Act 2002*
- *Fire Emergency New Zealand Act 2017*
- *Biosecurity Act 1993*
- *Resource Management Act 1991*
- *Building Act 2004*
- *Soil Conservation and Rivers Control Act 1941*
- *Hazardous Substances & New Organisms Act 1996*
- *Maritime Transport Act 1994*
- *Health Act 1956*
- *NZ Public Health & Disability Act 2000*
- *Health and Safety at Work Act 2015*
- *Canterbury EQ Recovery Act 2011*
- *Defence Act 1990*
- *Epidemic Preparedness Act 2006*
- *Public Works Act 1981*
- *Building (Earthquake-Prone Buildings) Amendment Act 2016*
- *Petroleum Act 1937*

3.8 Statutory and Non Statutory Planning Documents

- *Animal Welfare 1999*
- *Regional Policy Statements & Plans*
- *Long-Term Plans*
- *Asset Management Plans*
- *Business Continuity Plans*
- *Infrastructure Management Plans*
- *Oil Emergency Response Strategy*
- *The Guide to the National Plan 2015*
- *Resource Management Plan 2001*

3.9 Best Practice Guidelines and Technical Standards

- *MCDEM Directors Guidelines, Supporting Plans, Best Practice Guides, Information Series, & Technical Standards*
- *CDEM Strategies*
- *ISO Standards*

SECTION 4: READINESS

4.0 Introduction

The Readiness section relates directly to Goals 1 and 3 of the National CDEM Strategy. Readiness involves planning and developing operational arrangements, capacity and capability before an emergency happens. Readiness is dependent on the nature and scope of identified hazards and risks including likely emergency scenarios.

There are two distinct aspects of Readiness:

Organisational Readiness which focuses on the Readiness of emergency response organisations, emergency services, local authorities and health services providers. This can be achieved through planning, developing capability, exercising and testing arrangements, alongside monitoring and evaluation processes.

Community Readiness which focuses on communities, families, and individuals' ability to meet their own needs during and after emergencies. Need to ensure communities are informed of hazards and risks and appropriately prepared.

4.1 Principles

- *A description of the current levels of organisational and community readiness*
- *Issues that arise from current levels of readiness*
- *Objectives relating to the maintenance and enhancement of readiness including planning, training and education*
- *Outline methods and resources required to achieve these readiness objectives*
- *Arrangements in place to support readiness planning*
- *Description of ongoing readiness activities*
- *Develop, maintain and enhance plans for predetermined functional responses and consequences*
- *Establish and maintain adequate support for emergency events*

4.2 Organisational and Community Issues

Organisational readiness ranges between 80% prepared 24/7 with the community at 20% having a home kit and 60% knowing where to go in an emergency.

4.3 Issues, Objectives, Method and Action

TABLE 3

Organisational issue	***Relationship to national CDEM strategy goals***	***Readiness objective***	***Method***	***Action***
#1 *Improving accessibility of CDEM code research*	*Goal 1* *"increasing community awareness, understanding, preparedness and participation in civil defence emergency management."*	*Increase funding opportunities to pursue research projects.*	*Relationship building and networking within and across the emergency and science communities.*	*Speak with Ecan, MCDEM, GNS, Niwa, regarding sourcing funding avenues for inundation modelling.*
#2 *Availability to work with all schools in hazard awareness*	*Goal 1*	*Continue to work with schools/early childhood learning centres promoting hazard awareness.*	*Provide educational information to all schools and include where possible in community programmes or exercises.*	*Education tools from NPERG* *Develop hazard information that will help with hazards awareness in the Chatham and Pitt Island schools.*
#3 *Develop a PIM Plan*	*Goal 1*	*Consistency planning*	*Provide adequate information to PIM personnel*	*Develop PM Plan* *Form PIM team* *Develop training programme* *Implement training*
#4 *Increasing community awareness, understanding, preparedness and participation in civil defence emergency management*	*Goal 1*	*Promote community understanding of hazards, risks, impacts and consequences identified in this plan.*	*Use of local media, schools and brochures and involvement in community events*	*Access to the local newspaper "Chatham Islander", publish updated CDEM brochure including risks and hazards, maildrop, use of Council minutes/reports*
#5 *Community involvement in CDEM, planning and preparedness*	*Goal 1*	*Encourage community to be more involved in the decision-making.*	*Consultation on CDEM group plan*	*Encourage public to comment on CDEM group plan.* *Encourage public to attend CDEM group meeting.*
#6	*Goal 1*	*Increase joint partners' effective collaboration and*	*Workshop and team building*	*Encourage partners to work together during*

Relationship building		*commitment*		*training and exercises.* *Encourage social events for teams to unwind. I.e. Response team Christmas bbq* *A published schedule of CDEM governance meetings* *Meetings with stakeholders*

4.4 Actions

The effectiveness of the Islands' response will reflect the quality of "Readiness Activities" undertaken by personnel who make up the organisation, integration with emergency services and overall preparedness of the public to meet particular disasters. The CDEM Group has a responsibility to ensure there is effective training for all emergency management personnel including the following

- *Emergency Management Staff*
- *EOC Personnel*
- *Response Team*
- *Council Staff*
- *Councillors*
-
- *Welfare Personnel*
- *Controller*
- *Recovery Personnel*
- *Area Coordinators*

4.5 Training

The CDEM Group train in a 5-year cycle within the time span of this Group plan, enabling a logical progression from essential skill to an important exercise and then back to pick up any new members. CDEM needs to build on and maintain the necessary Not sure skills and experiences during this period. Once in the lifespan of this plan, there must be a Tier 3-4 all out to the community training exercise including the involvement of the National Crisis Management Centre.

The following is the next 5-year commitment to training; however, the training exercises may not necessarily run in order as shown, as long as they are all completed over this period. CDEM Group also commits to the 10 year National Exercise Program for training and annual training exercises for the Chatham Islands Response Team.

Figure 2

Year 1 Training
EOC Training with and without the presence of the Emergency Management Staff, Controller
Year 2 Training
EOC and Welfare Personnel Training. This can be in the form of workshops or EOC, Welfare activation exercise
Year 3 Training
Public awareness programme, working with the schools and the communitiy
Year 4 Training
Working with all stakeholders, partners and emergency services to build on awareness
Year 5 Training

All out to the community exercise (tier 3-4) is encouraged in the Chatham Islands. The idea of every home having a survival kit is encouraged, and the CDEM Group promotes the use and maintenance of standard resources. Most homes have at least three days of food supply and this should be promoted as a general standard. The broader community has rainwater tanks for collection of water.

At risk groups that may need assistance are considered to be the elderly or disabled; however most if not all have family that can assist them if needed.

SECTION 5: RESPONSE

5.0 Introduction

It is the intention of this section of the Plan to clarify the mandates, processes and resources for operational arrangements. Planning for response endeavours to manage residual risk and is carried out in the readiness phase commencing with the CDEM Group Plan. This plan involves local and hazard-specific planning with the aim to direct and coordinate an emergency response. Emergency responses are influenced by the measures already taken in the risk reduction and readiness phases.

The response section of this Plan relates directly to Goal 3 of the National Civil Defence and Emergency Management Strategy which is “enhancing New Zealand’s capability to manage Civil Defence Emergencies”. This section also describes the actions taken immediately before, during, or directly after a civil defence emergency to save lives and protect property and to support communities to recover, with a focus on operational arrangements and documents that empower it.

5.1 Principles

- *By the National CDEM Plan, all agencies should respond to an emergency by activating their plans and coordinating with the lead agency to work within their jurisdiction.*
- *During an event, emergency services are expected to assess the effect on the community, coordinate local agency efforts and communicate assessments and actions with the lead agency.*
- *Response objectives are the preservation of life and the prevention of escalation of the emergency, by maintaining law and order ensuring the wellbeing of the community.*
- *Provision or restoration of essential services*
- *Preservation of Governance*
- *Protection of property*
- *Protection of natural, social, built and economic environments*

5.2 Goals of the National CDEM Strategy

The Response section of a CDEM Group Plan should relate to Goal 3 of the National CDEM Strategy.

Response issues should form the basis for the development of objectives that will improve response functionality that the CDEM Group and its local authority members and partner organisations will work towards in the CDEM Group Plan.

Figure 3

5.3 Issues, Objectives Method and Actions

TABLE 4

Response issues	Relationship to national CDEM strategy	Response objective	method	action
#1 Limited people resources with numbers declining every year	Goal 3 "Enhancing New Zealand's capability to manage civil defence emergencies."	Enhance the capability to support the response personnel during an emergency event.	Encourage partners and key stakeholders to enlist the support of their people resources to become involved in CDEM.	CDEM group to inform the EM of anyone interested in assisting in CDEM and identifying where his or her expertise may be best suited.
#2 Community-based response exercise once every five years	Goal 3	Test community capability during the life of this plan.	Out to community exercise.	Develop and implement community exercise involving evacuation, testing all response plans.

Response issues	Relationship to national CDEM strategy	Response objective	method	action
#3 Unable to test partner or agency response plans	Goal 3	The ability to manage adverse situations during a response phase.	Ensure that all joint partners and agencies' response plans are current and compliant.	Partner agencies and stakeholder consult with emergency management in the development of their plans
#4 Continue professional development within CDEM including opportunities to learn from other CDEM groups experiences across the 4'rs	Goal 3	Ensure training opportunities are made available to all CDEM personnel.	Develop or implement professional development programmes.	Ensure annual training programmes scheduled for emergency personnel. National 10 yr training programme scheduled. Ensure that exercises are relevant. May need to enlist the services of ECan with the development of exercises
#5 Promote capability through better communication cover during a response	Goal 3	Improve island capability to manage emergencies with better communication technology during a response phase.	Improve internet access and seek the availability of cell phone coverage.	ConItinue to join with the Chatham Islands Enterprise Trust to seek solutions to enhance communication capability pursue through all and any channels cell phone cover for the Chatham
#6 The community capacity to respond to a significant emergency event can be hindered due to people resources being off island	Goal 3	Ensure there are support systems in place in case there is a lack of CDEM personnel on the island during a response phase.	Seek support from off islands	Build a relationship with a support team to come from NZ if required or via NCMC

5.4 Functions of the Emergency Operation Centre (EOC)

The EOC was established to provide control, direction, coordination of resources and support. The EOC also facilitates and manages information to support the local authority and emergency services that respond to a local emergency event. The EOC uses the CIMS (coordinated incident management system) which is utilised nationally by emergency services and other agencies as a basis for operational response.

An essential aspect of CIMS is the coordination of agencies to ensure consistent and effective response and recovery efforts. CIMS is about teamwork, sharing terminology and using modular organisational structure. CIMS is a multi-agency and incident control system (horizontally across agencies and vertically within).

The EOC is situated at the Chatham Islands Council building in the chambers. If the Council need to vacate the premises the other building will be decided on the day as the EOC is capable of working remotely from anywhere.

5.5 Coordinated Incident Management System (CIMS) Principles

- *A common use of terminology*
- *A modular organisation*
- *Integrated communications*
- *Consolidated action plans*
- *Manageable control*
- *Designated emergency facilities*
- *Resource management*

5.6 Common Terminology

Standard terminology is essential in any emergency management system, unusually when diverse or other than first response agencies are involved in the response. When agencies have slightly different meanings for terms, confusion and inefficiency can result. In CIMS, primary organisational functions, facilities, and resources are pre-designated and given titles. CIMS terminology is standard and consistent among all the agencies involved.

5.7 Modular Organisation

A modular organisation develops from the top-down organisational structure at any incident. “Top-down” means that, at the very least, the first-arriving officer who becomes the Incident Controller establishes the Control/Command function. As the incident warrants, the Incident Controller activates other functional areas. In approximately 95 percent of all incidents, the organisational structure for operations consists of a command and resources (e.g. one fire truck, an ambulance, or a tow truck).

If needed, however, the CIMS structure can consist of several layers.

5.8 Integrated Communications

Integrated communications require a common communications plan, standard operating procedures, clear text, common frequencies and common terminology. Several communications networks may be established, depending on the size and complexity of the incident.

5.9 Consolidated Incident

Consolidated Incident Action Plans describe response goals, operational objectives and support activities. The Incident Controller decides whether to have a written Incident Action Plan.

5.1.0 Action Plans

Incident Action Plans should cover all the objectives and support activities needed during the entire operational period. A written plan is preferable to an oral plan because it demonstrates responsibility and provides documentation when requesting assistance. Incident Action Plans that include the measurable goals and objectives to be achieve are always prepared around a timeframe called an operational period.

5.1.1 Manageable Span of Control

A manageable span of control is the number of individuals or functions one person can manage effectively. In CIMs the span of control for any person falls within a range of three to seven resources, with five being the optimum.

5.1.2 Designated Incident Facilities

It is important that there are designated incident facilities with clearly defined functions to assist in the effective management of an incident. Every incident requires one Incident Control Point. Additional facilities designated as the complexity of an incident increases.

5.1.3 Comprehensive Resource Management

Comprehensive resource management is a means of organising the total resource across all organisations deployed at an incident.

- *Maximises resource use*
- *Consolidates control of single resources*
- *Reduces the communications load*
- *Provides accountability*
- *Reduces freelancing*
- *Ensures personal safety*
- *Assigns all resources to a status condition.*

5.1.4 EOC Structure

The EOC structure is a response organisation but it may not require every function operating during some emergencies. Some situations may only require the Controller and other staff as required. The EOC will require information, display materials, telecommunication and any supporting equipment required to ensure efficient operation including capabilities to support systems that may be required to allow for continuous and independent operation.

5.1.5 EOC Personnel

This section's intention is a quick reference and should be read in conjunction with the EOC standard operating procedure, personnel roles, and responsibilities. The EOC management team consists of Hazard Risk Manager/PIM, Administration Manager, and Communications Manager. The Recovery Management Team consists of any member of the CEG or Council (those without an active role in response) and, if needed, multi-agency personnel.

5.1.6 Communications

The Communications Manager controls all information coming in and out of the EOC and forwards this information to operations for disbursement or to individuals. Communications requires more than one communications person to assist and will need to build a team to support. The Communications Manager is responsible for ensuring radio, telephone, TV and computer resources and services are available to EOC staff. Communications establishes links with Incident Controllers, (Area Coordinators) and other emergency agencies, response team, and welfare centres.

They also need to ensure that telecommunications (including sufficient frequencies to facilitate operations) and adequate communications operators are available for 24-hour coverage and have input into communication plans, telephone and email lists for active functions within the EOC, supervise all communications personnel and report to Controller.

5.1.7 Administration

Collects, organises and files all completed event or disaster-related forms, including all EOC position logs, situation reports, action plans and any other related information, just before the end of each operational period. Provide document reproduction services to EOC staff; distribute the sitreps, action plans and other documents as requested. Maintain a permanent archive of all sitreps and action plans associated with the event or disaster.

Assist the Controller with any administration support as needed. Supervise any administration staff including training personnel in EMIS software.

5.1.8 Group Controller

Controllers need to be conversant with the operational planning process and be clear about the levels of responsibility of Control and how lead responsibilities are assumed. Controllers should never feel they have to make decisions in isolation and should be well established with agencies and stakeholders. The EOC may need to operate for long periods of full activation up until stand down.

The Controller will determine the appropriate staffing levels for each required shift based on the current and projected situation. There may not be staff to maintain a full team in the EOC. When considering shifts include two to three shifts of personnel for an initial period; this could be at reduced strength depending on the situation.

While the Controller decides to reduce EOC personnel, it is then the responsibility of Logistics to produce the roster for shift change. Issues that require a decision or approval from the Controller include:

- *Establishing EOC priorities and objectives*
- *Authorising EOC Action Plans*
- *Extraordinary resources requests*
- *Authorising media releases*
- *Authorising media presence or interviews in the EOC*
- *Authorising public information bulletins*
- *Authorising Situation Reports*
- *Authorising Local Evacuation Orders*
- *Preparation of Declaration of State of Local Emergency*
- *Authorising request for mutual aid*
- *Authorising request for National Support*

All EOC staff must carefully assess, evaluate and prioritise each issue requiring a decision or approval. Once the decision is made, it must be assigned to applicable functions, positioned for implementation and communicated to all appropriate EOC staff and other response levels as appropriate.

5.1.9 Appointment of Group Controllers

1) A Civil Defence Emergency Management Group must appoint, either by name or by reference to the holder of an office, a suitably qualified and experienced person to be the Group Controller for its area.
2) A Group must appoint either by name or by reference to the holder of an office, at least one suitably qualified and experienced person to be the person or persons who are to perform the functions duties and exercise the powers of the Group Controller. On the occurrence of a vacancy in the office of Group Controller or the absence from duty of the Group Controller for any reason, for the duration of the vacancy or absence.
3) A Group may, at any time, remove from office or replace a Group Controller appointed under subsection (1) or subsection (2).
4) A Group may –
    a. Delegate the authority to replace the Group Controller during a state of emergency with a person appointed under subsection (2) to one or more of the representatives who are authorised under section 25(1) to declare a state of emergency for that group area and
    b. Impose limitations on the circumstances in which the authority delegated under paragraph (a) may be used.

- *By the CDEM Group Act s26, the Emergency Manager appointed as the Group Controller*
- *The Mayor appointed as the Alternate Controller who will act in the absence of the Group Controller (EM) s26 (2)*
- *The Deputy Mayor/Council Chief Executive Officer appointed by s26 (2) as Alternate Controllers in the absence of the Emergency Manager and Mayor.*

5.2.0 The Function of Group Controller s28

1) The Group Controller must during a state of local emergency for the area for which the Group Controllers appointed direct and coordinate, for the Act, the use of personnel, material, information, services and other resources made available by departments, Civil Defence Emergency Management Groups and other persons.
2) The Group Controller must also perform any functions or duties delegated to the Group Controller by the Civil Defence Emergency Management Group or conferred on Controllers by the Act or any other enactment and may exercise any power conferred on the Group Controller by delegation under the Act.

5.2.1 Public Information Management (PIM)

The role of the PIM during an emergency involves collecting, analysing and disseminating information to the public. It promotes effective leadership and decision-making and enables people affected by the emergency to understand what is happening and take the appropriate actions to protect themselves. The goal of the PIM is to create strong public confidence in the emergency management response and support public safety with public information.

The PIM will positively influence public behaviour with public information and manage public expectations. The PIM role is responsible for dealing with the media, issuing public information to the community and managing community relations.

5.2.2 Risk Management

The Environment Canterbury hazard expert can update the situation regarding hazard impact.

5.2.3 Operations

The Operations Manager is responsible for the support of an emergency through the implementation of the Action Plan. Operations coordinates the response for all operational functions assigned to the EOC, ensuring that objectives and assignments identified in the action plan are carried out effectively. Operations also coordinate with activated agencies and maintain a communications link between the incident controller's sites.

Operations ensures that planning intelligence are provided with status reports and major incident reports. Operations will also conduct periodic operations briefings for the Controller and management team as required or requested. The Operations Manager reports to the Controller. The Controller must sign off all plans before they are actioned.

5.2.4 Logistics

The Logistics Manager is responsible for providing facilities, services, personnel, equipment, materials and tracking financial activities along wth obtaining and providing response resources. Logistics functions include providing telecommunication services and information technology, locating or acquiring equipment, supplies, personnel facilities and transportation as well as arranging for food, lodging and other support services as required. Logistics is also responsible for establishing the appropriate level of staffing within the logistics section, continuously monitoring the effectiveness of the organisation and modifying as required.

Logistics coordinates closely with Operations to establish priorities for resource allocation within the operational area. They need to keep the Controller informed of all significant issues relating to the Logistics section. Logistics also ensures critical resources allocated according to the EOC Action Plan policy, priorities and direction.

Logistics also coordinates with Welfare on the provision of food and lodging for the EOC and site personnel and keeps accounts of financial costs during the response phase of the emergency. The Logistics Manager reports to the Controller.

5.2.5 Planning Intelligence

The Planning Intelligence Manager is responsible for accumulating, collating, and analysing information for development and maintenance of situation reports (sitreps) and action plans, advanced planning, technical

specialists and stand down. Planning Intel collects, analyses, displays situation information and prepares situation reports. They also prepare and distribute EOC action plans and facilitate action planning processes, track resources and conduct planning activities and reports.

Planning Intel also documents and maintains files on all EOC activities and provides technical support services to EOC section. Action plans are essential and require collaboratively identifying and providing for the priorities, objectives, tasks, resources and coordination necessary to support the agencies and personnel responding directly to an emergency. Action plans support and coordinate the response intelligence activities. The Planning Intelligence Manager reports to the Controller.

5.2.6 Recovery

During the Response phase, the Recovery Manager should be available to take an overview of the response activities. The Recovery Manager should assess the requirements for assistance for community and individual's recovery from an emergency and identify immediate steps for short term or long term efforts that can be taken to initiate and speed recovery within the area. The Recovery Manager should anticipate actions required over the long term to restore local services and return the area to pre-emergency conditions. The Recovery Manager reports to the Controller.

5.2.7 Area Coordinators

Area Coordinators are responsible for the coordination of their communities during an emergency and are the first point of contact for the public. Information will go directly to coordinators in the form of an action plan; coordinators implement the action and gather the community to a safe area. Once in the safe area, they assist the welfare personnel or assume the role of Welfare Manager and settle the public in the centre.

They are responsible for maintaining contact with the EOC and supplying sitreps, maintaining registration logs in the safe areas and collating all information needed to account for the whereabouts of any misplaced persons from their area.

5.2.8 EOC Activation Process

5.2.9 Alert

Emergency management office will be notified of an emergency event and will notify the following;

- *Controller*
- *Ministry of Civil Defence Emergency Management*
- *Communication officer*
- *EOC personnel as required (Police, Hospital, Fire, DOC, E.Trust, MPI)*
- *Area Coordinators*

With an impending emergency during an alert phase, notification to the appropriate contacts. Monitoring of the event will take place, and the event will dictate the level of this activity.

5.3.0 Standby

A threat is imminent and key personnel are on standby. Monitoring of the situation undertaken by key EOC personnel and contact with the Ministry of Civil Defence Emergency Management established. All EOC, area coordinators and response team members put on standby.

5.3.1 Full Activation

An event has or is going to occur; the emergency management office establishes contact with Ministry of Civil Defence Emergency Management to confirm if the threat is coming offshore or to make them aware of a threat from the Chatham Islands. All EOC and emergency personnel are activated.

5.3.2 Level of Response Coordination

TABLE 5

Level 1 Tier 1	Single agency incident with on-site coordination Local incident or response activities dealt with by an emergency service, local authority or other responsible organisation without the activation. The next level, incident coordination, will be activated if more than one organisation is, likely to be, involved.	No declaration
Level 2 Tier 2	The multi-agency incident with on-site, local coordination, these are managed by the incident controller of the relevant lead agency. Localised incident dealt with by the emergency services and or local government, where interagency coordination, using NZ CIMS is required.	No declaration
Level 3 Tier 3	A multi-agency emergency led by an agency other than a CDEM group or a state of local emergency below CDEM group level, (district, or ward). At this level, CDEM group support and coordination will be required and monitored by the national controller. An emergency response involving several response organisations and or several incidents, where coordination and direction of the response and resources are required. EOC may be activated by lead or coordinated organisations in support of incident coordination, whether a state of local emergency declared or not.	Declaration of a state of local emergency for the award, part of a district or one or more local authorities within the CDEM group area. Unitary authorities would use level 3 forward declarations only.
Level 4 Tier 4	A multi-agency emergency with more significant consequences than in level 3 coordination may be necessary between agencies or areas of both CDEM group support, and coordination is required the actual or potential need for a declaration national monitoring will occur, and national support is available. An emergency that is regionally significant, or where the response and resources provided to a single or multiple EOC's would benefit from being coordinated. This level of coordination provided from an EOC/ECC. A state of local emergency may be declared in this instance but is not a prerequisite for CDEM group coordination to be activated.	Declaration of a state of local emergency for the CDEM group area.
Level 5 Tier 5	A state of national emergency exists, or the civil defence emergency is of national significance, at this level, coordination by the national controller will be required. An emergency that is nationally significant, or requires national coordination and support for regionally coordinated responses. The respective national coordination facility, such as the NCMC or national health coordination centre, will be activated to support the EC/ECC, which will, in turn, be supporting participating local/agency EOC a state of emergency does not have to have been declared for this level of coordination to be activated.	A declaration of a state of national emergency

5.3.3 Declaration

5.3.4 Authorisation To Declare A State Of Local Emergency

- *Authorisation to declare is contained in two separate sections in the CDEM Act 2002 (s25 and s68) and read together.*
- *Forms for declaring, extending and terminating a state of emergency*
- *A person who declares a state of emergency, or extends or terminates a state of emergency, must do so by a declaration in the appropriate form prescribed in regulations made under Section 115, or a form of similar effect – Section 73(1).*

5.3.5 When Declaring a State of Local Emergency

- *A state of emergency comes into force immediately on the making of the declaration declaring it, or at a later time and date stated in the declaration s70 (1)*
- *A person who declares a state of local emergency, or extends or terminates a state of local emergency, must do so by a declaration in the appropriate form prescribed s72 (1)*
- *A person who makes a declaration by subsection (1) must immediately give notice to the public of the declaration by any means of communication that are reasonably practicable in the circumstances of the case and must ensure that the declaration is published in the Gazette as soon as practicable s73 (3)*
- *The commencement of the seventh day is one minute past midnight on the start of the seventh day; it is not 144 hours from the time of the declaration. It is advisable to declare an extension well before this time.*
- *No person may declare a state of local emergency for any part of New Zealand while a state of National emergency is in force s68 (5)*

5.3.6 Declaration of a State of Local Emergency

- *A person appointed for the purpose under s25 may declare that a state of local emergency exits in the area for which the person appointed at any time appears to the person that an emergency has occurred or may occur within the area.*
- *A person who is authorised to declare a state of local emergency may declare that the state of local emergency exits in respect of the whole are of the Civil Defence Emergency Management Group concerned or 1 or more districts or wards within the area.*
- *A state of local emergency may be declared in respect of an area that is not affected by an emergency if, in the opinion of any person authorise to declare a state of emergency in respect of that area, the resources of that area are needed to assist any other is where a state of local emergency is in force.*
- *The fact that a person purporting to be authorised by s25 declares a state of the local emergency is, in the absence of proof to the contrary, conclusive evidence that a person is a person authorised under that section to do so.*
- *Nothing in this section authorises a person to declare a state of local emergency for any part of New Zealand while a state of national emergency is in force in respect of that part.*

5.3.7 Authority to Declare

- *The Mayor of the Chatham Islands is authorised to declare a state of Local Emergency for the Chatham Islands including Pitt Island.*

Section 25 (5) The Mayor of a territorial authority, or an elected member of the territorial authority designated to act on behalf of the Mayor if the Mayor is absent, may declare a state of local emergency that covers the district of that territorial authority.

5.3.8 In the Absence of the Mayor

- *In the absence or unavailability of the Mayor the Deputy Mayor or any elected councillors after that; are authorised to declare a state of local emergency.*

- *The Minister may also declare a state of local emergency under section 69 if a state of emergency has not declared.*

Section 25 (3) provides that if a Group appoints more than one person to declare, the Group must state in the instrument of appointment whether the appointee has equal status to make a declaration or whether the appointee is authorised only to act in the absence of other named persons, and any other conditions or limitations.

5.3.9 Decision to Declare

- *If needed, the Group may meet to decide whether a declaration is necessary and will depend upon the time and type of emergency and the speed with which the decision required.*

- *The decision to declare based upon whether there is a significant threat to life and or property, that the typical response agencies cannot cope without the extra "powers" or higher level of coordination, and that a declaration will make a difference.*

5.4.0 Extending Declaration of State of Emergency

- *A declaration made by the Minister may extend the duration of a state of national emergency.*

- *The duration of a state of local emergency may extend by a declaration by a person authorised to declare a state of local emergency for the area concerned.*

- *Every extension of a state of emergency expires with the commencement of the seventh day after the date declared, or at an earlier time and date stated in the declaration of the extension of the duration of the state of emergency.*

- *Nothing in this section prevents the termination of a state of emergency under section 72, or the making of another declaration under this section, before the expiration of the state of emergency (as extended), further extending the state of emergency.*

5.4.1 Terminating a Declaration of State of Emergency

- *A person who is authorised to declare a state of emergency may, by declaration, terminate that state of emergency, whether or not that person made the declaration of the state of emergency or any extension of it.*

- *Every declaration made under subsection (1) takes effect from the time and date of the declaration, or any later time and date stated in the declaration.*

5.4.2 State of National Emergency Declaration

- *A person who is authorised to declare a state of emergency may, by declaration, terminate that state of emergency, whether or not that person made the declaration of the state of emergency or any extension of it.*

- *Every declaration made under subsection (1) takes effect from the time and date of the declaration, or any later time and date stated in the declaration.*

5.4.3 Emergency powers

- *Section 78 — Power of entry to obtain information in urgent cases*

- *Section 84 — Minister's power of direction3*

- *Section 85 — Emergency powers of CDEM Groups (to undertake a wide range of*

- *CDEM activities*

- *Carry out works, clearing roads and other public places, removing or disposing of, or securing or otherwise making safe, dangerous structure*

- *Provide for rescue*

- *Set up first aid posts.*

- *Provide for the relief of distress, including emergency food, clothing and shelter.*

- *Conservation and supply of food, fuel and essential supplies.*

- *Prohibit or regulate land, air and water traffic.*

- *Undertake emergency measures for disposal of the dead persons or animals.*

- *Disseminate information and advice to public*

- *Enter into employment arrangements*

- *Provide equipment, accommodation and facilities.*

- *Section 86 — Evacuation of premises and places*

- *Section 87 — Entry on premises*

- *Section 88 — Closing roads and public places*

- *Section 89 — Removal of aircraft, vessels, vehicles*

- *Section 90 — Requisitioning powers*

- *Section 91 — Power to give directions*

- *Section 92 — Power to carry out inspections*

- *Section 94 — Contracts in urgent cases*

- *Section 111 — Restricted application of the Resource Management Act 1991 to emergency works*

**Note emergency powers are available to the Minister of Civil Defence, director of CDEM, a Controller or persons authorised by a CDEM group*

5.4.4 Gazette the declaration of a state of emergency

- *The declaration must be notified to the public immediately and published in the Gazette as soon as practicable. Ideally, publication in the Gazette will occur within 20 working days of the date of termination or expiration of the declaration — Section 73(3).*

A copy of the signed declaration form(s) sent to:

New Zealand Gazette Office
Department of Internal Affairs
PO Box 805
Wellington 6140
Or Fax: (04) 470 2932
Alternatively, Email: gazette@parliament.govt.nz in Portable Document File (PDF) format.

5.4.5 Local Warning

The Chatham Islands have in place warning systems that may lead to a State of Local Emergency. Warnings may come via the Ministry of Civil Defence Emergency Management, Met Service or Emergency Services. A full description of the warning system is included in the Warning Standard Operation Procedures.

5.4.6 National Warning

National warning systems are detailed in the National Civil Defence Plan. The Director will issue warnings from the Ministry of Civil Defence Emergency Management to the Local Emergency Management Office on the Chatham Islands. The Director is responsible for issuing alerts and information about events of National significance.

5.4.7 Warning Systems

The purpose of the public warning system is for warnings to be issued to the public concerning physical safety from a hazard or emergency threat before and during an emergency. The general public can be alerted via radio and television to an impending emergency. Other communication methods can also be used.

Supported by the community organisations, emergency services and word of mouth, in some areas, there are evacuation sirens to alert communities of an impending emergency event. The type of communication used will depend on the needs and preferences of the particular community contacted.

The nature of the Chatham Islands along with the isolated population presents difficulties in promulgating any form of warning. Every effort will be made to advise people on the islands but in some situations residents must accept responsibility and the fact that warnings may not be able to be passed on. Any warning system will be tested in the community annually to ensure that the level of community understanding on how to access emergency information is established.

Warnings for national hazards may come via the Ministry of Civil Defence Emergency Management or another agency. Some natural hazards such as distant origin tsunami will have a period of warning the public; however, some natural hazards such as local tsunami may have no warning time. Where possible, communities at risk will be warned by the fastest means possible but the public need to take responsibility for their safety.

If they live near the sea, they are encouraged to evacuate inland to a safe area.

5.4.8 Testing Warning Systems

The public warning system will need to be tested out to the community no less than once a year, more if deemed necessary.

Siren Test

One continuous sound means “Evacuate” to evacuation zones

Evacuate to safe areas, (advise area coordinators at the safe area that you are there)

5.4.9 Communication

Communication on the Chatham Islands consists of the following, however; no one system can perform without some form of back up.

- *Radio VHF*
- *Handhelds*
- *Began*
- *Satelite Phone*
- *Landlines*
- *Email*
- *CIC Webpage*
- *CIC Emergency Management Facebook Page*
- *Fax*
- *Word-of-mouth*

The Communications Officer plays a vital role in an emergency and has responsibilities including;

- *Is familiar with the EOC activation process and notification of key personnel*
- *Familiar with all evacuation safe areas and personnel that will be coordinating in the safe areas.*
- *Familiar with EOC, Area Coordinators, Response Team personnel.*
- *If the Communications Officer intends to be off-Island, please advise the Emergency Management Office.*
- *Attend training exercises as necessary.*
- *Maintenance on all systems is the responsibility of the emergency management office.*
- *Testing of all equipment will be the responsibility of the Communications Officer.*
- *All systems check recorded by the Communications Officer and kept in the emergency management office.*

5.5.0 Response Planning Arrangements

The Chatham Islands Council has primary responsibility for managing a Civil Defence Emergency Tier 1-2 and Marine Oil Spills and other specified hazards. It also has significant coordination roles in non-declared events and other hazards.

5.5.1 Police

The NZ Police has primary responsibility for maintaining law and order and enforcement of road/driving behaviour. They are also the lead agency to provide overall coordination for land search and rescue, marine search and rescue, road and air accidents.

5.5.2 Fire Emergency New Zealand (FENZ)

Fire Emergency New Zealand has the primary responsibility for urban and rural fire response. FENZ is also responsible for making accident sites safe from fire or the risk to life from hazardous chemicals before any other response undertaken.

5.5.3 Health Service

The Health Service has the responsibility for the provision of primary secondary and mental health care through the Chatham Islands Hospital or Health Centre.

5.5.4 St John

St John contributes to the health services of the Chatham Islands by providing medical transport capabilities and trained first aid volunteers.

SECTION 6: RECOVERY

6.0 Introduction

Recovery is defined in the CDEM Act 2002 as the process of re-establishing the quality of life of an affected community after an emergency while taking opportunities to meet future community needs and reduce future exposure to hazards and risks. Recovery is a developmental and remedial process encompassing the following activities:

- *Including the regeneration of emotional, social and physical wellbeing of individuals and communities.*
- *Taking opportunities to adapt to meet the physical environmental, economic and future psychosocial needs.*
- *Reducing future exposure to hazards and their associated risks through recovery planning.*

6.1 Strategic Planning for Recovery

Recovery Planning aims to ensure that the efforts of all parties engaged in recovery are coordinated most effectively and efficiently possible to meet the priorities of affected communities. The aims of strategic recovery planning are to:

- *Encourage and support effective planning for recovery*
- *Identify recovery priorities for the Chatham Islands*
- *Encourage communities to increase resilience by planning for recovery from identified hazards*
- *Define agencies' roles and responsibilities and their relationship to the CEG and other governance mechanisms in recovery*
- *Maintain transparency and accountability in recovery*

6.2 Purpose

The purpose of this section is to provide guidance on planning arrangements including roles and responsibilities, structure and processes that may be implemented to assist the community to recover from a civil defence emergency.

6.3 Key Principles

- *Recovery requires active and ongoing communication and engagement with communities which recognises their diverse needs.*
- *Pre-event strategic planning for recovery is a critical component of a successful recovery operation.*
- *Response and recovery activities must be integrated and aligned.*
- *Recovery planning for emergencies needs to start as soon as possible after the response is underway and continues until the recovery objectives met.*
- *In effect, recovery recognises, supports and builds on individual, community, and organisational knowledge, understanding, capacity and capability.*
- *Recovery involves collaboration with local*

Imi and Iwi to build resilience and ensure the protection for waahi tapu (sacred area), nga taonga tuku iho (treasures of the ancestors) and kaitiakitanga (guardianship) of the environment in the recovery phase.

- *Recovery is a collective effort and requires joint collaborative planning between the community, local and central government, the commercial and not-for-profit sectors.*
- *Opportunities to reduce the risks and consequences of future events taken following an emergency.*

These principles apply to all of the recovery environments — social, economic, built and natural.

6.4 Recovery Priorities

- ***Safety and wellbeing of individuals*** *- People's psychological, emotional and physical health and wellbeing in the months and years after the event.*
- ***Social environment recovery*** *— Restoration and enhancement of the community's material and social needs, including housing and education, together with social and cultural capital, community space, community wellbeing and resilience.*
- ***Economic environment recovery*** *— Macro- and microeconomic policies to support economic viability as well as providing guidance and support to business owners and their staff.*
- ***Natural environment recovery*** *— Restoration and enhancement of the natural environment, including strategies to remove or reduce the risk of future damage.*
- ***Built environment recovery*** *— Repair of critical infrastructure, buildings (including historic buildings), road access and lifeline utilities.*
- ***Recovery of people working in the recovery*** *— Responding agencies should put in place mechanisms to ensure that the mental health of their response/recovery staff looked after.*
- ***Linking recovery to risk reduction*** *— Recovery based on long-term strategies adopting mitigation measures that prevent or reduce the likelihood and consequences of future emergencies.*
-

6.5 Issues, Objectives, Method and Actions

TABLE 6

Recovery issues	***Relationship to national CDEM strategy***	***Recovery objective***	***Method***	***Action***
#1 *Support from partnership agencies during the recovery will come from "off and on the island" if emergency event warrants*	*Goal 4* *"Enhancing New Zealand's capability to recover from civil defence emergencies."*	*Managed approach to restore and enhance social, economic, natural and built environments.*	*Practical and collaborative recovery planning with on and off island partners.*	*Revise and maintain recovery plan* *Consultation with on and off island joint partners, and emergency agencies on recovery planning.* *Ensure the recovery team takes the opportunity to enhance in the social, economic, natural, and built environments, where possible.*
#2 *Ensuring recovery personnel understand the process for addressing the community's needs during the recovery phase*	*Goal 4*	*Monitor and assess the effectiveness of recovery activities in meeting community needs and respond to emerging risks/issues.*	*Analyse community needs.*	*Identify who should be involved in this process within the Recovery Plan.* *Identify who is best suited to carry out the tasks within the Recovery Plan.* *Identify timeframe for tasks completion.*
#3 *Lack of knowledge about recovery after a major emergency event both locally.*	*Goal 4*	*Understanding the likely consequences for the community form specific emergencies*	*Assessment of the consequences of specific events*	*Engagement with the community* *Identification of the recovery activities needed to support community needs.*

6.6 Recovery Manager Appointment

Sections 29-30A of the CDEM Act set out the requirements relating to the appointment of group recovery managers. In summary, each CDEM Group must appoint a group recovery manager for its area, and another

suitably qualified and experienced person to act for the group recovery manager in his or her absence. The Chatham Islands CDEM Group has appointed a Group Recovery Manager.

Section 30A of the CDEM Act states that the Group Recovery Manager must 'direct and coordinate the use of the personnel, material, information, services, and other resources made available by departments, CDEM Groups, and other persons to carry out recovery activities'. To achieve this, the Group Recovery Manager coordinates the recovery activity across the Chatham Islands, in liaison with local recovery agencies. If a National Recovery Manager is appointed, the Group Recovery Manager will also liaise with that person as necessary.

The CDEM Group will appoint a Recovery Manager and outlined in the Recovery Plan.

The Group Recovery Manager ensures that:

- *Planning, prioritising and management functions are undertaken by the right agencies at the right time.*
- *Appropriate and timely reporting mechanisms are in place.*
- *Government and Chatham Islands Council informed of significant issues.*
- *Recovery resources identified and obtained as and when required.*
- *Affected communities, recovery partners and other stakeholders are informed about the impact of the event and progress of recovery.*
- *Affected communities and recovery partners are supported to identify emerging issues and develop collaborative solutions.*

The Recovery Manager is responsible for the wellbeing of their recovery team and ensures that their needs are addressed during the recovery period, i.e. getting enough rest. The Recovery Manager is directly responsible to the Controller during a declared emergency and the CEG after an emergency.

The Recovery Manager will refer to the Chatham Island Recovery Plan for further details on role and responsibility.

Notice issued following a declaration of a local state of emergency, or if no local state of emergency is declared, notice with the approval of the Minister.

The CDEM Act provides for certain people to be authorised to give notice of a local transition period. In deciding whether a notice of local transition period is necessary, the person who is authorised to give notice must be satisfied that a local transition period is required and that invoking the powers to manage, coordinate or direct recovery action is in the public interest and is necessary or desirable to ensure effective recovery (s94B(4)).

The CDEM Act also requires that the public is notified of the transition period, through newspapers and on the internet (the Chatham Islands Council website).

A local transition period comes into force on termination or expiry of the state of emergency, or, if no state of emergency is in place, on the time and date given in the notice. A local transition period ends after 28 days unless terminated or extended earlier.

The CDEM Act provides Recovery Managers powers during the transition period, and if those powers exercised, the Recovery Manager must report in writing to the Director of Civil Defence and Emergency Management.

6.7 Local Transition

By section 25(1)(b) of the Act, the CDEM Group must appoint at least one person as a person authorised to give notice of a local transition period for its area.

The Chatham Islands CDEM Group appoints the Chairperson of the CDEM Group as that person. In their absence, the Deputy Chairperson or any other available member of the Chatham Islands CDEM Group can give notice of local transition period.

Other persons authorised to give notice of local transition period identified as per section 25 of the Act as being:

- *the Mayor of the territorial authority*
- *alternatively, an elected member of that territorial authority designated to act on behalf of the Mayor*
- *Any person authorised to declare a notice of local transition may also extend or terminate a transition period by Part 5A, ss 94D – 94E of the Act.*

6.8 Recovery Structure

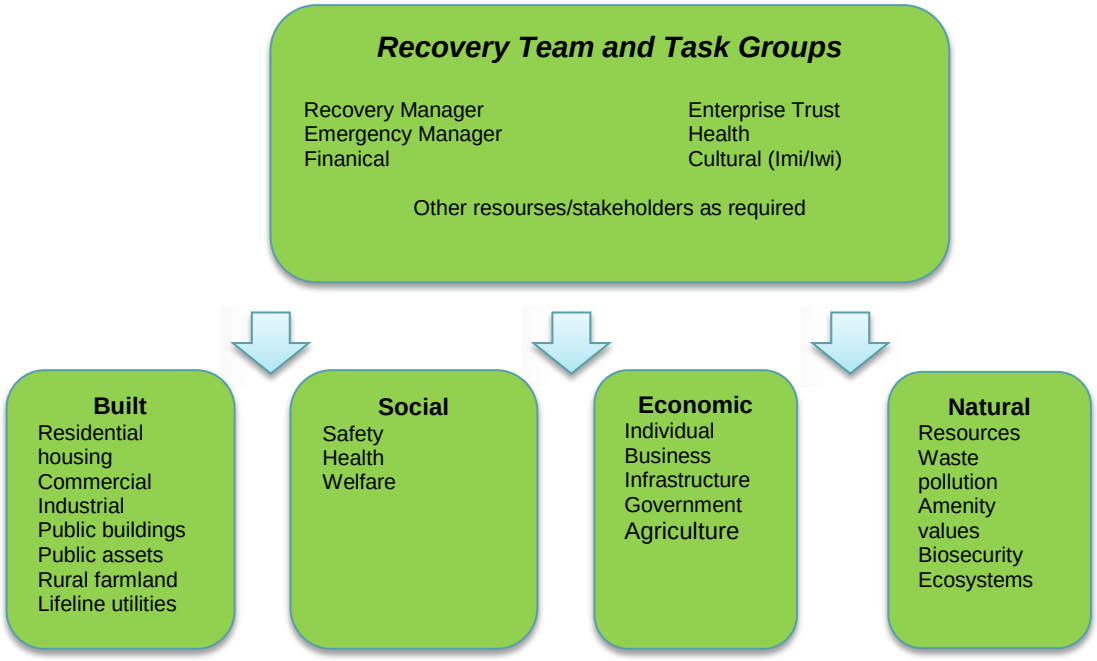
Administration structure provides communication within and across recovery organisations, agencies and groups for coordinating essential tasks and rebuilding the community's confidence. The structured outline below will depend on the emergency event as to the level that recovery will need to activate.

Recognising the needs of diverse and different communities, including the consequences across the build, economic or natural environments can have a direct consequence on the social environment.

Task groups can be formed to deal with the particular aspect of the recovery process. Recovery is generally the continuation or restoration of measures like welfare, health and safety. The social restoration will involve the psychological needs of the community, which can be overlooked after an event.

Recovery may be complicated and time-consuming but the destruction of the economic infrastructure will mean incomes within the affected area will be reduced, further compounding the effects of the disaster. Implementation of the physical recovery links back to reduction planning by the use of long-term strategies that prevent or reduce the effects of future emergencies.

FIGURE 4



6.9 Transition Response to Recovery

The recovery process starts from the time of impact and while response activities are still in progress as decisions taken during response will directly influence and shape recovery. It is vital that the Recovery Manager assumes the role at the earliest opportunity as regeneration empowers individuals, families and communities to rebuild the social fabric of the economy and relief assistance begins with the necessities of life.

During this time, the Controller continues to exercise the statutory power to direct and coordinate the response. The Group Recovery Manager's primary focus during a response is on preparing for recovery, including establishing a recovery structure, engaging staff and working with external agencies to lead the recovery work streams.

All statutory powers will cease and some organisations and agencies whose contribution may be linked directly to the declaration may decide their role is over. The recovery phase of the emergency management gains emphasis when the response phase ends and the Controller formally hands over to the Recovery Manager. If a declaration is in force, this would typically coincide with the termination of the declaration. The transition from the response to recovery involves:

- *A transition report by the Controller immediately before the termination of the response phase.*
- *Controller transfer control and accountability to the Group Recovery Manager.*
- *The development by the Chatham Islands Council of terms of reference for the Group Recovery Manager including funding, expenditure authority and reporting requirements.*
- *A transition briefing from the Controller to the Group Recovery Manager and to the Minister and the Mayor as required.*
- *Development of a Recovery Action Plan including matters arising from the response that continued in recovery.*
- *A Notice of Transition Period may be required but may not be necessary for all emergencies.*

6.1.0 Key points

When giving notice of local transition period or extending or terminating a local transition period, the appropriate legal form used from Schedule 2 in the CDEM Regulations 2003.

6.1.1 Emergency Management Office

The emergency management office will provide support to the recovery team where possible between events and maintain ongoing working relationships with many of the organisations or individuals who will play critical roles in any significant recovery activities. The emergency management role is hazard risk management and PIM during response and support during recovery. Refer to the Response section for further details.

6.1.3 Recovery Plan

The Chatham Islands have a recovery plan which includes, but is not limited to, reporting systems, impact assessment, financial management, government subsidised employment schemes, public information regarding, communication and managed withdrawal. It is the responsibility of the emergency management office to review and maintain the recovery plan on behalf of the CDEM Group.

6.1.4 Community Involvement

Community involvement is an essential aspect of recovery and means those directly affected by an event can help rebuild their facilities and services. Involvement by the community provides a framework for re-establishing the economic, social, emotional and physical wellbeing of the affected population. Local organisations know the community make-up and requirements better than any outside organisation, and affected people have an inherent need to rebuild. Using the resources wisely can lead to a stronger, more resilient and united community. This requires detailed planning.

6.1.5 Report System

The reporting system needs to cover the emergency from beginning to its final stages of recovery. Accurate records will need to be kept for analysis with the hope of learning where improvements can be made. Recovery Action Plans will vary according to the type of emergency and the ability of the local authority and the CDEM Group to manage the event.

6.1.6 Impact Assessment

The recovery process depends on the impact assessment which will determine the allocation of resources and concentration of recovery effort. This information and assessment is gathered immediately during the response phase and continues during the recovery phase by the Hazard Risk Management (ERC).

6.1.7 Financial Management

There are no financial delegations in place for the Group Recovery Manager. All financial expenditure must be approved and signed off by the Controller or Emergency Manager. All financial records need to be kept for accountability and any claims for reimbursement of costs from Central Government submitted through the Emergency Manager. Local authorities are initially responsible for meeting all emergency expenditure arising out of the use of resources and services provided under the direction of the Controller.

Government financial support for an emergency is determined by the Cabinet and applies whether or not there is a state of local emergency. The Government considers local risks to be a local responsibility and local authorities are responsible for dealing with the impact of an emergency. Generally, government assistance in recovery is considered in the circumstances involving emergencies of an unusual type or magnitude and made available only when recovery is beyond the capacity of the local community.

Eligible costs during an emergency include the direct cost of accommodating, transporting, feeding and clothing people who cannot continue to live in their usual place of residence. Ineligible costs, for example, are local authority overheads, indirect costs like staff time, EOC activation costs, office space, vehicles use and the cost of supporting people in longer-term temporary accommodation with the Ministry of Social Development meeting these costs.

6.1.8 Public Information Management

Effective information management is paramount and is to be coordinated via the PIM. See Response Section role and responsibilities.

6.1.9 Ministry of Civil Defence and Emergency Management

During significant events liaising with Central Government is an essential element of Recovery via the Controller during the response phase and MCDEM during Recovery.

6.2.0 Central Government Agencies

Most Central Government involvement and assistance during the Recovery phase is through a variety of agencies structured through Heartlands. If assistance is necessary beyond that, then the Recovery Manager will work with MCDEM.

6.2.1 Managed Withdrawal

Although the duration of each recovery period cannot be known before an event, recovery nevertheless needs to be a finite process. A recovery exit strategy sets out the plan for withdrawing formal recovery assistance to the level of business as usual.

An exit strategy will identify any ongoing actions, tasks and method of delivery including timeframes. It will ensure that affected people and communities continue to receive services that support business as usual, that lessons learned from the event are recorded and actions are taken to reduce hazards that contributed to the impact of the emergency.

The fundamental principles that need to be taken into consideration when developing a recovery exit strategy include:

- *The extent to which progress on social, built, economic and environmental recovery is complete*

- *The ability of affected communities to manage outstanding aspects of recovery*
- *The extent to which recovery has been started and sustained over time (e.g. environmental recovery may not be complete, but the majority of the work required to ensure it happens).*
- *Any need for ongoing resourcing or services that are not part of recovery agencies' business as usual*
- *The extent to which communities regard themselves as having adapted to a changed reality.*

It should acknowledge that psychosocial recovery generally lasts longer than other aspects of recovery. While acknowledging this, it may be detrimental to the psychosocial wellbeing of a community if recovery is allowed to continue indefinitely.

Section 7: Monitoring and Evaluation

7.0 Introduction

It is important that the CDEM Group continually monitors and measures progress to know when they have successfully reached the current goals and objectives of the CDEM Group and the expectations of the community.

7.1 Purpose

The purpose of this section is to provide a basis for monitoring and evaluation of the CDEM Group Plan and CDEM Group activities and to meet requirements in the CDEM Act.

7.2 Monitoring and Evaluation Criteria

- *Process for monitoring and evaluation of the CDEM Group and CDEM Group activities.*
- *Process for reviewing the CDEM Group Plan.*
- *A description of the process ensuring that legislation compliance requirements are monitored.*

7.3 Monitoring and Evaluation Process

Under section 8 of the CDEM Act, the Director of Civil Defence Emergency Management has a function to "monitor the performance of CDEM Groups and persons who have responsibilities under this legislation". This will be undertaken primarily via the CDEM capability assessment tool. The assessment tool is available for self-assessment of organisations and CDEM Groups at any time but also supports a common reporting cycle in which all organisations with responsibilities under the CDEM Act will be expected to complete assessments to understand and document New Zealand's collective CDEM capability.

- *Monitoring compliance of the CDEM Group with any relevant legislative requirements*
- *Measure capability and capacity to ensure the CDEM Group Plan or work programme or the local authority planning is being carried out according to needs and requirements.*
- *Monitoring and evaluating progress towards the high-level goals and objectives of the CDEM Group*
- *Internal monitoring and evaluation within the CDEM Group using agreed internal processes*
- *External monitoring and evaluation using the services of an agency outside the CDEM Group, i.e. MCDEM*

Monitoring and evaluation need to go well beyond merely checking whether measurable targets and actions are completed.

Qualitative information helps by:

- *Informing decision makers about whether the CDEM Group Plan is achieving the purpose of the CDEM Act.*
- *Informing decision makers about whether the CDEM Group Plan is addressing the issues raised within it and whether they reflect goals the community has identified.*
- *Justifying current and future activities to address risks*

- *Providing information that enables the CDEM Group Plan to be fine-tuned or improved, especially in light of changes over time*

- *Ensuring information is made available to local and national monitoring programmes in related areas*

- *Ensuring that the Plan has both breadth and depth and demonstrating that the Plan will be adequate to respond operationally*

7.4 Reviewing CDEM Group Plan

During the five-year life of the CDEM Group Plan from the date of approval, the Plan will be subject to regular reviews to ensure the Group is achieving its outcomes. Where appropriate, specific amendments to the Plan may be prepared during the five-year period. These amendments will not be subject to a public notification process unless they are likely to significantly affect the rights or obligations of an individual (CDEM Act s56 and s57).

The EM will facilitate the five-year review and if necessary instigate any amendments to the Plan required in the intervening period. These may be required because of the following reasons but are not limited to:

- *Matters arising out of the introduction of the National CDEM Plan.*

- *Introduction of new guidelines, codes or technical standards issued by the MCDEM.*

- *Changes in legislation affecting the role of any emergency management agency.*

- *Recommendations following an emergency event.*

- *Changes in CDEM Group Joint Committee appointed personnel.*

- *Work programme projects.*

- *Any proposed changes/ amendments to the Plan shall be addressed to the CEG/CDEM Group outlining the reasons for the amendment and include reference/information supporting the change, including the proposed amendment in detail.*

- *The CEG/CDEM Group retains the power to approve all amendments to the Plan that relate to Group strategic direction and Governance.*

Evaluating whether the CDEM Group Plan is adequate, the CDEM Group or MCDEM are expected to consider whether it:

- *Is accurate and supporting documents referred to in the Plan exist, and are relevant, complete and up to date including references to organisations, specifying locations and functions and resources are complete and up to date. That CDEM Group structure is in the manner described in the CDEM Group Plan.*

- *It is practical and the CDEM Group, local authority members and partner organisations are capable of carrying out the functions described in the Plan, and that the CDEM Group and its member organisations have access to resources needed to be able to carry out the functions described in the Plan.*

- *Covers all necessary functions by considering the hazards described in the planand the management mechanisms described for consequences are managed. Assessing the adequacy of existing linkages between the Plans of participating organisations and using an integrated monitoring and review process that crosses the CDEM Act and the RMA frameworks.*

- *Provides for the coordination of CDEM organisations and roles and responsibilities are clearly defined and the description of how agencies will work together in an emergency is unequivocal. Ensuring the functions in the CDEM Group Plan are described adequately, goals and objectives of the CDEM Group Plan and work programme are aligned with the goals and objectives of the National CDEM Strategy and the arrangements in the CDEM Group Plan align with those in the National CDEM Plan and Guide.*

7.5 Legislation Monitoring Process

The CDEM Group has a statutory requirement (CDEM Act s17 (1) (g) to promote and raise awareness of compliance with the CDEM Act and legislative provisions relating to the purpose of the Act including those referred to on Page 74 of this Plan s17 CDEM Act. The CDEM Group is also required to monitor and report on compliance within the CDEM Group area with the requirements of the CDEM Act and legislative provisions relevant to the purposes of that Act (CDEM s17 (1) (h).

The primary purpose of this compliance monitoring process is to assess whether the statutes are having a bearing on emergency management outcomes, identify any weaknesses in the CDEM Group emergency arrangements and work to improve them. As statutes can change and CDEM responsibilities subsequently alter, it is vital that awareness and regular monitoring of these changes by the CDEM Group occur.

Section 10: Management & Governance

The CDEM Act requires all local authorities to provide for civil defence emergency management within their districts and places a requirement on all agencies to support the coordinated effort of the CDEM Group and its function; entirely, during an emergency event. The dual role of all authorities and agencies to manage their affairs and to cooperate at the local level during an emergency is achieved by having distinctive appointments in place, supported by adequate delegations, to deliver on the requirements of civil defence emergency management.

The CDEM Group is viewed as working in partnership with emergency services and other organisations to deliver CDEM at the local level and provide coordinated planning for reduction, readiness, response and recovery. This section states management arrangements for the CDEM Group. The Governance arrangements are covered in the Response Section.

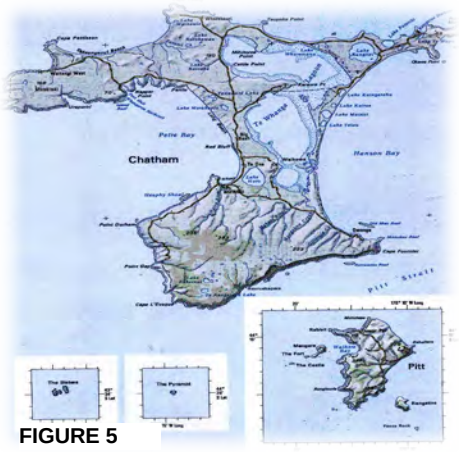


FIGURE 5

10.1 CDEM Group Structure

The CDEM Group is a committee of Council under the Local Government Act 2002; however, the Chatham Islands Council (eight councillors) is also the CDEM Group and has responsibilities specified by the Civil Defence Emergency Management Act 2002

The CDEM Group comprises the Mayor who is also the CDEM/CEG Chair, eight Councillors, CIC General Manager, EM (ex officio) and MCDEM (ex officio).

10.2 CDEM Group Functions

The functions of the CDEM Group are detailed in Section 17 of the CDEM Act. They are to:

- *Identify, manage and reduce relevant risks and hazards*
- *Ensure suitably trained and competent personnel for all CDEM Group roles are available*
- *Organise resources, services and information for the Chatham Islands Group*
- *Respond to and manage the effects of emergencies*
- *When requested assist other CDEM groups if practicable*
- *Promote and educate the public on CDEM and its purpose*
- *Monitor and report on compliance with the CDEM Act*
- *Develop, implement, monitor and regularly review the Chathams Island plan*
- *Participate in the development of the National CDEM strategy and the National CDEM plan*
- *Promote all aspects of CDEM in the Chatham Islands*

10.3 CEG Group Structure

The Coordinating Executive Group (CEG) is established by s20 of the CDEM Act 2002. The CEG will meet jointly with the CDEM Group, but decisions are to be ratified by the elected members only (Councillors) as part of the overall process. Under s20 of the CDEM Group Act, the CEG is responsible for advising the CDEM Group,

implementing its decisions, and overseeing the development, implementation and currency of the CDEM Group Plan.

- *The representative members include:*
- *NZ Police (assigned for the purpose by the Commissioner of Police)*
- *A senior member of Fire Service (assigned for the purpose by the National Commander)*
- *Manager of the Chatham Islands Hospital*
- *Chief Executive Officer of the Chatham Islands Enterprise Trust*
- *Ministry of Primary Industries*
- *St John*
- *Department of Conservation Manager*

10.4 Powers of the CDEM Group s18

1. The functions of a Civil Defence Emergency Management Group, and of each member are;
   a) About relevant hazards and risks, -
      I. Identify, assess, manage, and reduce risks and hazards.
      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 that 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.
   f) When requested, assist other Groups in the implementation of civil defence emergency management in their areas (having regard to the competing civil defence emergency management demands within the Group's area and any other requests for assistance from other Groups).
   g) Within its area, promote and raise public awareness of, and compliance with, this Act and legislative provisions relevant to the purpose of the Act.
   h) Monitor and report on compliance within its area with the Act and legislative provisions relevant to the purpose of the Act.
   i) Develop, approve, implement, and monitor a civil defence emergency management group plan and regularly review the plan.
   j) Participate in the development of the national civil defence emergency management strategy and national civil defence emergency management plan.
   k) Promote civil defence emergency management in its area that is consistent with the purpose of the Act.
   2) A Group also has any other functions that are conferred or imposed by or under the Act or any other enactment.
   3) For subsection (1) (g) and (h), legislative provisions relevant to the purpose of the Act include, but are not limited to, the provisions in the following Acts that may be relevant to civil defence emergency management including.

   a) Biosecurity Act 1993:

   b) Building Act 2004:

   c) Fire Service Act 1975:

d) Forest and Rural Fires Act 1977:

e) Hazardous Substances and New Organisms Act 1996:

f) Health Act 1956:

g) Health and Safety in Employment Act 1992:

h) Local Government Act 2002:

i) Maritime Transport Act 1994:

j) Resource Management Act 1991:

k) Any enactment passed in substitution for any of the Acts in (a-j).

1) A Civil Defence Emergency Management Group has all the powers that are reasonably necessary or expedient to enable it to perform its functions, including the power to delegate any of its functions to members, the Group Controller, or other persons.
2) Without limiting the generality of subsection (1), a Group may—
a. Recruit and train volunteers for civil defence emergency management tasks:
b. conduct civil defence emergency management training exercises, practices, and rehearsals:
c. issue and control the use of signs, badges, insignia, and identification passes authorised under this Act, regulations made under this Act, or any civil defence emergency management plan:
d. provide, maintain, control, and operate warning systems:
e. provide communications, equipment, accommodation, and facilities for the exercise of its functions and powers during an emergency:
f. Exercise any other powers that are necessary to give effect to any civil defence emergency management plan.

10.5 Delegations s17, 18

The functions, duties and powers of the CDEM Group are specific and provided in s18 (1) which allows the CDEM Group to “delegate any of its functions to members, the Group Controller, or another person”. Thus, there are no limitations to the functions the CDEM Group may delegate to the Controller. Section 17 of the CDEM Act lists functions of the CDEM Group that aremost relevant to the Controller. “s17 (1) (d) Respond to and manage the adverse effects of emergencies in its area.

This function does not require a declaration of a state of local emergency and enables the CDEM Group or member authority and partner response organisations to coordinate or manage emergencies “out of declaration”. A Controller needs sufficient delegations and directions from their CDEM Group to be able to carry out their functions and duties by the CDEM Group Plan.

10.6 CDEM Group standing orders s19

1) Unless three-quarters of the representatives of the members of a civil defence emergency management group present at a meeting of the group agree otherwise, at its meetings, the Group must follow the New Zealand Standard for standing orders (NZS: 9202:1992) or any New Zealand Standard substituted for that standard. If the representatives of the members of the Group agree by subsection (1) to adopt other standing orders, those standing orders must not contravene the provisions of the Local Government Act 1974, the Local Government Official Information, and Meetings Act 1987, or any other enactment.

10.7 CDEM Group Meetings

The CDEM Group will meet as agreed by the Chairperson in consultation with the Group. Meetings will be publicly notified and open to the public except where there are grounds to exclude the public regarding the Local Government Official Information and Meetings Act 1987.

10.8 Reporting

The CDEM Group is a committee of the Chatham Islands Council with the Emergency Manager reporting work progress in April, August and December to the council.

10.9 Funding

All administrative costs will be met by the Chatham Islands Council and any costs incurred by members of the CEG will be met by the organisation which they represent.

10.1.0 Life of the CDEM Group

The CDEM Group is a requirement of Section 12 of the Civil Defence Management Act 2002.

10.1.1 Emergency Management/Controller

The Emergency Manager/Controller employed by the Chatham Islands Council has responsibilities in the following areas. These include providing professional services to the CDEM Group, including governance, administrative and technical support, a work programme that reflects the goals, objectives and targets of the CDEM Group Plan and represents the CDEM Group on national bodies and projects.

- *Maritime Oil Spill*
- *Civil Defence Emergency Management*
- *Hazard Risk Management*

10.1.2 Financial

Funding to ensure the delivery of the CDEM Groups objectives is the Chatham Islands Council's responsibility. There are also various grants and subsidies which are administered and monitored by the Emergency Manager, CDEM Chair and CEO.

10.1.3 Work Programme

An annual work programme is set in February of each year and approved by the CDEM Group to ensure that projects, objectives and targets in the CDEM Group Plan are recognised and strategically planned for, implemented and completed.

10.1.4 Support

The specific nature of support that this CDEM Group/Emergency Manager can offer another Group or NCMC/MCDEM depends on the circumstances and nature of the emergency event. However, requests for specific support from one CDEM Group may include:

- *Controller*
- *Personnel/Emergency Manager (EM)*
- *Persons trained in EOC, operations, information management, a welfare centre and logistics*
- *Radio operators*
- *Rescue/Response personnel*
- *Media liaison (PIMs)*

- *Evacuee management (including registration and arranging food, clothing and temporary accommodation)*

10.1.5 Support from Environment Canterbury

- *Training/exercises*
- *Documentation reviewing*
- *Hazard assistance*
- *Technical*
- *EOC backup personnel*
- *Services via the Ecan/Chatham Islands Council contract*

10.1.6 Supporting Documents

Supporting documents or relevant plans listed are not kept in the main body of this document. Copies are available from the Chatham Islands Emergency Management Office or on the Chatham Islands Council website www.cic.govt.nz

- *Emergency Operation Centre Plan*
- *Emergency Communication Plan*
- *Tsunami Warning Plan*
- *Evacuation Plan*
- *Marine Oil Spill Plan*
- *Emergency Contact Details*
- *Welfare Centre Emergency Plan*
- *Recovery Plan*
- *Pandemic Plan*
- *Health & Safety Management Plan*
- *Resource List*

Glossary and Definitions

4r's	Reduction – identifying and analysing long-term risks to human life and property from natural or non-natural hazards; taking steps to eliminate these risks if practicable, and, not reducing the magnitude of their impact and the likelihood of their occurring. Readiness – developing operational systems and capabilities before a civil defence emergency happens, including self-help and response programmes for the public and specific programmes for emergency services, lifeline utilities and other agencies. Response – actions taken immediately before, during, or directly after a civil defence emergency to save lives and propert, and to help communities recover. Recovery – the coordinated efforts and processes used to bring about the immediate, medium-term and long-term holistic regeneration of a community following a civil defence emergency.
Act	Civil Defence Emergency Management Act 2002 (CDEM Act 2002)
Action plan	A national action plan states the national response to an emergency that requires significant national support, coordination and direction. The national action plan is developed and continuously reviewed and updated during an emergency. A local action plan does the same as a national action plan but at a local or group level.
Agencies	Government agencies including public service departments, non-public service departments, Crown entities and offices of Parliament Non-Governmental organisations Lifeline utilities
All-clear	Is a message issued informing evacuees that it is safe to return home
Capability	An organisation can undertake functions such as provide a service or fulfil a task. Implies that it has the necessary staff, equipment, funding systems and resources to do this. Organisations are likely to have some capabilities.
Capacity	Adequacy of resources in quantity, suitability of personnel, equipment, facilities and finances.
Civil Defence Emergency Management Group	Means a group established under Section 12 of the Civil Defence Emergency Management Zct 2002 for this constitution refers to the local authority defined area and the resources of the Chatham Islands
CDEM Group plan	A plan prepared and approved under Section 45, the Act.
CDEM sector	Agencies with responsibilities under the CDEM act, i.e. local authorities, CDEM groups, Government departments, emergency services and lifeline utilities.

Civil defence emergency	Any emergency as defined by the CDEM act that is managed by the Ministry of Civil Defence and Emergency Management as the lead agency at the national level. Any event that requires coordinated management under the provisions of the CDEM Act.
Civil Defence Emergency Management	Is the same meaning as Section 4 of the CDEM Act The application of knowledge, measure and practices that; Are necessary or desirable for the safety of the public or property; and Are designed to guard against, prevent, reduce, or overcome any hazards or harm or loss associated with any emergency and Includes, without limitation, the planning, organisation, coordination, and implementation of those measures, knowledge and practices.
Coordinating Executive Group (CEG)	Means a committee established under Section 20 of the Act.
Community	The community refers to the entire Chatham Islands and Pitt Island, its population, infrastructure, volunteers, non-government organisations and resources.
Communities	Refers to individual townships or geographical areas as defined in this plan and their population, infrastructure and resources.
Coordinated Incident Management System (CIMS)	A structure to systematically manage emergency events. A nationally mandated set of consistent principles, processes, organisation structures and roles.
Cluster	Is a group of agencies that interact to achieve common civil defence emergency management outcomes.
Director	The director of the Civil Defence Emergency Manager appointed under Section 8 of the act
Domestic and external security coordination	A system of domestic and external security coordination used by the government to manage all national crises
District Health Board	The DHB provides hospital and community-based health services. The DHB is the founder and provider of publicly funded services for the population of a specific geographical area in New Zealand
Domestic animal	An animal kept by humans for companionship and enjoyment rather than for commercial reasons. In this context, domestic animals are also referred to as companion animals or pets.
The duty officer, MCDEM	Immediate 24/7 response position, as part of the MCDEM duty team.
Emergency	Is the result of any happening, whether natural or otherwise, including, without limitation, any explosion, earthquake, eruption, tsunami, land movement, flood, storm, tornado, cyclone, severe fire, leakage or spillage of any dangerous gas or substance, technological failure, infestation, plague, epidemic, failure of or disruption to an emergency service or a lifeline

	utility, or actual or imminent attack or warlike act; and Causes or may cause loss of life or injury or illness or distress or in any way endangers the safety of the public or property in New Zealand or any part of New Zealand; and Cannot be dealt with by emergency services, or otherwise requires a significant and coordinated response under the Act.
Emergency Management Office	The office within the council that has the responsibility for Emergency Management.
Emergency Operation Centre (EOC)	A secure facility where the response to an event may be supported and managed.
Emergency services	The Police, Fire Service, National Rural Fire, hospital and health services.
Emergency Manager (EM)	The Council Emergency Manager is responsible for all the activities that occur in and services provided by the Emergency Management Office.
Epidemic	A disease affecting or tending to affect the typically large number of individuals within a population, community or region at the same time.
Evacuation Assembly Area	A safe area where evacuees reported and transported to a reception centre. Assembly areas should be public buildings that are well known and have toilets.
Evacuation	Temporary relocation of all or part of a particular population or geographical region from a location that has been or is about to be affected by an emergency, to a place considered safe. Assisted evacuations are for those that do not have their own vehicle, or access to a vehicle, and need assistance. Evacuation in place/vertical evacuation refers to the concept of evacuation to the higher elevation within a current location. This method of evacuation may be a most appropriate option for some locations in the event of a hazard such as a near-source tsunami. A rapid onset hazard such as this may require occupants of lower levels to proceed upstairs to floors above the anticipated inundation level. A mandatory evacuation directed when believed that the risk to residents is too significant to allow them to remain where they are. Mandatory evacuation places a significant burden on the resources of the emergency services and places a duty of responsibility on authorities to ensure support. Self-evacuation refers to evacuees that leave their current location via their means of transport such as a personal car, bike or another vehicle. Voluntary evacuation refers to evacuees that leave their current location because of actual or perceived risk without being directed to do so. Occupants of areas outside of the evacuation zone that leave despite the fact the hazard does not threaten them referred to as “shadow evacuees”.
Fire Emergency New Zealand	The fire service units maintained by the New Zealand Fire Service, National Rural Fire Authority, Rural Fire Authorities, Airport Rescue Fire Services, New Zealand Defence Force, industrial fire brigades registered under Section 36 of the Fire Service Act 1975 and other fire service resources owned by private organisations.

Guide	The guide to the national Civil Defence Emergency Management plan that is referred to in the national CDEM plan and approved by the Government.
Group	A group of elected representatives established under Section 12 of the Act
Group Controller	A person appointed as the local Controller under Section 26 of the Act The national Controller has the same meaning as in Section 4 of the Act
Group Recovery Manager	A person appointed by the group to act as Recovery Manager. The function performed after an adverse event, i.e. non-declared event or an after a declared event.
Hazard	Hazards are something that may cause or contribute substantially to the impact of an emergency
Lead agency	An agency that has a mandate through legislation or expertise to manage a particular emergency.
Levels of emergency	To clarify responsibilities the Group recognises five tiers of emergencies:
Liaison Officer	Agency representative that coordinates with other agencies during an emergency
Lifeline utility	An entity name as described in part of Schedule 1 or that carries on a business described in part B of Schedule 1.
National Crisis Management Centre	Is a secure Government facility maintained during a state of readiness in which the national response to emergencies is managed.
National significance	Any case where the Minister or the Director considers that; There is widespread public concern or interest or There is likely to be significant use of resources or It is likely that the area of more than one civil defence emergency management group will be affected or It affects or is likely to affect or is relevant to New Zealand's international obligations or it involves or is likely to involve technology, processes or methods that are new to New Zealand or It results or is likely to result in or contribute to significant or irreversible changes to the environment.
National CDEM plan	The national Civil Defence Emergency Management plan
Recovery activities	Activities carried out under the act or any Civil Defence Emergency Management plan after an emergency occurs, including, without limitation:

	The assessment of the needs of a community affected by the emergency; and The coordination of resources made available to the community; and Actions relating to community rehabilitation and restoration; and new measures to reduce hazards and risks.
Risk	The relationship between likelihood/probability and consequences.
State of emergency	A state of national emergency declared under S66 CDEM Act 2002 or a state of local emergency declared under S68-69 CDEM Act 2002.
Civil Defence Centre	CDC is a site that provides temporary emergency accommodation and registration services for those evacuees who cannot accommodate themselves.
CDEM	Civil Defence Emergency Management
CEG	Coordinating Executive Group
CIMS	Coordinated Management System
EMO	Emergency Management Office
ERC	Emergency Manager
EOC	Emergency Operations Centre
HLG	Hazard Liaison Group
LTP	Long-Term Plan
MAF	Ministry of Agriculture and Forestry
MCDEM	Ministry of Civil Defence and Emergency Management
NCMC	National Crisis Management Centre

Photo: Ngaire Lawson

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OUR ISLANDS
OUR FUTURE