TARANAKI
EMERGENCY MANAGEMENT

Civil Defence Emergency Management

Group Plan
for Taranaki

2018-2023

Te Mahere Rōpū Tauira a Taranaki
Civil Defence and Emergency
Management 2018-2023

Mountain to Sea
Te Kaunihera-ā-Rohe o Ngāmotu
NEW PLYMOUTH DISTRICT COUNCIL
newplymouthnz.com

STRATFORD DISTRICT COUNCIL

REAL ENERGY
South Taranaki District Council

Taranaki Regional Council

Civil Defence Emergency Management Group Plan for Taranaki 2018-2023

Te Mahere Rōpū Tauira a Taranaki Civil Defence Emergency Management 2018-2023

Taranaki Civil Defence Emergency Management Group

Te Rākau Whakamarumaru Ki Taranaki

July 2018

Civil Defence Emergency Group Plan for Taranaki

This Civil Defence Emergency Management Group Plan for Taranaki was prepared by the Taranaki Civil Defence Emergency Management Group pursuant to the requirements of the Civil Defence Emergency Management Act 2002 and any subsequent amendments.

The Civil Defence Emergency Management Plan for Taranaki was approved by the Taranaki Civil Defence Emergency Management Group on 19 June 2018, to take effect on 19 June 2018 and remain in force until 18 June 2023.

DATED at _____ this _____ day of _____, 2018

SIGNED by the following members of the Taranaki Civil Defence Emergency Management Group:

SIGNED for and on behalf of
STRATFORD DISTRICT COUNCIL

_____
Signature

_____
Print Name

SIGNED for and on behalf of
SOUTH TARANAKI DISTRICT COUNCIL

_____
Signature

_____
Print Name

SIGNED for and on behalf of
NEW PLYMOUTH DISTRICT COUNCIL

_____
Signature

_____
Print Name

SIGNED for and on behalf of
TARANAKI REGIONAL COUNCIL

_____
Signature

_____
Print Name

Tom Cloke
Chairperson
Taranaki CDEM Joint Committee

Foreword

I am very pleased to present the Taranaki Civil Defence Emergency Management Plan 2018- 2023, the third for the Taranaki CDEM Group.

Recent regional and national events have continued to remind us that our region is vulnerable to geological, climatic, and technological disruptions. This Plan sets out how we seek to address the exposure, by enhancing our ability to prepare and to cope. The Civil Defence Emergency Management sector (CDEM) is in the process of transformation in Taranaki. The Taranaki CDEM Joint Committee agreed in 2017 to invest in growing the capacity of the CDEM sector across the '4 R's of risk reduction, readiness, response and recovery, this included increasing staff numbers at the Group Office level and the development of Emergency Operation Centres at District Council level.

Due to the transitional nature of moving from a centralised system of CDEM delivery to a more devolved system, many of the statements about how agencies will work together in this Group Plan will be developed in more detail over the next 12 months, to then be put into effect. More detail about specific actions and protocols will be included in plans and standard operating procedures that are to be developed over the period of this Group Plan.

While this Plan sets out how the members of the Taranaki CDEM Group and of the wider CDEM organisation in Taranaki will seek to deliver their emergency management function, in the end our communal resilience will only be as good as the readiness of each individual, community sector and agency within the region. The Taranaki CDEM Group looks forward to working with you towards a better prepared and more secure Taranaki.

Taranaki CDEM Group Vision 2025

Vision Statement

Where we're going

Our Taranaki community shows resilience through periods of disaster, crisis and change

Core Purpose

Why we exist

We deliver professional disaster risk and emergency management for Taranaki

Core Values

What we stand for

Collective responsibility: Shared between National, Group and District level

Unified approach: CDEM partners work for the overall benefit of the Taranaki Community

Organisational resilience: Any part of the system can lend support seamlessly

Strong relationships: Strong effective coordination and integration

Strategic goals

The fulfilment of our vision is underpinned by delivering on our six strategic goals, under the leadership and accountability of the CDEM Joint Committee

	Goal		Strategic measures	Responsibility
1	Governance	Our expectations from CDEM partners is clear and met through strong governance arrangements and accountability for delivery	Performance monitoring	CDEM Joint Committee Coordinating Executive Group
2	Disaster risk reduction	The risks from hazards, their likelihood and impacts, are understood and managed to reduce our risk exposure	Risk priorities and reduction activities	Group Office Local Councils
3	Organisational resilience *Readiness*	We build resilience into organisations and plan for the impacts from disaster and ensure our systems and arrangements are fit for purpose	Capability assessment	Group Office Local Councils CDEM Partners
4	Community resilience *Readiness*	Community resilience is strengthened so that the impacts from disasters are reduced	Community engagement	Group Office Local Councils Community
5	Capability development *Readiness, response and recovery*	We develop the capability of staff and volunteers to effectively carry out their roles in a disaster	Training completion	Group Office Local Councils
6	Response and recovery	We enable well managed effective responses, and we support the community's journey of moving on from the impacts of disasters	Activity performance	Group Office Local Councils Emergency Services Community

Note:
The vision of the Taranaki CDEM Group reflects the importance of integrated effort, partnership and cooperation within the CDEM sector agencies, so that we can work together with resilience and function at a high level during a disaster or emergency. The term 'resilience' means literally to 'spring back'. In the Civil Defence and Emergency Management sector resilience is described as the capacity to withstand and recover from the occurrence of a hazardous event

Figure 1 Taranaki CDEM Group vision and Strategy.

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PART 1

INTRODUCTION

Provides a brief overview of the document, Taranaki CDEM's strategic vision, and the relationship of the Plan to the national CDEM framework.

How the plan is structured

PART 1:
INTRODUCTION

Provides a brief overview of the document, Taranaki CDEM's strategic vision, and the relationship of the Plan to the national CDEM framework

PART2:
RISK PROFILE

Describes the Taranaki environment, current hazards for the Taranaki community, the risks and vulnerabilities associated with those hazards and how the Group has prioritised which hazards it will manage.

PART 3:
STRATEGY

Outlines how the Taranaki CDEM Group and partner agencies will manage the hazards according to the 4 Rs and the Sendai Framework

PART 4:
GOVERNANCE, MANAGEMENT AND FINANCES

Sets out the administrative arrangements relating to the provision of emergency management in Taranaki including the group structure and role, the Joint Committee and CEG, cost and resource sharing arrangements, and coordination with other CDEM Groups.

PART 5:
REDUCING AND MANAGING RISK

States roles and responsibilities for hazard identification, risk reductions, community readiness arrangements and the agencies who have functions and/or statutory responsibilities for risk management

PART 6:
RESPONSE AND RECOVERY ARRANGEMENTS

States the processes for activating emergency facilities, declaring and terminating a state of emergency, and giving notice of a transition period

PART 7:
MONITORING AND EVALUATION

Outlines how we will measure the performance of the CDEM Group, the implementation of this Group Plan, legislative compliance and the process for Group Plan review

PART 8:
ANNEXES

Contains a range of extra detail including a glossary of terms and more information about our hazardscape, detailed plans and operating procedures.

Purpose of the Plan

This is the Civil Defence Emergency Management (CDEM) Group Plan for Taranaki and sets outs the vision, goals and high-level arrangements for the Taranaki region.

The Group Plan provides for effective risk reduction, readiness, response, and recovery in Taranaki by:

- Identifying Taranaki's major hazards and risk profile
- Clarifying expected roles, responsibilities and functions of all parties contributing to civil defence emergency management
- Encouraging cooperative planning and action between the various agencies and the Taranaki community, and
- Outlining the high-level objectives/actions for the Group and its partners for the next five years.

The Group Plan is implemented through a number of work plans, operating procedures, and other documents which provide more detail to our CDEM partner agencies and communities about how and why we operate.

This is the third plan prepared by the Taranaki CDEM Group to meet the requirements of the Civil Defence Emergency Management Act 2002.

The Taranaki CDEM Group manages the CDEM Group area (as defined in the CDEM Act – see Annex A for glossary), covering the areas contained within New Plymouth, Stratford, and South Taranaki Districts from Tongaporutu in the north to the Waitōtara catchment in the South (which includes the Wai-inu Beach settlement). Its western boundary extends 12 nautical miles into the sea to align with the seaward boundary of the Taranaki Regional Council. (Figure 2).

This plan was approved by the Taranaki CDEM Joint Committee to take effect from 19 June 2018. A review of this plan will commence no later than five years from this date.

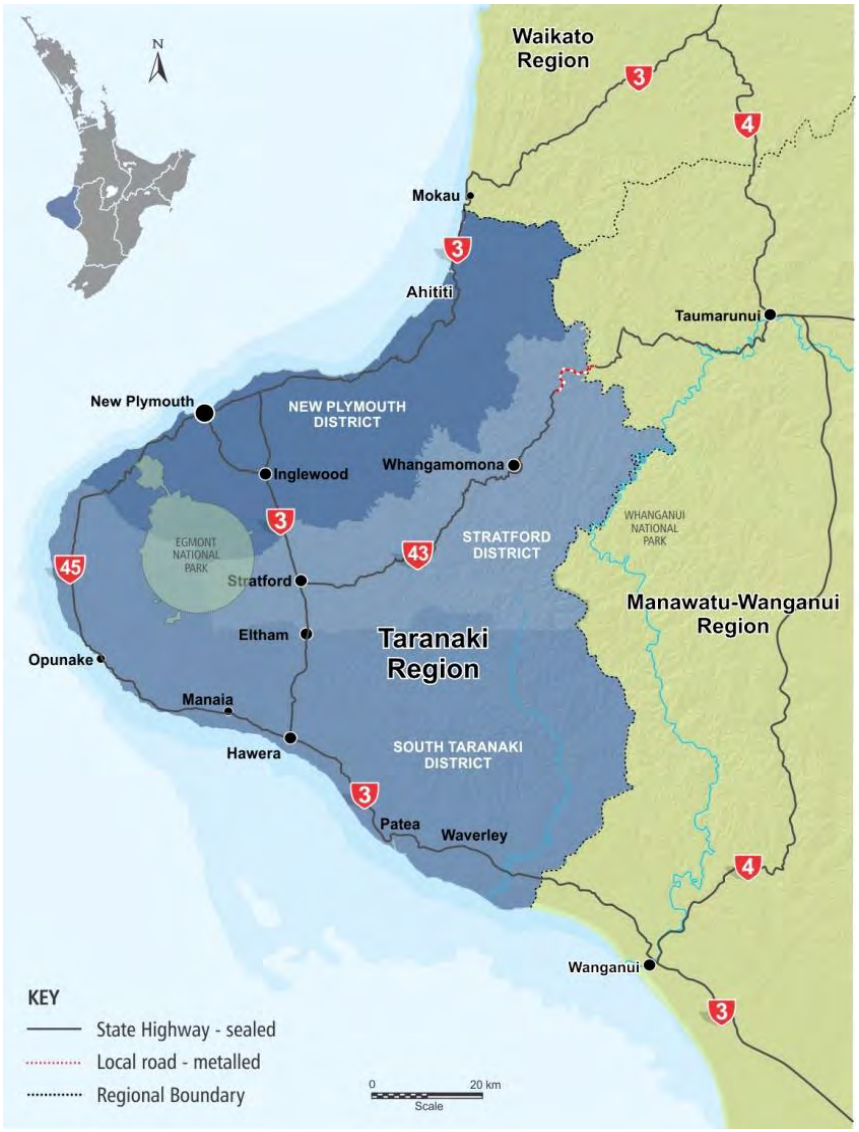

Figure 2: Taranaki CDEM area

What is Civil Defence Emergency Management (CDEM)?

In its simplest form civil defence emergency management is about preparing in advance the protection we need for when an emergency happens. Emergencies include, without limitation, any explosion, earthquake, eruption, tsunami, land movement, flood, storm, tornado, cyclone, serious 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 (see full definition in Annex A Glossary).

In most small incidents our emergency services (Police, Fire and providers of health and disability services) can cope on their own. Where they can't, either due to the scale of the event, or there is a need for more legislative powers, then civil defence emergency management measures are used. Activation of civil defence emergency management measures does not automatically mean significant extra resources are provided. Rather, CDEM enables better co-ordination, intelligence gathering, and prioritisation of planning.

The New Zealand integrated approach to civil defence emergency management can be described by the four areas of activity, known as the '4 Rs'.

The 4 Rs are:

Reduction: Identifying and analysing long-term risks to human life and property from hazards; taking steps to eliminate these risks if practicable, and, if 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 general 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 protect property, and to help communities recover.

Recovery: The coordinated efforts and processes to bring about the immediate, medium-term and long-term holistic regeneration and enhancement of a community following a civil defence emergency.

Strengthening relationships with iwi

The CDEM Group is committed to working with iwi through strengthening relationships and seeking their involvement in local CDEM activities.

There are eight local iwi located in the Taranaki region:

Ngāti Tama	Taranaki
Ngāti Mutunga	Ngāruahine
Te Atiawa	Ngāti Ruanui
Ngāti Maru	Ngaa Rauru Kiitahi

As tangata whenua in the region, the eight iwi have a special relationship with the land and with Mt Taranaki.

In its planning for emergency response and recovery the Group is committed to:

- Developing a shared understanding about how iwi and the CDEM sector can best work together,
- Protecting waahi tapu (sacred sites)
- Protection of taonga tuku iho (treasures of the ancestors), and
- Kaitiakitanga (guardianship of the environment)

during emergency risk reduction, readiness, response and recovery planning.

The Taranaki CDEM Group recognise that this plan does not provide full details of how this commitment will be actioned due to the new relationship with various iwi groups being in very early stages.

Iwi, Hapū and marae support

Iwi, hapū and marae organisations have the ability to play a key role in supporting emergency management functions.

Iwi and hapū can provide vital links to people, organisations and resources both before, during and in the recovery phases of an emergency. Iwi organisations may play an important role in an emergency providing

support and assistance. Working together with Iwi in respect of planning and response functions will be critical in creating a complete CDEM response when required.

Marae are a key component of Taranaki's community resilience with two marae identified as formal Civil Defence Centres in an emergency. Other marae not formally designated as Civil Defence Centres may also play an important role in hosting (manaakitia) displaced people during an emergency.

How our work relates to National CDEM planning

The Taranaki CDEM Group Plan is consistent with the National CDEM Strategy (2007) and National CDEM Plan 2015 and ensures that Taranaki's operational arrangements align with management of national and inter-regional hazards, risks and emergencies. The plan also takes into account other guidelines, regulations, and technical documents issued by the Director of Civil Defence Emergency Management.

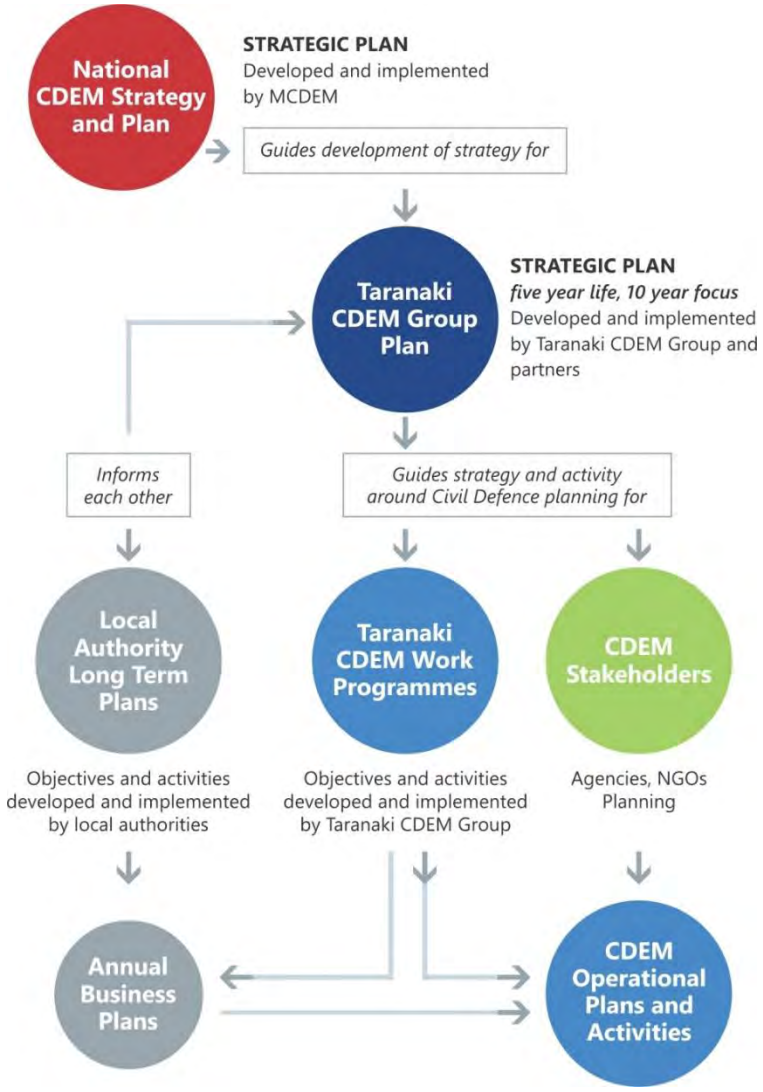

Figure 3: Taranaki CDEM Planning Framework

PART 2

RISK PROFILE

Describes the Taranaki environment, current hazards for the Taranaki community, the risks and vulnerabilities associated with those hazards and how the Group has prioritised which hazards it will manage.

Our environment

Understanding the Taranaki community and environment helps us to develop a profile of the kind of hazards and risks that Taranaki faces in an emergency, and how we can manage them. Through engagement with our communities we can understand the consequences these hazards and risks are likely to have, and what we need to do to manage them and support and enhance our communities when recovering from them.

This section sets out key statistical and other information across five 'environments' – the social, natural, built, economic and rural environments – and then links that information to the kinds of risks we face.

The statistical information provided in this section is sourced from official 2013 Census results and other studies produced by Statistics New Zealand or by Venture Taranaki.

Social environment

Population[1]

Taranaki's population is approximately 110,000 and increased by 5.3% between 2006 and 2013. The population of the New Plymouth District, which contains New Plymouth city, has risen 7.7% between the last two censuses: it is now approximately 67.7% of the total population in the region. The New Plymouth Urban area is projected to grow by 9.3% between 2013 and 2023.[2] In the two smaller districts that make up the region, Stratford District has grown by 1.1% and South Taranaki by 0.4% in the same period. As in the rest of the country, the Taranaki population continues to drift from rural to urban centres.

The median age in 2013 was 39.9 years (compared to 38.0 for New Zealand as whole), with those aged 0-14 years making up 21.1% of the population (NZ 20.4%) and those aged 65 + years making up a total of 16.2% (NZ 14.3%).

z

Ethnicity

The proportion of people with European ethnicity in the region is still relatively high (77.6%) however the total Māori population has increased by 14.9% to 18,150 people since 2006 (and changed in proportion from 15.2% to 17.4% of our total population).

Asian and Pacific ethnic groups represent 3.4% and 1.6% of the Taranaki population respectively.

Income

Taranaki's median household income is slightly lower than the national average, however earnings in the mining sector are much higher due to the presence of the oil and gas industry. There are still small areas of deprivation in Taranaki as measured by the New Zealand Deprivation Index 2013 (NZDep133). Most of the higher social deprivation is in urban areas throughout the region.

[1] All references in this section, with noted exceptions (see below) are sourced from Statistics New Zealand, as a result of the Census 2013.

[2] Ministry for the Environment and Ministry of Business, Innovation and Employment (2016). *Proposed National Policy Statement on Urban Development Capacity: Consultation Document*. Wellington: Ministry for the Environment, page 26.

[3] NZ Herald, 13 May 2014, *Where are NZ's most deprived areas?* (Interactive map). Data taken from Atkinson J, Salmond C, & Crampton P, *NZDep2013 Index of Deprivation,* May 2014, Department of Public Health, University of Otago, Wellington, & Division of Health Sciences, University of Otago

Preparation for an Emergency

Overall, Taranaki residents surveyed have told us they are not well-prepared for an emergency, and there has been little improvement over time, with a brief exception occurring after the Christchurch earthquakes. Official definitions of 'preparedness' mean being physically prepared for an emergency event: i.e. having enough food and water for each member of a household for three days; having a household 'emergency plan'; and for each household or organisation member to have a 'Getaway Kit' for the situation where they must leave their place of work or home.

Risk implications for Taranaki's SOCIAL environment include:

- The significant projected growth in the New Plymouth urban area may mean that proportionately more local welfare services will be required after an event (depending on vulnerability or exposure).
- The slightly higher percentage of elderly and young populations than elsewhere in New Zealand makes Taranaki more vulnerable during an emergency. This means a greater need to plan for evacuation and/ or welfare services in an emergency.
- The projected increase in Māori population in the region will require greater involvement of Māori and iwi groups in resilience and risk management planning over time.
- The low levels of readiness identified in historical and more current surveys increases vulnerability to impacts in an emergency.

Natural environment

The Taranaki skyline is dominated by the strato-volcano Mt Taranaki. The Taranaki region is at much less at risk of damaging earthquakes and liquefaction than most other regions.

Geology

Taranaki has four distinct types of land with different risks. The **Volcanic zone and ringplain** contains rich and fertile soil and much of the dairy production is located here. The **marine terraces** extend north to south along the coastline and include coastal sand dunes. The sandy soils and strong winds in some areas make the terraces susceptible to erosion if vegetation is lost or removed. The **coastal environment** has high cliffs, boulder reefs, and black sand beaches. This environment receives high energy wave and wind conditions that produce ongoing and often extensive erosion. The **eastern hill country** is a steeper part of the region, and the sedimentary soil there is prone to landslides and erosion. All inter-regional land transport systems pass through this zone.

There are over 530 named rivers in the Taranaki region and most flow from Mt Taranaki with short, narrow catchments with steep gradients and sometimes high amounts of sediment. High rainfall and hilly topography means the region's rivers can rise very rapidly.

Vegetation

Native vegetation covers 40% of the region and over 151,000 hectares is formally protected. Many local community groups and organisations work to protect and enhance regional flora and fauna.

Weather

Taranaki's mainly sunny, windy climate is typically moderate; however, the region's exposed position means there can be some extremes (see Page 85). Mt Taranaki has one of the highest 24-hour rainfalls in New Zealand. Yet despite the generally high rainfall, there can also be periods of moderate drought. Climate change predictions for Taranaki predict rainfall to decrease in summer and increase in winter, which may also increase the severity and/or frequency of flooding. Gale and storm force winds from the west are also predicted to increase.

Coastal areas

As noted above, significant sections of our coastline are protected by cliffs but prone to erosion from waves, and westerly wind, and inundation due to storm surge and sea-level rise. River mouths, estuary areas, and Port Taranaki are not protected by cliffs, and are particularly at risk of inundation from storm surges.

Risk Implications for Taranaki's NATURAL environment include:

- Natural hazards in the 'hazardscape' can affect people, infrastructure, and the regional economy, as well as the natural environment.
- Some areas of the natural environment are more exposed to certain natural hazards than others – for instance locations more likely to experience coastal erosion, tornados and landslides.
- Climate change will increase adverse weather and erosion hazards along the region's coastline and rivers in particular. Rising sea levels may cause escalated risks to natural and built environments along the coast, and to the people who live in coastal and river mouth areas in the region.
- Tsunami hazards threaten low-lying areas near the coast, river mouths, and estuaries.
- Biosecurity emergencies – for instance foot and mouth disease or major pest incursions – may have an impact on the natural flora and fauna and also on economic production in the region.

Built environment

Taranaki is well-serviced by an extensive infrastructure network, including roads, airport and the only West Coast deep-water Port. The presence of the energy (oil and gas) sector in the region has required development of unique energy and telecommunications infrastructure and transport systems.

Taranaki's only city is New Plymouth. The main towns are: Hāwera, Stratford, Inglewood, Waitara, Oākura, Opunake, and Pātea. There are also several smaller country and coastal communities. The population of 109,609 makes the region the 10th largest in the country.

Residential dwellings and public buildings

Household dwellings in the region number approximately 47,511. Around 68% of occupied dwellings are owned privately.

Knowledge about the quality of buildings in terms of their resilience to various types of natural hazards (e.g. earthquake, volcanic ash loading, tornado) is variable across the region.

As of 1 July 2017, new regulations for district councils regarding assessing the earthquake risk of public buildings came into force. This will speed up the requirements for district councils to carry out assessments of earthquake prone public buildings and will provide a better understanding of the level of risk to which the public is exposed.

Lifeline Utilities

Roading

Taranaki's roading network includes 3,916 kilometres of roads of which 82% are sealed. 10% are state highways, and 90% are local roads. There is a bridge approximately every four kilometres along local roads.

State Highway 3 is of particular strategic value and significance for Taranaki to both the north and south, as it is a primary route for the delivery of fast moving consumer goods and petrol movements for the region and the export of regional products, as well as being the primary road evacuation route.

Airport

New Plymouth Airport is the region's main airport and 411,661 passengers travelled through it in 2016. New Plymouth Airport has general aviation facilities for private planes and helicopters, including hangers and refuelling services (BP). The airport has three runways in regular use.[4] The maximum size of aircraft currently landing at the airport is an ATR72-600 seating 68 passengers. There are plans to extend the main runway by 100 metres at each end to improve the ability of these aircraft to land in a wider range of weather conditions.

Gas and Oil

As the largest and most important oil and gas-producing region in the country, Taranaki has developed a significant amount of infrastructure to produce, distribute and transport oil and gas. Gas production stations in Oaonui and Kapuni (South Taranaki) supply gas to the whole country through the high pressure 300km Māui pipeline and the 2,200 km transmission pipeline owned by First Gas Limited. Oil is transported either by pipeline or via tanker trucks to storage or export at Port Taranaki.

[4] http://www.newplymouthnz.com/Residents/Facilities-and-Services/Airport

The Māui pipeline, First Gas transmission pipeline and Omata Tank Farm are all rated as nationally significant assets.[5]

Electricity

There are two levels of connectivity for the Taranaki electricity network:

1. The high voltage national electrical transmission system that covers both North and South Islands. This system connects generation sources to local substations and is operated by Transpower. The Taranaki region connects at Stratford to the National Grid through 220 kV circuits that run north to Huntly and south-east to Bunnythorpe. Under normal operation, generation exceeds demand in this region and power is exported to the rest of the National Grid[6].
2. The lower voltage local distribution network that connects substations to local businesses and residents. This local network is operated in Taranaki by Powerco.

There are several electricity generation sites in Taranaki. The largest is at Stratford where there are two gas powered plants operated by Contact Energy. There is also a smaller peaker plant in Stratford.

Other generation sites include Todd Energy's gas-powered sites at McKee and Mangahewa, Fonterra and Todd Energy's Whareroa gas-cogeneration site, Vector and Bay of Plenty Energy's gas cogeneration site at Kapuni and Trustpower's hydro sites at Mangamahoe and on the Pātea and Motukawa Rivers.

Telecommunications

The telecommunications network in the region includes copper networks (landline), high-speed broadband and ultra-high speed fibre connections, satellite services, cellphone networks, paging, and internet data.

Radiocommunications

The radiocommunications network in the region includes RT equipment and AM and FM transmitters that provide the important function of broadcasting information to the public in an emergency.

Drinking water, storm water and waste water

The majority of municipal water supplies in Taranaki are sourced from surface water flowing from Mt Taranaki, with groundwater and bore water sources used for some smaller communities.

Sewerage networks operate in New Plymouth and all other major urban areas in the region. Other areas use on-site sewage treatment, mainly septic tanks.

New Plymouth's flood protection network includes three major flood detention dams located on the Huatoki, Mangaotuku and Waimea Streams and built in the 1980s.

Port

Port Taranaki is located in New Plymouth and is the only deep-water seaport on New Zealand's western seaboard.

Port Taranaki has nine fully serviced berths for a wide variety of cargoes and vessels. The maximum port draft is 12.5 metres and has a maximum vessel capacity of 225 metres. It handles large volumes of cargoes, principally those of the farming, engineering and petrochemical industries.[7]

Rail

Rail access is only from the south via the Marton to New Plymouth line (MNPL) which brings freight to and from the Port. Rail is an important mode of exporting dairy products from the region.

[5] New Zealand Lifelines Council, New Zealand Lifelines Infrastructure Vulnerability Assessment: Stage 1, September 2017

[6] https://www.transpower.co.nz/sites/default/files/publications/resources/TPR2015Chapter12Taranaki.pdf

[7] www.porttaranaki.co.nz

Risk Implications for Taranaki's BUILT environment include:

- Roading infrastructure and bridges are vulnerable to a range of natural hazards particularly flooding, landslips, and subsidence.
- The Port and other low-lying areas are vulnerable to tsunami.
- Lack of knowledge about earthquake prone buildings in some parts of the region makes risk reduction planning difficult.
- Taranaki is reliant on SH3 for fast-moving consumer goods, petrol, and freight for the primary production and energy sectors. SH3 and SH45 are the only land-based evacuation routes in the region. The State Highway network in Taranaki is prone to landslips and other flood damage and lengthy closures can cause significant negative economic impacts for the region and the country.
- Taranaki's electricity production supplies the national grid during peak winter loads and any damage to this supply would put pressure on national as well as local supplies.
- Taranaki's supplies of oil and gas are of domestic and national significance. Some goes through the Port, a portion of which is reclaimed and vulnerable to liquefaction.
- Most communications transmission equipment is located on Mt Taranaki and will be affected during an eruption event. Some of the cellphone transmission towers are susceptible to landslips.
- As most municipal water supplies are taken from surface water, these are vulnerable to hazards such as landslips, ashfall, and other eruption hazards that affect rivers, such as lahars. This also applies to private farm rain-fed water supplies.
- While the likelihood is rare, failure of a detention dam, Lake Mangamahoe or Pukekura Park dams in New Plymouth while they are full would have severe consequences for hundreds of properties.

Economic environment

The region is New Zealand's energy powerhouse and an important food-producing and processing centre. Together with the agriculture sector, the oil and gas industry is of national significance. Taranaki is currently the only region in the country with producing oil and gas fields.

Business and employment

Taranaki generates approximately $8.8 billion of Gross Domestic Product (GDP), which contributes 3.6% of GDP nationally, and is the highest GDP per capita in the country after Wellington and Auckland[8]. Nearly 50% of GDP produced in the region is contributed by the forestry, fishing, mining, electricity, gas, water, and waste services sector[9]. The next highest contributing industry is manufacturing[10], with 22%, followed by agriculture, at 8%[11].

During 2013 the region produced 35,500 barrels of oil per day, 22% of New Zealand's primary energy supply, and 19% of its electricity.[12] Sheep and beef farming is a big industry - there are 7.1 cows and 5.3 sheep for every person in the region[13].

Visitor industry

There is a strong arts and culture component of Taranaki's tourism trade, with visitors to the Len Lye Centre, WOMAD, PowerCo Garden Spectacular and Taranaki Arts Festival increasing the local population by up to 15 times its normal size over the course of a year. Most visitors come from within New Zealand to stay with friends or family, but over half a million stayed in commercial accommodation during 2015.[14]

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[8] Venture Taranaki, 2016, *Taranaki Facts and Figures, Winter 2016*, pages 2-3.

[9] This classification includes Oil and Gas extraction, Petroleum exploration, Electricity Generation, transmission and distribution, and Gas supply.

[10] This classification includes Petroleum Refining and Petroleum Fuels Manufacturing, and Industrial Gases Manufacturing.

[11] This classification includes Grain, Sheep and Beef Cattle Farming, Dairy Cattle Farming, and Poultry Farming.

[12] Venture Taranaki, March 2015, *The Wealth beneath Our Feet: The Next Steps* (The Value of the Oil and Gas Industry to New Zealand and the Taranaki Region: A fresh perspective on the industry and its economic impact).

[13] Venture Taranaki, 2015, *Annual Report 2015*: 'Taranaki at a Glance'.

[14] Venture Taranaki, 2016, *Taranaki Facts and Figures, Winter 2016*, pages 24-27.

Risk Implications for Taranaki's ECONOMIC environment include:

- The presence of the oil and gas industry and associated technologies in the region requires management of additional hazardous substances and processes, either on site, during storage, or during transportation.
- Droughts (or more strictly low river levels) can have an adverse effect upon the petrochemical and the gas-fired electricity generation capacity of the region, as these industries depend on river flow water for cooling purposes. Low flows in rivers therefore adversely impact both hydro generation and gas-fired generation.
- Any hazard or event that affects access to commercial and residential gas supplies is costly. This was demonstrated by the shutdown of the Maui pipeline in October 2011, due to a leak caused by land movement. This cost approximately $200 million in economic impact to the rest of the country.
- Special events such as WOMAD, the Festival of Lights, and garden and art festivals attract high numbers of tourists to the area who are not aware of local hazards or local resources and facilities.
- Any arts or other recreational event that attracts a large number of visitors to the region increases the potential need for welfare services and evacuation in the event of an emergency occurring at the same time.

Rural environment

The agricultural sector forms a large part of the economic activity in the Taranaki region and is of national importance. The region contains about 1800 dairy farms and most of them are situated on the volcanic ring plain surrounding Mt Taranaki. The Taranaki region is also a significant producer of poultry for the rest of the country. Most poultry farms are intensively-farmed and are heavy users of power and water. Other growing rural industries include forestry, Manuka honey, and hemp production.

The rural environment of Taranaki forms a distinct social and economic environment of its own and, in general, people and farmers who live in rural areas are very resilient. Historically the rural sector in Taranaki has been heavily affected by flood events, such as the June 2015 event, and the economic impact of these events has been significant. Flood damage affects land, roads, bridges, fencing, stock and crops. The long-term costs of these events may extend over several seasons.

Pest and animal diseases, such as Foot and Mouth Disease, could devastate the dairy industry and cause significant economic consequences for the region and New Zealand, with the loss of milk production.

Droughts affect the rural environment more than any other in the region. Although they can be managed to some extent they can affect farms and the larger rural economy over a long period of time. Both the

Risk Implications for Taranaki's RURAL environment include:

- The region's intensive agriculture and widely-dispersed rural communities have resulted in a high number of sealed roads for relatively low numbers of people. Repairing these roads after a flood event is costly for district councils.
- Long-term power shutdowns affecting the poultry industry may mean that some animals will need to be destroyed and this process can take some time.
- Severe weather events have proven to have significant on-farm costs in Taranaki, due to infrastructure, and loss of production impacts.
- Road closure after severe weather events also have an effect on farmers' ability to move stock and feed and undertake normal seasonal work.
- Many natural hazards would also affect availability of feed and water for stock and poultry and may reduce stock numbers and future income.
- Disruption to stock numbers and production from a volcanic eruption could continue for years.

agricultural and horticultural sectors would be affected by a volcanic eruption particularly through contamination of water, pasture, and crops by ash.

Our Hazardscape

What is a hazard?

A hazard is something that may cause or aggravate an emergency, creating risks to people, property, the environment or the economy. The Taranaki CDEM Group area is at risk from a wide range of significant natural, infrastructure, and 'human-made' hazards. The combination of all hazards in an area is commonly termed the 'hazardscape'.

Natural hazards include environmental processes such as volcanic eruptions, earthquakes, flooding, landslides, or tornadoes. Natural hazards also include biological hazards such as biosecurity threats, infectious human diseases and pandemics.

Infrastructure hazards include infrastructure failures of lifeline and related services such as water supply and wastewater removal, electricity, the internet, cellphone coverage, roading and the Port.

Human-made hazards are those that originate with human activities, such as hazardous substance incidents, major transport accidents, and terrorism or bioterrorism.

A recent stocktake of research already commissioned, or held in relation to natural and other hazards, for the Taranaki CDEM Group, resulted in the development of the *Summary of Hazard Information and Research for the Taranaki CDEM Group Region.*[15]

Likelihood and consequences

In preparation for the review of the Group Plan, a list of hazards was compiled and consolidated. The extent of risk resulting from each hazard was analysed and evaluated through a risk analysis process workshop facilitated by GNS Science and attended by emergency management staff, staff from other CDEM Group partner and lifeline agencies, local government officers, and scientists from NIWA and MetService.

The first part of the process involved identification and analysis of the region's hazards. The risk analysis generates a 'risk rating' to prioritise hazards and their management. Prioritisation is based on an analysis of both **consequence** and **likelihood**. A major hazard that is very unlikely may be a lower priority than a frequently-occurring minor hazard.

In emergency management scenarios, the consequences of risk also encompass concepts of **vulnerability** and **exposure**. Vulnerability is the characteristics and circumstances of elements at risk (e.g. human life and property) that make them susceptible to the damaging effects of a hazard. Exposure is the extent to which hazards and risks may affect particular communities based on the locations and number of people, buildings and infrastructure.

The second stage of the risk assessment process is to assess the risk rating against three factors:

- Seriousness;
- Manageability; and
- Growth.

This evaluation produced risk values for the full list of hazards for the region, which are set out in Figure 4 on the next page.

The first 15 hazards in the list below have been deemed to be **priority hazards**. These priority hazards will receive more resources and management from the CDEM Group over the life of the Plan. Note that the evaluation score was derived from a qualitative process but they are shown to two decimal places to indicate ordinal placement.

More detail of the risk assessment and evaluation process, and the likely consequences and vulnerabilities of each hazard is contained in the Hazard and Riskscape Annex and in the GNS Science report.[16]

Note: Some of the hazards listed are managed by government entities other than CDEM.

[15] Taranaki Regional Council, 2016, Frodo #1581684

[16] Woods RJ, Saunders WSA 2016.'Taranaki Civil Defence Emergency Management Group Plan: Risk Assessment Workshop and Analysis', *GNS Science Consultancy Report 2016/143.*

Figure 4: All hazards and Group Plan priorities

Regional and local priorities

The prioritised list of 15 hazards is based upon the risk to the region as a whole, and these are the hazards which the Group has agreed to focus on and manage, as required under Section 49(2) (b) of the CDEM Act 2002. The seriousness of some of the hazards will vary by location across the region. Territorial authorities and other CDEM member agencies may wish to undertake their own assessment of how each priority hazard will affect their district or business. Further information about these hazards is contained in Annex B of this Plan.

Hazards which may be of national significance

Some hazards may be too big for the Taranaki CDEM Group to manage alone, and will require national-level assistance or assistance from CDEM Groups outside of the region. Such hazards include:

- Mt Taranaki eruption: any eruption will have a significant local impact and aspects of the eruption may also affect large areas of the North Island. The disruption of infrastructure and transport in other regions is likely to require activation of the National Crisis Management Centre. All regional and local CDEM emergency Coordination Centres would be active.
- Volcanic: distant ashfall: This could come from a Taranaki source or other NZ volcanic centres. Depending on the wind direction, ashfall could affect other regions from a Taranaki source, especially the central and eastern North Island. Equally eruptions at other volcanoes mountains in the North Island could affect Taranaki. All eruptions of this size are likely to see activation of the National Crisis Management Centre.

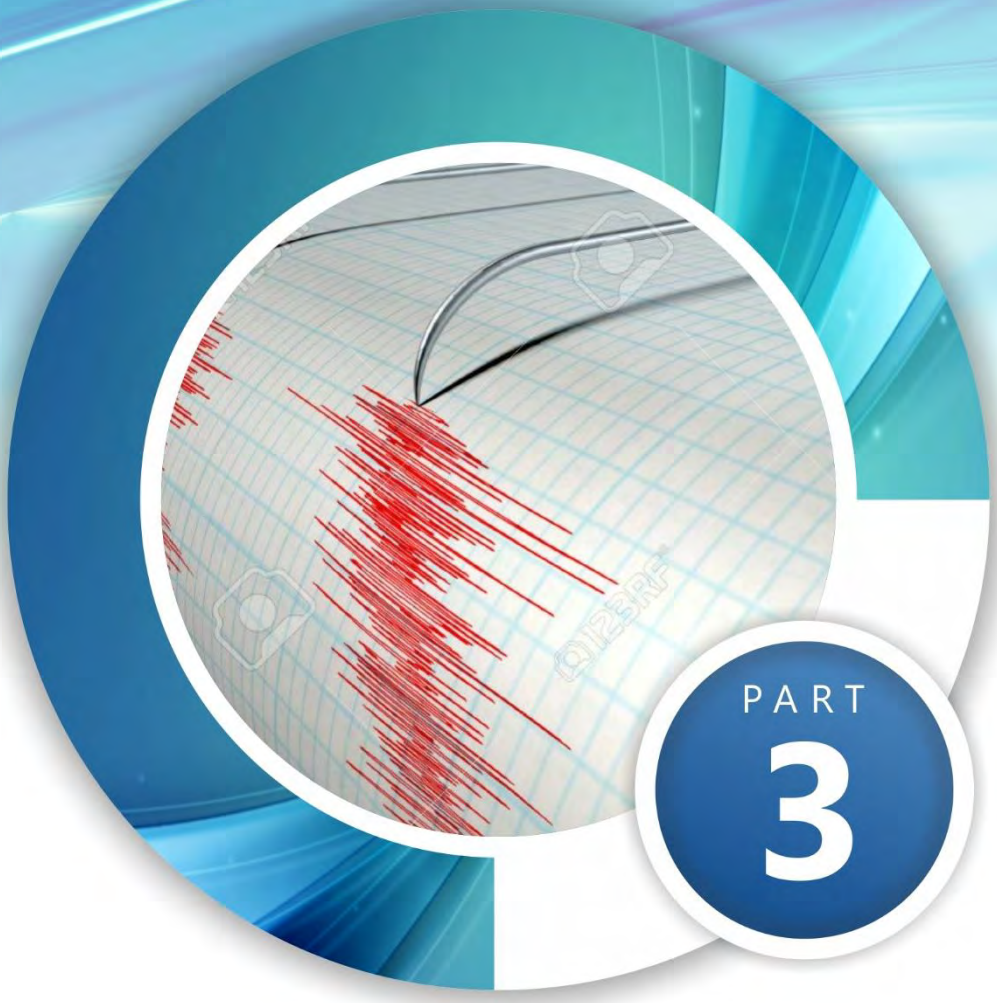
Figure 5: Taranaki Hazards map.

- Widespread human pandemic.

- An earthquake creating Modified Mercalli scale 9 or greater shaking intensity could potentially create significant local damage. This may involve lifeline utilities with national significance such as the Maui Gas pipeline.[17]
- Widespread animal or pest epidemics such as Foot and Mouth or Myrtle Rust disease.
- Large-scale terrorist/bioterrorist activity or civil disobedience.
- Major, long-term electricity, gas and other infrastructure failures.

Emergencies of national significance or national activation still require the Taranaki CDEM Group to respond within the region, whether through the Emergency Coordination Centre (ECC) or the local Emergency Operation Centres (EOCs). The CDEM Group may develop and undertake regional and local response planning for these hazards during the life of this Plan.

[17] Brad Scott, GNS Science, Pers.comm., November 2017

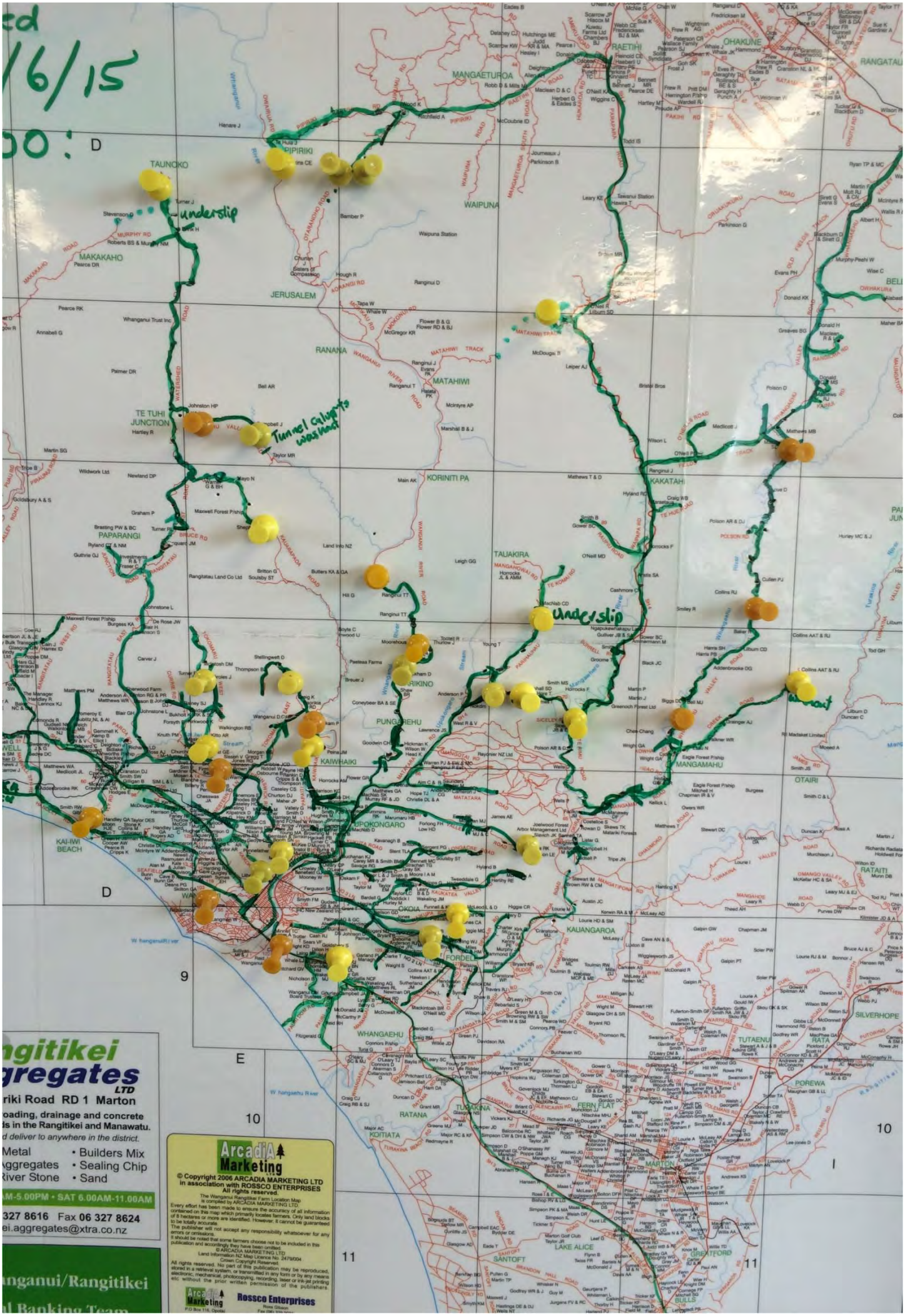


PART

3

STRATEGY

Outlines how the Taranaki CDEM Group and partner agencies will manage the hazards according to the 4Rs and the Sendai Framework.



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OTAIRI
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UPOKONGARO
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FORDELL
KAUANGAROA
RATAITI
SILVERHOPE
WHANGAEHU
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ei.aggregates@xtra.co.nz
anganui/Rangitikei
al Banking Team
ArcadiA Marketing
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The Wanganui Rangitikei Farm Location Map
is compiled by ARCADIA MARKETING LTD.
Every effort has been made to ensure the accuracy of all information contained on this map which primarily locates farmers. Only land blocks of 8 hectares or more are identified. However, it cannot be guaranteed to be totally accurate.
The publisher will not accept any responsibility whatsoever for any errors or omissions.
It should be noted that some farmers choose not to be included in this publication and accordingly they have been omitted.
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Introduction

The Taranaki CDEM Group strategy was developed by the Group Plan project team and is partly based upon structural and functional recommendations made in the Brendon Morris Consulting Ltd review of the Taranaki CDEM structure in 2016. The strategy also takes into account the Sendai Framework around disaster risk management. The Sendai Framework is a 15-year, voluntary, non-binding agreement which recognizes that the state has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders. It aims for the substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

The Taranaki CDEM Group organisational **vision** is a clear, comprehensive 'photograph' of our organisation for the future. It provides direction because it describes what we believe a successful CDEM organisation looks like in the future.

To further define the organisational vision for the Taranaki CDEM Group, a core purpose and core values have been defined. **Core purpose** is broad, fundamental and enduring and a good purpose serves to guide and inspire the organisation for the long term. **Core values** are the organisation's essential and enduring tenets, which are a small set of timeless guiding principles that require no external justification

Key strategic **goals, principles/policies and objectives/actions** for the CDEM Group are outlined for the next five years.

Due to the unique redevelopment phase that the group is in, many of the objectives and actions are related to an intention to develop more specific action-oriented planning and these plans are expected to be completed over the Group Plan's operative five-year period.

For the avoidance of doubt the rural sector, iwi, hapū, and marae are included wherever the terms community and organisations are used in this strategy section.

More specific action plans relating to actions within each of the 4 'R's will be developed during the life of this plan. For further information about the Taranaki CDEM planning framework, existing action plans and standard operating procedures refer to Annex D.

Vision

Our Taranaki community shows resilience through periods of disaster, crisis and change.

Core purpose

We deliver professional disaster risk and emergency management for Taranaki.

Core values

Collective responsibility - Shared between National, Group and District level

Unified approach - CDEM partners work for the overall benefit of the Taranaki community

Organisational resilience – any part of the system can lend support seamlessly

Strong relationships – strong effective coordination and integration

1 Governance

Strategic goal

Our expectations from CDEM partners is clear and met through strong governance arrangements and accountability for delivery

Principles/policies

1.1 Organisations will cooperate and develop relationships at governance, executive, and operational levels to understand and accept roles and responsibilities.

Objectives/actions to achieve the Strategic Goal

Gov 1 A performance monitoring and evaluation framework for the CDEM Group (based on this Group Plan and other planning documents) will be established and implemented to ensure that the work of the Group remains on track to achieve the strategic goals outlined in this Plan, and to identify risks and issues that emerge over the course of the Plan that will need to be addressed.

Gov 2 CDEM Group Financial Policy arrangements implemented to ensure accountability for delivery.

Gov 3 Advisory Group work plans and priorities are established, implemented and contribute towards the 4 Rs.

Gov 4 Group Plan and annex documents review commenced 12 months prior to expiry to comply with legislative requirements.

Gov 5 Review the Constituting Agreement within five years to ensure governance and delivery arrangements are fit for purpose.

Gov 6 An annual report will be submitted by member councils to CEG and the CDEM Joint committee regarding actions undertaken to improve their preparedness and readiness to respond to and recover from emergencies.

Gov 7 Governance arrangements across the full range of Taranaki CDEM activities will be reviewed by 1 July 2020 regarding the involvement and representation of Māori.

2 Disaster risk reduction

Strategic goal

The risks from hazards, their likelihood and impacts, are understood and managed to reduce our risk exposure

Principles/policies

2.1 Risk reduction actions in Taranaki will be prioritised in order of:

1. risks to human life and safety and to vulnerable communities
2. risks to the built environment (critical infrastructure and lifeline utilities)
3. risks to the natural environment

4. risks to the economic environment

2.2 Hazard, risk information, and levels of risk will be discussed with communities to enable them to make informed decisions on reduction works and on the acceptability of any residual risks.

2.3 Risk reduction will be based on scientific research and risk analysis and will be approached in a balanced, practical, and achievable way using best practice methods.

2.4 Risk reduction activities will be identified and coordinated collaboratively.

2.5 Risk reduction and prevention will be promoted with consistent messaging.

Objectives/actions to achieve the Strategic Goal

DRR 1 A survey of all current risk and hazard documents completed to create a better understanding of the hazardscape for Taranaki.

DRR 2 Disaster Risk Reduction Advisory Group established to create a focal point for ensuring the implementation of risk reduction measures across the region.

DRR 3 Disaster Risk Reduction priorities developed into a Disaster Risk Reduction Strategy to address priority hazards.

DRR 4 The CDEM Group will seek out and encourage applied hazard science research to benefit risk reduction planning.

DRR 5 Regional GIS (Geospatial Information System) system established for the CDEM Group to improve the understanding of risk exposure and to enable better situational awareness during a response and recovery.

DRR 6 The CDEM Group will promote the integration of activities and a consistent CDEM risk reduction approach within work programmes such as Councils' Long Term Plans, Resource Management Plans, and other stakeholder agency work plans, to ensure they are informed by the likely post-event consequences on communities.

DRR 7 Regional Lifeline vulnerability study undertaken to improve the understanding of lifeline utility exposure to natural hazards and to create a basis for a work programme for risk reduction measures.

3 Organisational resilience (readiness)

Strategic goal

We build resilience into organisations and plan for the impacts from disaster and ensure our systems and arrangements are fit for purpose

Principles/policies

3.1 All organisations involved in Taranaki CDEM activity are clear about their roles and responsibilities, actively plan and prepare for response and recovery, and take a unified approach with other partners, to ensure an effective whole of sector delivery of CDEM.

Objectives/actions to achieve the Strategic Goal

OR 1 Implement EMIS (Emergency Management Information System), or another suitable CDEM Group information system to improve the communications and record keeping of decisions made during emergency activations.

OR 2 Audits of existing and proposed EOCs/ECC conducted to assess their capacity for response.

OR 3 Training capability development plan developed and implemented to increase the number and capability of civil defence emergency management staff and volunteers.

OR 4 CDEM Group partner business continuity plans tested based on hazardscape and likely impact scenarios to improve the capacity and capability of organisations to cope with and recover from emergencies

OR 5 Development and implementation of performance measures by 2020 to monitor the progress against the recovery programme of work, and ensure the actions are achieving the required outcomes.

OR 6 Continuous improvement practices are adopted and corrective action planning established and implemented following exercises and activations.

4 Community resilience (readiness)

Strategic goal

Community resilience is strengthened so that the impacts from disasters are reduced and communities are equipped to adapt to change.

Principles/policies

4.1 Consistent engagement with communities about emergency preparedness, including the possible longer-term consequences, will enable them to be aware of and take action in a coordinated and collaborative way, including vulnerable groups, families, individuals, minors and businesses.

Objectives/actions to achieve the Strategic Goal

CR 1 Develop and commence delivery of a Volunteer Management Strategy to increase the numbers and capability of volunteers.

CR 2 Review and rationalise Civil Defence Centres to ensure they are fit for purpose.

CR 3 Refine and continue delivery of our Community Resilience Strategy to ensure that its objectives of engaged, connected, resource and empowered communities is being achieved.

CR 4 Develop and implement a public education and community engagement strategy focused on improving community preparedness to act in a coordinated and collaborative way during an emergency, and to strengthen their ability to adapt to change following an emergency.

CR 5 500 community volunteers registered and trained in CIMS and other relevant topics to improve the level of skills in the sector.

CR 6 10 Community Emergency Plans (including marae based) established and functioning to create local groups of prepared and skilled community volunteers to support communities to respond to and recover from emergencies.

5 Capability development (readiness, response and recovery)

Strategic goal

We develop the capability of staff and volunteers to effectively carry out their roles in readiness, response and recovery

Principles/policies

5.1 All organisations involved in CDEM will commit to training, ongoing professional development and release of personnel for CDEM readiness, response and recovery purposes.

Objectives/actions to achieve the Strategic Goal

CD 1 Adult Community Education (ACE) funds and other funding sources for volunteer training investigated and accessed to increase the number of people able to be trained.

CD 2 Training records managed to record staff and volunteer training for both currency and proficiency to create better knowledge about the community's capacity to respond to and recover from emergencies.

CD 3 Plan and run at least one Tier 2 Exercise (whole of Group) to test and increase the capacity and capability of staff and volunteers.

CD 4 Participate in all Tier 4 national exercises to test and increase the capacity and capability of staff and volunteers.

CD 5 500 CDEM centre staff trained to Integrated Training Framework (ITF) Intermediate CIMS to provide a sufficient pool of trained staff within the region.

CD 6 85% of CIMS function leads trained in relevant ITF Function Lead courses to ensure a sufficient skill level of critical staff.

6 Response and recovery

Strategic goal

We enable well managed effective responses, and we support the community's journey of moving on from the impacts of disasters

Response principles/policies

6.1 The objectives for a civil defence emergency response are:

1. the preservation of life; and
2. the prevention of escalation of the emergency; and
3. the maintenance of law and order; and
4. the provision of safety and security measures for people and property; and
5. the care of sick, injured, and dependent people; and

6. the provision of essential services; and
7. the preservation of governance; and
8. the protection of assets that includes buildings and their contents and cultural (including waahi tapu and taonga tuku iho) and historic heritage assets; and
9. the protection of natural and physical resources and the provision of animal welfare (to the extent reasonably possible in the circumstances); and
10. the continuation or restoration of economic activity; and
11. the putting into place of effective arrangements for the transition to recovery.

6.2 Emergency management response will be locally delivered and regionally coordinated and will utilise the Coordinated Incident Management System (CIMS).

6.3 Organisations will coordinate their response and action planning with the appropriate lead agency and utilise regional or national support as appropriate.

6.4 Response organisations will communicate and engage with communities regarding response activities during an emergency.

6.5 Up-to-date public information on the response situation and activities, both undertaken and planned, will be communicated in an integrated way with consistent messaging to the community through a range of mechanisms.

6.6 As far as is practicable, response activities will be undertaken with a view to recovery and the need to "build back better".

Recovery principles/policies

6.7 Comprehensive community recovery that takes into account community values and priorities is coordinated by the lead organisation at local and regional levels to address the social, built, economic, natural and rural environments.

6.8 Recovery organisations will collaborate both pre- and post-emergency to support the lead organisation and affected communities.

6.9 Recovery actions will be balanced and practicable, and will take opportunities to minimise future exposure to risks with the aim to undertake risk reduction and to "build back better" wherever possible.

6.10 Response and recovery organisations will communicate recovery activities to the community during the transition to recovery.

6.11 Organisations involved in recovery commit to completing the recovery process and returning to 'business-as-usual' activities as soon as practicable.

6.12 Recovery organisations will communicate and consult with affected communities, and where practical, provide opportunities for the community to assist or have input into recovery activities.

Response objectives/actions to achieve the Strategic Goal

RR 1 A Readiness and Response Advisory Group will be established (fulfilling Section 8 Guide to the National Plan requirement for and emergency services coordination committee) to improve the quality of communication and cooperation both between first responders and with Civil Defence Emergency Management.

RR 2 All Group and Local Controllers complete National Controller Training Programme to improve decision making and emergency management skills.

RR 3 Three district based EOCs and one regional ECC established to increase the capacity for response at a local level.

RR 4 The accuracy and currency of all response plans and Standard Operating Procedures is assessed (and takes into account the response principles in this plan) and a programme for review developed.

RR 5 Standard Operating Procedures established and kept up-to-date to ensure consistency of decision making and actions in an emergency.

Recovery objectives/actions to achieve the Strategic Goal

RR 6 The Recovery programme of work to be completed by 2020 will guide the activities of the Group to prepare for recovery ahead of an emergency, and enable the Group and partner agencies to achieve the recovery principles and policies. This work will include (but is not limited to):

- Engagement with priority communities likely to be affected by specific hazards to understand their values and priorities, the likely consequences and the support needed. This will allow the necessary capabilities, processes and arrangements to be identified.
- Identification of key recovery partners needed to support recovery activities, including across local, regional and central government, non-government organisations, private sector, and within communities.
- Identification and prioritisation of actions to address gaps in recovery preparedness

RR 7 Hazard specific strategic recovery planning will be undertaken at the same time as hazard response contingency planning for the 15 Group Plan priority hazards over the life of this Group Plan to enable comprehensive emergency management.

RR 8 A framework for the coordination of recovery activities and collaboration post emergency will be established by 2021.

Figure 6: The 4 Rs.

PART

4

GOVERNANCE, OPERATIONAL STRUCTURES AND FINANCIAL ARRANGEMENTS

Sets out the administrative arrangements relating to the provision of emergency management in Taranaki including the group structure and role, the Joint Committee and CEG, cost and resource sharing arrangements, and coordination with other CDEM groups.

Let's Get Ready!
SESAME STREET
Join Grover and Elmo to learn how families get ready for emergencies.
Hello, everybodeee!

Governance

The CDEM Act 2002 sets out the requirements for CDEM arrangements and the establishment of CDEM Groups in New Zealand. The Act requires all local authorities to provide for CDEM in their area and for all organisations with CDEM responsibilities (CDEM sector organisations) to support CDEM activities.

This section clarifies the management and governance arrangements that ensure a collective understanding of roles and responsibilities and encourage cooperative activities between CDEM Group members and agencies/organisations with CDEM responsibilities.

The Joint Committee and Coordinating Executive Group (CEG) have the primary responsibility for overseeing the governance and management of CDEM activities during Reduction, Readiness, and Recovery; and for ensuring that the Group is prepared and capable of responding to an emergency. The primary responsibility for managing and implementing a Response to an emergency, however, is with the Group and Local Controllers, who are appointed by the Joint Committee.

The way Civil Defence Emergency Management is structured in Taranaki is illustrated and outlined in more detail in the rest of this section.

Figure 7: Civil Defence Emergency Management Structure

Joint Committee

The Taranaki CDEM Group Joint Committee is a statutory standing committee established under Section 12 of the CDEM Act 2002, and confirmed by a Constituting Agreement, with overall responsibility for setting the strategic direction and conducting the business of CDEM in Taranaki.

Membership

The Joint Committee is made up of the Chairperson of the Regional Council and Mayors from each of the territorial local authorities.

Each member can appoint and delegate responsibility to alternate representatives, providing they are elected representatives.

Member	Representative
New Plymouth District Council	Mayor
South Taranaki District Council	Mayor
Stratford District Council	Mayor
Taranaki Regional Council	Chairperson

Table 1: Taranaki CDEM Joint Committee Membership.

Meeting arrangements

Meeting arrangements for the Joint Committee are set out in the Terms of Reference and will be a minimum of four (4) meetings per annum.

Responsibilities

The functions, powers and duties of each member of the CDEM Group are specified in the CDEM Act 2002 (s16, 17, 18). The Joint Committee is responsible for ensuring the Group fulfils its CDEM responsibilities in respect of–

- strategy
- work programmes
- monitoring progress
- overseeing the Group Plan and
- undertaking appointments.

Delegation of functions and powers during interregnum following local authority elections

Following an amendment to the CDEM Act 2002 in 2012, provision was made for CDEM Groups to automatically continue to operate following a local authority election (s12(2). However, in the interregnum and until new representatives of the four constituent councils are appointed, the Group has no members and therefore cannot declare a state of emergency. The Minister of Civil Defence can declare a state of local emergency under section 69 of the Act, if necessary.

In the first instance, the powers of the Controller are available to address this hiatus, and to act on behalf of the Group. In addition, the members of CEG are unaffected by the elections and can continue to implement the decisions of the Group, as well as to implement the Group Plan and work programmes.

Administering authority

In accordance with section 23 of the Act, the Taranaki Regional Council ("the regional council") is the administering authority for the Taranaki CDEM Group and CEG.

Coordinating Executive Group (CEG)

The role of the Coordinating Executive Group is to implement the decisions of the Taranaki CDEM Group, provide them with strategic advice and overseeing the implementation, development, maintenance, monitoring and evaluation of this Group Plan.[18]

Membership

The Coordinating Executive Group (CEG) is chaired by a chief executive officer of one of four local authorities and consists of statutory and co-opted members (such as Advisory Group chairpersons) as determined by the CDEM Joint Committee (current list in Table 2).

CEG members are usually senior representatives of their organisations and ensure a strategic overview and commitment of organisational resources to agreed projects and tasks.

All members have voting rights unless a conflict of interest is declared. A representative from MCDEM is accorded observer status.

Meeting arrangements

Meeting arrangements for CEG are set out in their Terms of Reference and generally occur four times a year at the offices of the administering authority, the Taranaki Regional Council.

Responsibilities

The functions, powers, and duties of the CEG are specified in the section 20 of the Civil Defence Emergency Management Act 2002 and in their Terms of Reference.

Rahotu Tornados April 2018

[18] Section 20 CDEM Act 2002

Local advisory groups to support planning and operations

The Group has established a number of advisory groups to support and inform the decisions of the Group and in particular the CEG. Advisory Groups are a source of interested, trained, experienced personnel who provide specialist advice on operational planning across the 4 Rs, and expertise to assist in the running of the ECC and EOCs.

Advisory Groups ensure effective liaison between CDEM and key stakeholders in the community, and are a key pathway to sector networks. Advisory group personnel receive training and take part in exercises to the extent possible.

The groups are as follows:

- Rural Advisory Group
- Lifelines Advisory Group
- Welfare Coordination Group
- Area HAZMAT Coordination Committee
- Taranaki Seismic and Volcanic Advisory Group
- Risk Reduction Advisory Group
- Readiness and Response Advisory Group

The Terms of Reference for these groups are available on the Taranaki CDEM website.

During the operative period of the Group Plan, the Group Office intends to establish a Recovery Advisory Group, to better focus on the increasing community expectations for recovery management.

Member	Type[19]	Representative
New Plymouth District Council	S	CEO
South Taranaki District Council	S	CEO
Stratford District Council	S	CEO
Taranaki Regional Council	S	CEO
NZ Police	S	Senior Member
Fire and Emergency NZ	S	Senior Member
Taranaki District Health Board	S	Senior Member
St John Ambulance	C	Senior Member
Taranaki CDEM Group	C	Group Controller
Taranaki CDEM Group	C	Group Recovery Manager
Lifelines Advisory Group	C	Chairperson
Welfare Coordination Group	C	Chairperson Group Welfare Manager
Taranaki Seismic and Volcanic Advisory Group	C	Chairperson
Rural Advisory Group	C	Chairperson
Risk Reduction Advisory Group	C	Chairperson
Readiness and Response Advisory Group	C	Chairperson
Area HAZMAT Coordination Committee	C	Chairperson

Table 2: Taranaki CDEM Coordinating Executive Group Membership

[19] S = Statutory; C = Co-opted

Group structure

CDEM delivery in the Taranaki region is centrally coordinated by a Group Office, the Taranaki Emergency Management Office (TEMO).

Following consideration of the completed Brendon Morris Consulting Ltd review in 2016[20] , local CDEM delivery has been re-established through the three Taranaki District Councils (New Plymouth, South Taranaki and Stratford), while retaining the Group Office coordination and support via TEMO.

The three district councils in Taranaki will assume more of the local CDEM delivery, and any additional local delivery cost. The Group Office will provide CDEM coordination, support, and administration across the CDEM Group area. Additional resourcing at the Group Office will support this.

As a CDEM Group region-wide provision of systems, processes and training occurs. This ensures strong organisational and CDEM resilience, as one part of the region can provide seamless deployment within the Group area should this be required.

Group Emergency Management Office (TEMO) responsibilities

The Taranaki Group Emergency Management Office is located at 45 Robe Street New Plymouth and is administered by a Group Manager and support staff.

Advisers based at the Group Office coordinate and facilitate the 'day-to-day' planning, project work and capability development on behalf of the CDEM Group and CEG.

The Group Office is a shared service between all four councils in Taranaki, and its role is to support CDEM partner organisations. The responsibilities of the Group Office are outlined in the *Constituting Agreement of the Taranaki Civil Defence Emergency Management Group*, attached as Annex C to this Plan.

Standardisation of documentation, systems and processes occur at the Group Office. Standardised documentation of procedures will include:

- Warning procedures;
- Activation and Operational procedures (ECC/EOC);
- Response Management;
- Communications procedures;
- Operational systems.

Specific functions are–

General

- Maintain relationships and robust communication networks with Taranaki CDEM Group partners and other agencies
- Provide project coordination and management including the ongoing development, implementation, monitoring and review of the CDEM Group Plan and supporting CDEM strategy, policy and plans
- Prepare in consultation with CEG, the annual report of the CDEM Group's activities, budget and performance to the Group for adoption and publishing once adopted
- Represent the CEG on national bodies and projects
- Monitor and respond as appropriate to activities and developments at national level (including legislative or regulatory change or national level guidance)
- Participate in CEG and advisory groups, and other events or collaborations as appropriate

Reduction

- Hazard, risk information, and levels of risk will be discussed with communities to enable them to make informed decisions on reduction works and on the acceptability of any residual risks
- Coordinate risk reduction scientific research and risk analysis in a balanced, practical, and achievable way using best practice methods
- Identify and coordinate risk reduction activities
- Promote consistent risk reduction and prevention messages
- Provide support to the region's district councils and the Taranaki Regional Council on linking hazard risk research to local planning and implementation

[20] Brendon Morris Consulting Ltd Review of structural and functional delivery of responsibilities of the members of the Taranaki Civil Defence Emergency Management Group and Coordinating Executive Group, 2016

Readiness

- Work alongside the region's district councils to build and maintain local CDEM response and recovery capability
- Coordinate and deliver public education and engagement
- Provide professional development and training for CDEM personnel
- Coordinate the development of inter-agency response plans and assist in the development of agency-specific response plans, to specific hazards
- Support communities to prepare for emergencies through liaison with community groups and through the preparation, exercising, and maintenance of community response and recovery plans
- Coordinate development of community volunteer capability
- Maintain the Group ECC in a ready state

Response

- Monitor and respond to the adverse effects of emergencies on behalf of the CDEM Group and disseminate warnings
- Provide support for local and CDEM Group responses

Recovery

- Assist with recovery operations at the local and CDEM Group levels.

Local authority responsibilities

Each local authority ensures that it maintains an appropriate number of trained and competent staff. These staff form a cadre of expertise for Emergency Coordination.

Specific functions for local authorities are–

Taranaki Regional Council

To support regional coordination for CDEM in Taranaki and to provide all the services of the administering authority necessary for effective and efficient delivery of CDEM services across Taranaki (defined under section 24 of the Act), including any related services as defined by the CDEM Group.

This role includes the following functions and activities based on the 4 Rs as well as the administering authority function:

Reduction

- Regional hazards and risk monitoring management support and advice to TEMO as required by the Group
- Implement methods for natural hazards under section 11.1 of the Regional Policy Statement for Taranaki 2010

Readiness

- Provide TRC staff for CDEM training and professional development

Response and recovery

- Provide CDEM personnel for regional coordination roles at the Group ECC during response and recovery
- Provide support for fulfilling key CDEM Group appointments such as Group and Alternate Controllers, Welfare Managers and Recovery Managers
- Provide EOC support for the region's district councils in local CDEM coordination and delivery as required

Administering authority

- Provide secretariat services for the CDEM Group and CEG (convening meetings, providing venues, distributing agendas, providing minutes and catering)

Territorial authorities

The responsibilities of the region's three district councils – the New Plymouth, Stratford and South Taranaki district councils – relate primarily to local CDEM coordination and delivery within their local authority areas. Territorial local authorities also have lifeline utility responsibilities under the Act.

This role will include the following functions and activities based on the 4 Rs as well as the lifeline utility responsibilities:

Reduction

- Linking district policy and planning and implementation to objectives within the CDEM Group Plan and the Regional Policy Statement for Taranaki 2010

- Implement methods for natural hazards under section 11.1 of the Regional Policy Statement for Taranaki 2010

Readiness

- Develop and maintain capability and capacity to lead local CDEM coordination and delivery by:
- Allocating leadership roles: controller, information gathering and planning, Welfare Manager and Recovery Manager and alternates, for either the Group or local level
- Providing for staff to undertake professional development, training and participation in exercises
- Developing a local EOC capability and ensuring all systems and processes, and facilities and resources, are robust (such as communications, impact assessment, welfare delivery, local recovery management)
- Supporting TEMO in the preparation and delivery of community resilience programmes

Response and recovery

- Activate local CDEM response and recovery when required
- Provide CDEM personnel for coordination and delivery roles at the local EOC or regional ECC during response and recovery
- Provide support for fulfilling key CDEM Group appointments such as Alternate controllers, Welfare Managers and Recovery Managers
- Provide liaison with TEMO
- Provide support for other territorial authorities and TEMO with CDEM delivery as required

Lifeline utility responsibilities

- Fulfill responsibilities under section 60 of the Act to ensure territorial authority lifeline utilities are able to function to the fullest possible extent during and after an emergency.

Statutory appointments

Controllers

The CDEM Group has appointed a Group Controller and Alternate Controllers in accordance with Sections 26 and 27 of the CDEM Act (2002) and these positions operate out of the ECC and EOCs during a response. Local Controllers will also be appointed for each local EOC. A Local Controller must follow any directions given by the Group Controller during an emergency.

The Taranaki CDEM Group has delegated the following powers under Section 18 of the CDEM Act to the Group Controllers[21]:

1. **General powers:** The Group Controller is delegated the authority to co-ordinate the activities (as are required to perform his/her duties) detailed in section 18(2) including:
   - recruit and train volunteers
   - conduct CDEM training exercises, practices, and rehearsals
   - issue and control the use of signs, badges, insignia, and identification passes
   - provide, maintain, control, and operate warning systems
   - provide communications, equipment, accommodation, and facilities for the exercise of its functions and powers during and emergency.
2. **Power to require information:** The Group Controller is delegated the authority to require information to be provided under section 76.
3. **Information to obtain a warrant:** The Group Controller is delegated the authority to provide the necessary information under oath for a warrant to be issued under section 78.
4. **Receipt of information**: The Group Controller is delegated the authority to receive information seized under section 81.

[21] All powers that are delegated to the Group Controller will also be delegated to Local Controllers when appointed.

5. **Emergency Powers:** The Group Controller is delegated the authority to exercise all the emergency powers conferred on the Group by section 85 and shall make reports on the actions undertaken at such intervals as are directed by the Chairperson of the Group. For the avoidance of doubt, the Group Controller retains the specific emergency powers conferred on Controllers in sections 86-92 and 94.

Recovery Managers

The CDEM Group has appointed a Group Recovery Manager and alternate Recovery Managers in accordance with Sections 29 and 30 of the CDEM Act (2002) and these positions operate out of the ECC and EOC[22] during a response and thereafter through recovery.

Recovery Managers have access to powers during a transition period designed to assist the recovery phase (see Page 48 of this Group Plan)

Group Welfare Manager

Positions of Group Welfare Manager, and alternative Welfare Manager, are made by the CDEM Group in accordance with Section 62(6) of the National Civil Defence Emergency Management Plan 2015. The Plan 2015 specifies that each CDEM Group is responsible for:

a) the Co-ordination of and arrangements for local delivery of welfare services

b) the appointment of a suitably senior and experienced CDEM Group Welfare Manager to fulfil that function; and alternative CDEM Group Welfare Managers.

Current list of appointments

A current list of statutory appointments is available at the Taranaki Civil Defence Emergency Management Website.

www.cdemtaranaki.govt.nz/about-us/people-and-groups/key-appointments/

[22] Local Recovery Managers will be appointed during the period of this group plan.

Cost and resource sharing arrangements

Cost apportionment

Members of the CDEM Group have agreed to apportion the costs of administrative and related services in respect of the CDEM Group in Taranaki as per the following agreed funding split:

Local authority	Percentage of approved budget
Taranaki Regional Council	34%
New Plymouth District Council	40 %
South Taranaki District Council	18%
Stratford District Council	8%

Table 3: Taranaki CDEM Group cost appointment.

Response expenditure delegation

In order to provide for an effective response to an emergency, the following financial delegations for the persons appointed to the position of Group or Local Controller apply, where appropriate local authority delegations have not been approved previously for the area concerned:

Local Controllers: Any one item of expenditure of up to $100,000 for within their area

Group Controller: Any one item of expenditure of up to $100,000 for within their area.

Recovery expenditure delegation

Recovery financial delegations, if any, sit with district councils in determining expenditure levels as part of their usual financial approval processes

Table 4: Detailed financial responsibilities for key CDEM organisations in Taranaki

Types of cost	Group Office (TEMO)	District Councils (NPDC, STDC, SDC)	Taranaki Regional Council	Other CDEM Stakeholders
Programmed activities –				
Representation	Responsible for funding representation costs for their own staff and elected members.			
Risk Reduction, Resilience and Readiness activities	Leading and delivering Group programmed activities, including support to local delivery Strategy and Planning requirements Standard operating procedures Training and capability delivery 24/7 Duty Officer Monitoring and activation Coordination of CDEM Centre staff (EOCs and ECC) and function leads Group office costs (staff, equipment/vehicles/plant, facility requirements)	Statutory responsibilities related to the delivery of 4 Rs All costs associated with their own CDEM personnel, facilities and resources Staff training and exercise participation CDEM Centre staffing (EOCs and ECC) Delivering local CDEM community resilience building activities	Statutory responsibilities related to the delivery of 4 Rs All costs associated with their own CDEM personnel, facilities and resources Staff training and exercise participation CDEM Centre staffing (EOCs and ECC)	Statutory responsibilities Staff training and exercise participation CDEM Centre staffing (EOCs and ECC)
Emergency Management Facilities	All costs associated with the Emergency Coordination Centre (ECC) All costs associated with Group shared emergency equipment All costs associated with Emergency Management facility information technology requirements and licensing, including a regional CDEM GIS platform	All costs associated with the Emergency Operation Centres (EOCs), excepting IT licensing Business continuity requirements	Business continuity requirements	

Types of cost	Group Office (TEMO)	District Councils (NPDC, STDC, SDC)	Taranaki Regional Council	Other CDEM Stakeholders
Emergency expenditure –				
Staffing	Staff requirements for CDEM Centre staffing at EOCs and ECC, including CIMS Function Managers			Any direct incurred costs for areas of responsibility
Impact of disaster	Shared Group funding could be applied where there are widespread adverse regional impacts, and there are regional benefits to do so	Local authorities take full first line responsibility for dealing with the impact of disaster in their geographic and functional areas of responsibility, including all emergency expenditure		Any direct incurred costs for areas of responsibility
Claims	Prepare claims according to the government claims process for Group costs	Prepare claims according to the government claims process for respective incurred expenditure		
Emergency Recovery	Taranaki Disaster Relief Trust Fund	CDEM recovery within their districts or regions		

Recovery costs in a civil defence emergency

The Taranaki Recovery Plan 2008 details the financial arrangements developed by the Group for the Recovery phase. The arrangements cover:

- Links to Government financial support processes through section 33 of the Guide to the National CDEM Plan 2015.
- Group recovery funding arrangements; and
- Arrangements for operation of the Taranaki Disaster Relief Fund and other recovery assistance funds.

Claims for government assistance is made by the organisation incurring the expenditure.

Taranaki Disaster Relief Fund

The purpose of the Taranaki Disaster Relief Fund is to assist members of the community following an emergency.

Members of the affected community may apply for assistance and the governors consider qualification for assistance on a case-by-case basis, allocating funding generally on items that cannot be insured [i.e. fencing on farms]. The governors are the mayors of New Plymouth, Stratford and South Taranaki District Councils, and the Chairperson of the Taranaki Regional Council. The Taranaki Regional Council administers the Taranaki Disaster Relief Trust Fund on behalf of the Taranaki Disaster Relief Fund Governors.

All contributions for disaster relief from central government and other agencies must be made to the Taranaki Disaster Relief Fund.

Other appeals and funds

During an emergency it is not uncommon for organisations to initiate appeals for disaster relief. Funds raised and offered to the Taranaki CDEM Group for distribution should be deposited in the Taranaki Disaster Relief Fund to ensure appropriate accountability and management.

Financial contribution is the preferred form of aid.

Arrangements for cooperation and coordination between CDEM Groups

In accordance with Section 17(1)(f) of the CDEM Act, the CDEM Group will support other CDEM Groups in New Zealand. The basis of this support is outlined below.

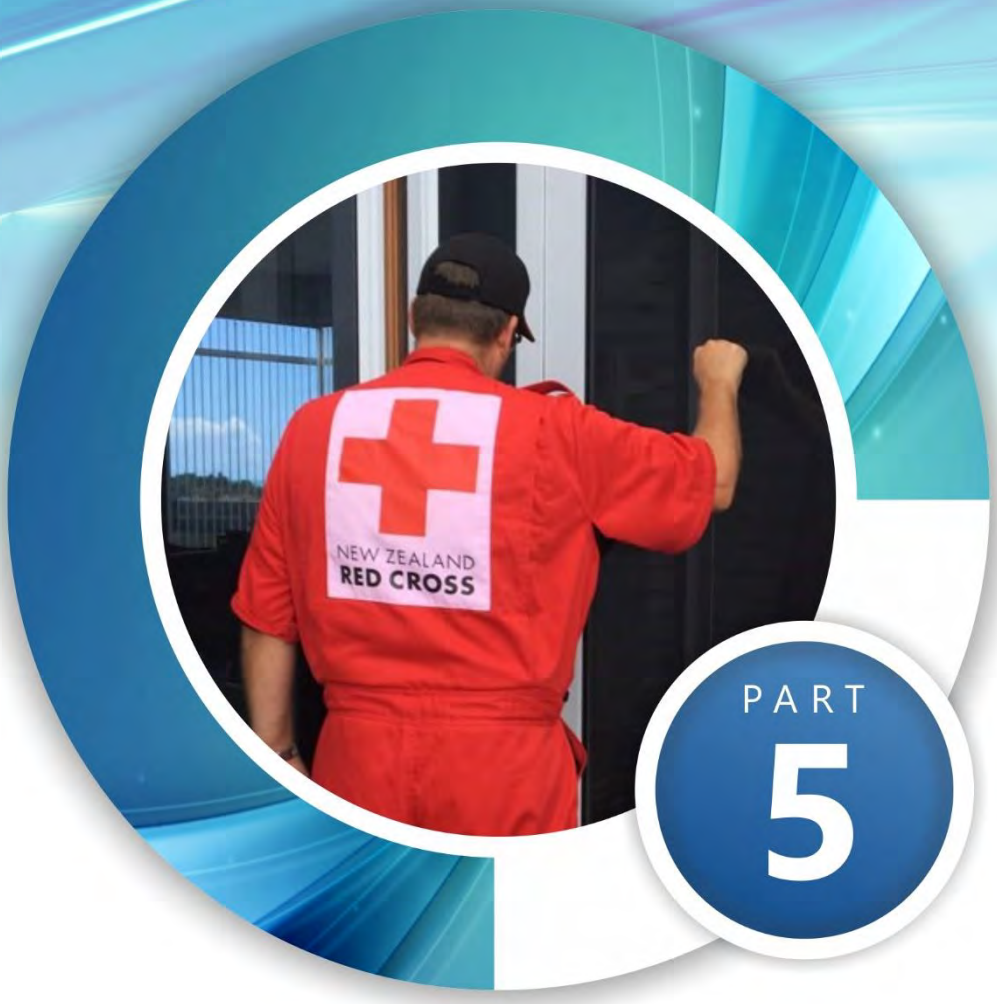
The specific nature of support that the Taranaki CDEM Group can provide during the response and recovery phases of an emergency will depend on the circumstances at the time and to what extent an emergency has affected each CDEM Group. The support may be in the form of:

- personnel (EOC staff, radio operators, rescue personnel, media liaison, other specialists);
- equipment (stock on hand of particular items or supplies or support when purchasing);
- logistics management (management of air, rail and other supply points outside of the other CDEM Group area that are being used for logistics transfer operations);
- evacuee management (management of evacuees arriving from the affected area, including registration and arranging food, clothing and temporary accommodation).

The Group agrees to consult on priorities for resources, which includes, without limitation: equipment, material, services and personnel. Competing demands for resources are always likely to be evident, particularly where the emergency affects both parties, and active consultation to resolve competing demands and achieve optimum resource allocation will have precedence over all other mutual support.

The CDEM Act 2002 (Section 113) provides for the recovery of actual and reasonable costs associated with provision of assistance to other CDEM Groups.

The Waikato and Horizons (Manawatū-Wanganui) CDEM Groups border the Taranaki region.



PART 5

REDUCING AND MANAGING RISK

States roles and responsibilities for hazard identification, risk reductions, community readiness arrangements and the agencies who have functions and/or statutory responsibilities for risk management

The Taranaki CDEM Group has adopted the Sendai Framework for Risk Reduction as discussed in Annex B of this Group Plan.

Disaster risk reduction in the New Zealand context is about understanding risks and managing them in the emergency management 4 Rs framework: reduction, readiness, response and recovery. Disaster risk reduction should happen nationally, regionally, and individually – in communities, businesses, and families. Effective disaster risk reduction involves engaging with and listening to everyone - including all cultures, children and young people and the disabled.

Risk Reduction in New Zealand

Other than CDEM Groups, Government agencies with a role in hazard identification and risk reduction include:

- MCDEM
- Ministry for the Environment (Resource Management Act 1991
- Ministry for Business Innovation and Employment (Building Act and code)
- Department of Conservation (New Zealand Coastal Policy Statement)
- Earthquake Commission (disaster insurance and research)
- National Infrastructure Unit (within Treasury) – sets infrastructure priorities
- Regional Councils
- District Councils
- Crown Research Institutes (GNS and NIWA)
- Natural Hazards Research Platform (mechanism for long-term strategic focus on natural hazards research)

CDEM Advisory Groups

Advisory Groups play an important role in disaster risk reduction activities. The following advisory groups have important roles in risk reduction.

Risk Reduction Advisory Group

The Taranaki Risk Reduction Group (RRAG) will promote a better understanding of the hazards (natural and man-made) that are present in Taranaki and the options for reducing the societal risks arising from those hazards. This promotion will be both to those within the Taranaki CDEM group and to organisations outside of the group.

Taranaki Seismic and Volcanic Advisory Group (TSVAG)

TSVAG has the responsibility for providing a forum for discussion and planning for issues relevant to seismic and volcanic hazards in the Taranaki region. During reduction activities their role is to coordinate research relevant to seismic and volcanic hazards and risk so that information gathering is more effective and efficient; advise on the development of informed land use planning and infrastructure design for seismic and volcanic hazards; and provide input into educational material in relation to reduction of risk from the volcanic and seismic hazards.

Lifelines Advisory Group (LAG)

This group include representatives of lifeline utilities which are defined specifically in Schedule 1 of the Act. A lifeline utility includes any entity that produces, supplies or distributes manufactured or natural gas; that generates electricity; that supplies or distributes water (which includes territorial authorities); that provides a sewerage and waste water network and disposes of sewage or waste water (also territorial authorities); that provides telecommunications, road or rail networks; or produces, processes, or distributes petroleum products.

Their role during risk reduction is to identify natural hazards zones within Taranaki which present hazard risks to key lifeline utilities. Then advocate the inclusion of these zones in council district plans and in Council GIS or other information systems, so that hazard risks are known when applications for land use consent are being considered.

Area HAZMAT Coordination Committee

The main purpose of the Committee is to provide the skills and expertise to support, in an advisory capacity, integrated agency planning activity that addresses the readiness for, and response to hazardous substance incidents. During reduction activities their role is to consider and advise on the appropriate of land use controls delivered by the District Council, and if necessary, provide recommendations for the CDEM Group to consider as decisions. They also advise on the appropriate management of facilities using hazardous substances (e.g. with storage and transportation)

Rural Advisory Group (RAG)

The Rural Advisory Group (RAG) leads the integration of CDEM, the primary sector, and the wider rural community in order to prepare for and respond to hazards that impact rural Taranaki communities. The purpose of the group is coordinate activities to build resilience and speed up the rate of recovery from adverse events. During reduction activities their role is to identify risks and hazards that may affect the rural community and advise through the Coordinating Executive Group (CEG).

Readiness for Emergencies

A critical part of being ready for emergencies is having a sufficient number of well-trained and exercised staff and volunteers to carry out response and recovery.

The Taranaki CDEM Group recently completed a review of its organisational structure across its members, focussing on the needs and development of emergency operations and coordination centre staff. This highlighted the need to improve the levels of training and trained personnel across the group, of core processes in Emergency Operation Centre (EOC) roles and improve consistency across the Group.

The Taranaki CDEM Group has developed a group training and exercising plan that details how the CDEM Group will undertake the training and exercising of staff to perform their roles in an emergency as efficiently and effectively as possible.

The plan also details how the Taranaki CDEM Group will train volunteers and with our external partner agencies, such as the emergency services

The goal of this plan is:

To ensure the Taranaki Civil Defence Emergency Management Group has the capability and knowledge to respond to adverse events in a timely and effective manner

The objectives of this plan include:

- Increasing the capability of EOC/ECC staff, volunteers and partner agencies to respond to events within the Taranaki Region
- Embedding CIMS operations for response within Taranaki
- Ensuring training and exercising within the Group meets the identified needs of staff and volunteers
- Identifying development pathways for key response roles
- Enabling staff to undertake a range of training that is tailored to improving their capability and capacity within their allocated role
- Developing the use of EMIS within the Group
- Ensuring that training and exercising is provided in a professional manner following best practice
- Ensuring training and exercising maximises the available time of staff, volunteers and partner agencies

Supporting Plans and Standard Operating Procedures

In addition to this Group Plan Taranaki CDEM have a number of functional plans, contingency plans, and standard operating procedures (SOPs) that are required to give effect to the operational arrangements of CDEM in Taranaki. Key documents include:

- Operational plans – e.g. 5-year work plan, annual business plan
- Contingency plans for specific hazards - e.g. Flood Response Plan
- Standard Operating Procedures – e.g. Group Office Operational Guidelines
- Functional plans – e.g. Recovery Plan, Welfare Plan

These plans give guidance to staff on how to carry out their roles in an emergency. The relationship of plans and SOPs within the Taranaki CDEM framework is detailed in Annex D. Copies of the plans and SOPs are available from TEMO.

PART

6

RESPONSE AND RECOVERY ARRANGEMENTS

States the processes for activating emergency facilities, declaring and terminating a state of emergency, and the process for moving into a transition period.

WANGANUI AERO WORK

Activation of emergency facilities

Modes of Activation

The Taranaki CDEM Group has four modes of activation that align with the NCMC Modes of Activation, as outlined in Appendix 2 of the National CDEM Plan 2015. The Coordinated Incident Management System (CIMS) organising structure will scale with the emergency itself and generally larger scale emergencies will require full activation of ECC/EOCs. During smaller emergencies, or emergencies localised to a particular district area, the ECC will play a support role to local responses or to the lead agency.

The Emergency Operations and Coordination Centres operate in accordance with the CIMS principle of 'Lead Agency' being applied in response[23]. The ECC/EOCs operate under four modes of response as described in Table 5 below.

Table 5: Modes of activation.

Mode	General description
1. Monitor – normal activity	Emergency Management Duty Officer on 24/7 standby and active monitoring. Controllers and alternatives are identified and trained.
2. Engage – precautionary activation	A potential emergency situation has developed which requires a coordinated response and has the potential to escalate to a Mode 3 event. Declaration of a state of emergency unlikely.
3. Assist – activation	The situation has developed, or is immediately recognisable, as requiring a coordinated inter-agency approach. Declaration of emergency possible, or Notice of Transition Period.
4. Direct – Regionally or Nationally significant event	Can include a declaration of emergency at either local or national level, or notice of transition period.

[23] See Appendix 1 of the National CDEM Plan 2015

24/7 monitoring

The CDEM Group may receive weather or other hazard warnings or requests for assistance from a number of different sources (such as from elected officials or Rural Advisory Group members). In order to respond to these notifications and requests, the CDEM Group Office provides an on-call 24/7 duty roster, so that a duty Emergency Management Officer can respond.

A response to an emergency is generally initiated by the receipt of a warning. Warnings are issued by agencies with a responsibility to advise other agencies and the public of impending and potentially hazardous situations.

National Warning System

The National Warning System is used by MCDEM and other agencies issue messages and warnings to CDEM Groups and other key emergency response agencies for events with potentially serious adverse consequences.

Table 6: Agencies responsible for warning CDEM Group and the Public

Hazard alerts/warnings	Monitoring/ surveillance agency
Volcanic Alert Bulletins Earthquake notifications	GNS Science via GeoNet
Tsunami (distant and regional sources)	MCDEM
Tsunami (local source)	No lead agency as natural signs serve as primary warning but if possible MCDEM will issue an official warning
Public health warnings	Ministry of Health and the Taranaki District Health Board
Forecasting and alerts/warnings/watches/ outlooks/advisories for heavy rain, gales, snow, thunderstorms, swells, surge, volcanic ash	NZ MetService
Flood warnings for major rivers, including interpretation of meteorological information	Taranaki Regional Council
Animal disease outbreaks and pest invasions	Ministry for Primary Industries (MPI)

Hazard alerts/warnings	Monitoring/ surveillance agency
Terrorism	NZ Police
Hazardous Substance and New Organism (HSNO) incidents	Fire and Emergency New Zealand or Worksafe NZ

Taranaki CDEM Group Warning System

Methods for disseminating key messages depend on the event type and particular community affected. Public warnings will be issued in accordance with the CDEM Group's *Public Information Management Plan* and *Public Alerting Standard Operating Procedure*. The general public can be alerted to an impending emergency using a variety of systems, including radio and television, social media, emergency mobile alerts and text messages.

Warning systems or procedures form part of community resilience activities to ensure the community knows when and how to respond appropriately. In some cases, there may be opportunities to collaborate with other agencies to disseminate messages (e.g. Fonterra or power companies).

The Taranaki CDEM Group has procedures in place to facilitate an effective response following receipt of a national warning message. The National Warning System is tested by MCDEM quarterly; the Taranaki CDEM Group must be able to acknowledge the receipt of a test message within 30 minutes.

Activation

When determining an appropriate response to any event, the duty Emergency Management Officer (EMO) will take into account:

- Warnings or information on the nature and scale of the event
- A response already provided by any other party
- Advice or requests for assistance from any responding party
- Potential for escalation of an event
- Risk to people, property, services, or general community wellbeing
- The nature of any further assistance that could be required or offered, including the provision of information

Emergency Coordination and Operation Centres, and Civil Defence Centres are activated at the direction of a Controller. The Duty Officer will contact a Controller (in the first instance, the Group or Local Controller, or if the Group/ Local Controller is unavailable, any Alternate Controller) to provide a recommendation and obtain instructions regarding activation.

Declaring State of Local Emergency

The declaration of a state of local emergency gives the Group or Local Controllers access to powers designed to assist a response. A declaration also promotes public awareness.

The CDEM Act 2002 enables a declaration to be made across either the whole CDEM Group area, or for a defined part of the area, such as a ward or district.

Who can declare a State of Emergency?

Local

In Taranaki, any CDEM Group representative[24] may declare a state of local emergency for any part of the region. However, in identifying the need to declare a state of local emergency, the Controller shall contact the first available CDEM Group representative in the following order:

1. The CDEM Group representative (i.e. the Mayor) for the area affected; or
2. The Chairperson of the CDEM Group; or
3. Any other available member of the CDEM Group (i.e. any one Mayor of any Territorial Authority in Taranaki, or the Chairperson of the Taranaki Regional Council).

Regional

Where the area affected covers more than one district, the Controller will contact a person authorised by the

[24] CDEM Group Representative means the elected representatives serving on the Taranaki CDEM Joint Committee.

CDEM Group to declare for the affected districts or for the entire CDEM Group area in the following hierarchy:

1. The Taranaki Regional Council representative of the CDEM Group
2. A CDEM Group representative (i.e. the Mayor) for one of the areas affected
3. Any other available representative of the CDEM Group

Any of these representatives are authorised to declare, extend or terminate the state of local emergency for any part of the Taranaki CDEM Group area. Best endeavours will be made to follow the above hierarchies, however, if time is of the essence, the signature of any of those authorised to declare will over-ride the above hierarchies.

The Minister of Civil Defence may also declare a state of local emergency in certain cases under s69 of the CDEM Act 2002.

Process to declare, extend or terminate a State of Local Emergency

Declaration is a formal process carried out under section 68 of the Civil Defence Emergency Management Act 2002, which establishes a 'state of local emergency' across any or all of parts of the Taranaki region.

Prior to the declaration of a state of local emergency, the Controller and the person authorised to make a declaration will consider the CDEM Act 2002 and declaration process as set out in the relevant Director's Guidelines including if:

- the emergency has caused, or may cause, loss of life or injury or illness or distress or in any way endangers the safety of public or property;
- emergency services across the Group area advise they cannot deal with the situation; a significant or co-ordinated response is required under the CDEM Act 2002;
- the powers conferred to the Controller under the CDEM Act 2002 are required;
- the resources of the CDEM Group area are needed to assist another area that has declared a state of local emergency;
- CDEM agencies agree that there is a requirement to declare

The type of event, its magnitude and its impacts on the community will determine if the powers conferred on the Controller are required to be extended or terminated.

A state of emergency comes into force at the time and on the date that a declaration of the state of emergency is made.

A state of emergency expires seven days after the time and date on which the state of emergency comes into force[25], and may be extended[26] or terminated[27] at any time depending on the circumstances.

The person who makes a declaration must immediately give notice to the public by any means of communication that is reasonably practicable in the circumstances and must ensure that the declaration is also published in the Gazette (the official Government newspaper) as soon as practicable.

Before a state of local emergency expires, a person authorised to declare a state of local emergency for an area may, by declaration, extend the state of local emergency. An extension of a state of emergency comes into force:

(a) immediately before the state of emergency would have expired; or

(b) if the state of emergency was previously extended under this section, immediately before that extension would have expired.

Authority for evacuation

Once a state of emergency is declared under s68 of the Civil Defence Emergency Management Act 2002, the Controller, a constable, or any other person authorised by the Controller or constable may decide to evacuate within the area or district in which the emergency is in force (s 86).

In limited circumstances a mandatory evacuation can be ordered and enforced before a state of emergency by Fire and Emergency New Zealand[28], if in the opinion of an authorised person from those agencies, life is in danger.

[25] Section 70 of the CDEM Act 2002
[26] Section 71 of the CDEM Act 2002
[27] Section 72 of the CDEM Act 2002
28 Section 44 (1)(d) Fire and Emergency New Zealand Act 2017

Evacuations authorised directed by a Controller or constable will be led by NZ Police supported by Fire and Emergency New Zealand, and road-controlling agencies. For these actions to be legally enforceable the action must be, in the opinion of the Controller or constable, necessary for the preservation of human life and within the area or district in which the emergency is in force. The full legal test is set out in s86 of the CDEM Act 2002.Note: In a transition period a Recovery Manager has the same powers of evacuation as a Controller (s94K)

Roles and responsibilities in a response

The role of the Taranaki CDEM Group in response is to coordinate the activities of its members, its local operations, the community and others to ensure that response to any emergency in Taranaki is timely and effective, and makes the best use of available resources. The extent of involvement depends on the level of emergency and whether the CDEM Group is the lead agency.

National Crisis Management Centre (NCMC)

The National Crisis Management Centre (NCMC) is an all-of-government facility that MCDEM uses to coordinate an all-of-government response in a national emergency. The NCMC can also be used by other lead agencies to coordinate national response arrangements.

Emergency Coordination Centre (ECC)

An ECC is the main facility from which the response to a CDEM Group emergency will be co-ordinated within the Taranaki Group, and is the main interface between the National Crisis Management Centre/ National Controller and Emergency Operation Centres.

Its primary function is to maintain a central coordination, command and control facility for the CDEM Group area, responsible for directing emergency management, or disaster management functions at a strategic level. It does this by setting the operational rhythm via timelines and operational periods, coordinating the gathering and dissemination of information (including public

Figure 8: Relationship between response levels

information management), setting response priorities, and supporting the decision making of Local Controllers. The ECC will be the responsibility of the CDEM Group.

Emergency Operations Centre (EOC)

An EOC role by contrast is to direct local operations within a defined area, and ensure the continuity of operation of district council lifeline utilities and welfare provision.

An EOC is responsible for strategic local direction and operational decisions and does not normally directly control field assets, leaving tactical decisions to lower commands such as lifeline utility providers or contractors.

The common functions of EOCs are to:

- collect, gather and analyse data;
- make decisions that protect life and property, maintain continuity of the organization, within the scope of applicable laws; and
- disseminate those decisions to all concerned agencies and individuals.

There is a strong interface between the Local Controller and Recovery Manager and the ECC and Group Controller. EOCs will be the responsibility of District Councils.

The Group has identified facilities that may operate as fixed Local Emergency Operations Centres (EOCs). These facilities are:

- New Plymouth: New Plymouth District Council;
- Hāwera: South Taranaki District Council; and
- Stratford: Stratford District Council.

Each district council member of the Group maintains the EOC identified within its jurisdiction, with support of the Group Office.

Individual agency EOCs

The Group also recognises that certain businesses or response agencies will also establish EOCs for specific events that they will lead or support. Clear naming of these EOCs will avoid confusion about the role of the facility, e.g. Public Health EOC. Where appropriate, agencies providing critical information to support a response may provide liaison or advisory officers to another EOC.

Civil Defence Centres and community-led centres

Civil Defence Centres

Civil Defence Centres (CDCs) are established and led by Taranaki CDEM to provide the point of contact for many agencies to interact with impacted communities. More information about these are in the Taranaki CDEM Group Welfare Plan. Civil Defence Centres can be located at marae, schools, or community halls.

A plan of action for the service required in a CDC during an emergency will be determined by the Local or Group Welfare Manager in consultation with the Local or Group Controller and Recovery Manager. Services may include but not be limited to:

- Information on the event and response;
- Emergency shelter;
- Registration of people affected by an emergency;
- Receiving enquiries;
- First aid and counselling support;
- Recording of offers of assistance;
- Recording of requests for assistance;
- Distribution of goods and supplies;
- Communications;
- Contact with welfare service agencies; and
- Refreshments.

Community-led centres

Community-led centres may also be established in an emergency. These are places where the community may meet and share resources and information and may provide overnight accommodation for those displaced from their homes. These Community-led centres are opened and managed by the community with guidance from local councils. They may include marae, churches, schools etc.

Incident Control Points (ICPs)

Other lead or partner agencies also have the ability and resources to set up Incident Control Points (ICPs).

ICPs are a means of controlling a site-specific emergency where a single agency takes primary responsibility for response management. ICPs are often located near to the site of an incident and managed from a mobile facility. Generally, ICPs are set up by the Incident Controller from the lead agency, who coordinates the response to site-specific, and more general, aspects of the emergency.

Use of the Coordinated Incident Management System (CIMS)

The Coordinated Incident Management System (CIMS) was first developed in 1998 to provide emergency management agencies with a framework so they could coordinate and cooperate effectively in response. It is based on similar systems used in North America (NIMS) and Australia (AIIMS). CIMS is the structure adopted in New Zealand, and by the Taranaki CDEM Group.

The purpose of CIMS is to achieve effective coordinated incident management across responding agencies by:

- Establishing common structures, functions and terminology used by agencies in incident management, yet within a framework that is flexible, modular and scalable so that it can be tailored to circumstances specific to any level or type of incident; and
- Enabling agencies to develop their own processes, procedures and training for the execution of CIMS.

The following diagram (Figure 9) outlines the basic CIMS operational structure of the ECC in an emergency response. This structure is replicated at a local level, through Emergency Operations Centres.

The CIMS structure roles can be tailored to fit a range of needs and situations. Technical advisors can be recruited for specific hazards and impacts such as volcanic eruptions. The rural sector can be involved at both a technical expert level, in a liaison role, and in the welfare function.

The role of the Recovery Manager is not yet covered in the CIMS structure however the Taranaki CDEM group view this role as extremely important. The Group Recovery Manager would be working with the Group Controller from a very early stage of any emergency response.

Figure 9: Coordinated Incident Management System (CIMS) Structure.

CIMS emergency response functions and roles

The following roles and functions will be undertaken at both the EOC and ECC level:

Controller: The primary role of the Controller during a response is to assess impacts, prioritise response measures, monitor agencies and coordinate and allocate resources where required.

Personal Assistants: responsible for recording meetings and decisions, managing the Controller's diary and ensuring controllers administrative arrangements are in place.

Response Manager: The Response Manager role is responsible for ensuring the operability of the ECC or EOC during a response, and providing advice to the Controller, and Incident Management Team (comprised of Function Leads).

Recovery Manager: The Recovery Manager is responsible for directing, co-ordinating the use of personnel, material, information, services and other resources during a local transition period, and thereafter, if required, developing the Recovery Action Plan, and coordinating the activities of all the organisations participating in the recovery effort.

Intelligence: Responsible for the collection and analysis of response information, especially (but not limited to) that relating to the status, hazards and the context of the incident. They develop and distribute situation reports.

Planning: Responsible for the development of action plans to respond to the emergency, developing long term plans and contingency plans and assisting with the transition to recovery.

Operations: Responsible for the day-today coordination of the response, detailed task planning, implementing action plans, volunteer coordination, and liaising with other agencies and lifeline utilities.

Logistics: Responsible for management of the movement and wellbeing of ECC/EOC staff; IT and communications systems; tracking Group expenditure; receipt and coordination of public donations of money, goods and services; and coordinated distribution of regional and national logistical supplies.

Public Information: Responsible for providing a media management function for the emergency; the distribution of key emergency information in accordance with the Public Information Management Plan; managing important visitors into the ECC/EOC, and managing the flow of information in and out of, the ECC/ EOC.

Welfare: The Welfare Manager is responsible for coordinating welfare services for those people who have been affected or displaced from their homes by an emergency, in accordance with the Taranaki CDEM Group Welfare Plan.

These additional roles are primarily provided at the ECC level:

Lifeline Utility Coordinator: The Lifeline Utility Coordinator (LUC) is responsible for coordinating communication to and from all the lifeline utility organisations and reporting to the Incident Management Team.

Advisory Group Coordinators/Liaison: Advisory Group Coordinators or Liaison personnel provide specialist advice to the CDEM Group as appropriate.

Technical Experts: provide specialist advice on aspects of the response. Examples include scientists specialising in the hazard (such as volcanologists during a volcanic eruption), environmental experts (such as hydrologists during a flood) or industrial experts (such as mining experts during a mine incident).

CIMS functions and roles capability development

The Group supports CIMS specific function training and discussion groups which meet regularly.

Training and exercising are key components to ensure readiness, response and recovery in an emergency.

The CDEM Group Training and Exercise Plan contains the key elements to provide a successful staff development programme. It includes projected forecasts for CIMS staffing, developmental pathways and exercising timeframes. Implementing this plan will provide the Taranaki CDEM Group with the depth and skill to respond to an event across the Taranaki Region.

Transition from response to recovery

Recent amendments to the Civil Defence Emergency Management Act 2002 (Sections 94A to 94P) have come into force to help recovery from emergencies to be more efficient and effective. It removes the incentive to keep a state of emergency in place as way of accessing emergency powers and strengthens the law to help communities to recover from small to medium scale emergencies.

Civil Defence Emergency Management (CDEM) Group members can give notice of a local transition periods. Transition periods will generally follow the end of a state of emergency (however notice of a local transition period can be given without there being an initial state of emergency, provided the Ministers approval is obtained first).

Giving Notice of a Transition Period

The Controller will contact a person authorised by the CDEM Group to give notice of transition for the affected districts or for the entire CDEM Group area in the following hierarchy:

1. The Taranaki Regional Council representative of the CDEM Group
2. A CDEM Group representative (i.e. the Mayor) for one of the areas affected
3. Any other available representative of the CDEM Group

Any of these representatives are authorised to give notices of transition to recovery for any part of the Taranaki CDEM Group area. Best endeavours will be made to follow the above hierarchies, however, if time is of the essence, the signature of any of those authorised to give notice of transition will over-ride the above hierarchies.

The procedure for giving notice of transition is outlined in the Civil Defence Emergency Management Act 2002 Sections 94A to 94F.

Powers of Recovery Managers during transition periods include the ability to enter, examine and mark buildings, close roads, require assessments of buildings or types of buildings, carry out works and keep areas clear of the public. The Recovery Manager may exercise powers in relation to a transition period if, in the Recovery Manager's opinion, the exercise of the powers is in the public interest, necessary or desirable to ensure a timely and effective recovery, and proportionate in the circumstances. The full legal test is set out in s94G CDEM Act 2002.

These powers are more fully described (including their limitations) in the Civil Defence Emergency Management Act 2002 Sections 94G to 94I.

Recovery management

A comprehensive programme of strategic planning for recovery will be undertaken by 30 June 2020 that will take into account the Director's Guidelines on Strategic Planning for Recovery.

Upon completion of this work the Recovery Plan 2008 will also be updated.

To guide the development of the new Strategy a number of principles listed in this Group Plan to guide decisions during the recovery phase of a natural disaster or other emergency.

These principles are:

- Comprehensive community recovery that takes into account community values and priorities is coordinated by the lead organisation at local and regional levels to address the social, built, economic, natural and rural environments
- Recovery organisations will collaborate both pre- and post-emergency to support the lead organisation and affected communities
- Recovery actions will be balanced and practicable, and will take opportunities to minimise future exposure to risks with the aim to undertake risk reduction and to "build back better" wherever possible
- Response and recovery organisations will communicate recovery activities to the community during the transition to recovery
- Organisations involved in recovery commit to completing the recovery process and returning to 'business-as-usual' activities as soon as practicable
- Recovery organisations will communicate and consult with affected communities, and where practical, provide opportunities for the community to assist or have input into recovery activities.

Roles and responsibilities in recovery

The recovery management structure of the Taranaki CDEM Group follows the generic structure set out in the Guide to the National CDEM Plan 2015 and will be fully described in the *CDEM Group Recovery Strategy* when completed.

The structure for implementing recovery programmes in Taranaki extends across five environmental 'task groups' to reach different parts of the community and is overseen by the Group Recovery Manager and Local Recovery Managers.

- **Social Environment**: safety and well-being, health, and welfare services.
- **Built Environment**: residential housing, commercial/ industrial property, public building and assets, and lifeline utilities.
- **Economic Environment**: individuals, businesses, infrastructure, and government.
- **Natural Environment**: natural resources, waste pollution, amenity values, and biodiversity and ecosystems.
- **Rural Environment**: agriculture, horticulture, and other rural industries.

The recovery structure established will depend on the consequences of the specific emergency. It may be that not all task groups will need to be established, and the structure should be flexible to respond to the changing needs of the community.

Exit strategy

If a formal recovery structure is implemented, an exit strategy will be produced to manage the handover of remaining recovery activities to the relevant agencies in a planned and systematic way. The strategy will outline the handover responsibilities of the Recovery Manager(s), the Recovery Office, the task groups and public information management and any other support teams. Withdrawal of formal recovery arrangements from the impacted community will be planned and staged and the responsibility of outstanding tasks and actions will be assigned and acknowledged.

There will be a multi-agency debrief at the conclusion of any significant event. This debrief allows those participating in or liaising with the EOC/ECC to evaluate the response and recovery, provide opportunities for improvement which can be incorporated into future planning. There may be several stages – a hot debrief immediately after the event, and a more detailed debrief a few days or weeks after – depending on the size of the event.

Communicating relevant findings to key stakeholders and the public, following debriefing, is an effective way to raise awareness of the role of CDEM in an emergency.

A copy of the findings will be communicated to all relevant agencies involved in the event, and the CEG will oversee the implementation of corrective actions.

Projects developed from lessons learnt will be incorporated into the five-year work plan, for enhancement of future responses.

PART 7

MONITORING AND EVALUATION

Outlines how we will measure the performance of the CDEM Group, the implementation of this Group Plan, legislative compliance and the process for Group Plan review.

PlaceMakers

CDEM Groups are responsible for monitoring and reporting on the performance of the Group, and compliance with this CDEM Group Plan, the CDEM Act 2002, and other legislative provisions relevant to the purpose of the Act.

This section outlines how we will measure the performance of the CDEM Group, the implementation of this Group Plan, legislative compliance and the process for Group Plan review.

Monitoring and evaluation are two different processes, and they can occur **internally** (within the Group) and **externally** (through some other agency such as MCDEM or independent review):

- Monitoring is about measuring progress against a plan or work programme, or performance against standards, and keeping a record of what has or has not happened;
- Evaluation is about measuring effectiveness; it compares what is happening against what was intended by the plan (the goals, objectives and expectations) and interprets the reasons for any differences.

Performance principles

The Taranaki CDEM Group has the following guiding principles for monitoring and evaluation:

- The CDEM Group and its partner agencies recognise that monitoring and evaluation is an important and continuous process which supports identification of opportunities for improvement;
- Monitoring the performance of the Taranaki CDEM Group and the community in achieving the vision of this Plan will allow implementation of the Plan to be adjusted if required;
- Regular review of the implementation of this Plan will ensure that it is achieving the strategic vision and goals of the Group;
- The mechanism for implementing the Group Plan is the CDEM Group Annual Business Plan;
- The Coordinating Executive Group is responsible for the oversight of the delivery of the Group Annual Business Plan; and
- Regular reporting to the Coordinating Executive Group and the CDEM Joint Committee on the progress of delivery of the Group Annual Business Plan KPIs will occur.

External monitoring and evaluation

- MCDEM are required to monitor the performance of CDEM Groups and persons who have responsibility under the CDEM Act 2002[29].
- Monitoring also occurs through the Long Term Plan and Annual Reports of each contributing council
- Consultation occurs with MCDEM Regional Emergency Management Advisors on a regular basis to advise on compliance with current legislation and guidelines
- Multi-agency debriefs (including iwi/hapū) at the conclusion of any significant event or exercise will allow those participating to evaluate the response and provide opportunities for improvement which can be incorporated into future planning.

Internal monitoring and evaluation

(CEG Group and CDEM Joint Committee oversight)

- Five-year Work Plan report to CEG and the CDEM Joint Committee
- Annual Business Plan implementation report to CEG and CDEM Joint Committee which will include reporting against Group Plan Goals and Objectives

[29] Section 8(2)(f) CDEM Act 2002

- Review of Group Plan Implementation during the next development and review cycle.
- Annual report by member councils and partner agencies to CEG and the CDEM Joint committee regarding actions undertaken to improve their preparedness and readiness to respond to emergencies.

Legislative compliance

Measurement of legislative compliance is achieved through an annual review and reporting on legislative changes and compliance against the CDEM Act 2002to the CDEM Group.

Under section 17(1)(h) of the CDEM Act 2002, the CDEM Group is required to monitor and report on compliance with the Act, and other legislative provisions relevant to the purpose of the Act. The relevant provisions defined by section 17(3)(a) (-(k) include (but are not limited to):

- Biosecurity Act 1993
- Building Act 2004
- Fire and Emergency New Zealand Act 2017
- Hazardous Substances and New Organisms Act 1996
- Health Act 1956
- Health and Safety at Work Act 2015
- Local Government 2002
- Maritime Transport Act 1994
- Resource Management Act 1991
- Any enactment passed in substitution for any of the Acts above.

Process for review of the Taranaki CDEM Group Plan

During the next development and review cycles the CDEM Group Plan will be reviewed for:

- **Accuracy**: checking whether supporting documents and other references in the plan are in alignment, up-to-date and the CDEM Group structure is clearly described.
- **Practicality**: by considering whether the CDEM Group, its local authority members, and partner organisations can carry out the functions described in the plan.
- **Coverage**: by considering the hazards described in the plan, management mechanisms, appropriate linkages between other agency plans and an integrated monitoring and review process that crosses the CDEM Act and the RMA frameworks.
- **Coordination**: by considering whether roles, responsibilities and functions are clearly defined, whether the principles and objectives of the CDEM Group Plan are aligned with National CDEM Strategy, the National CDEM Plan 2015 and Guide and the CDEM Group Planning Director's Guidelines for CDEM Groups (DGL09/15 or any subsequent amendment).

PART

8

ANNEXES

Contains a range of extra detail including a glossary of terms and more information about our hazardscape, detailed plans and operating procedures.

BUILING
CONTROL

ANNEX A
Glossary and abbreviations

Abbreviation	Meaning
4 Rs	Means the four areas of emergency management, as follows:
	• *Reduction* - identifying and analysing long-term risks to human life and property from hazards; taking steps to eliminate these risks if practicable, and, if 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 emergency services, lifeline utilities and other agencies.
	• *Response* - actions taken immediately before, during, or directly after a civil defence emergency to save lives and protect property, and to help communities recover.
	• *Recovery* - the coordinated efforts and processes to bring about the immediate, medium-term, and long-term holistic regeneration of a community following a civil defence emergency.
Act	Means the Civil Defence Emergency Management Act 2002 or any subsequent amendments.
Action Plan	Means a document that describes how the response will be managed and how response agencies will integrate their activities to achieve the response objectives.
Administrating authority	Means an administrating authority as required by section 23 of the CDEM Act, the Taranaki Regional Council is responsible for the provision of administrative and related services required by the Group.
Advisory Group	Advisory groups are a source of interested, trained, experienced personnel who provide specialist advice on operational planning and expertise to assist emergency management.
Agency	Means a government or non-government organisation or entity (other than a CDEM Group) with responsibilities under the National CDEM Plan 2015 or the Taranaki CDEM Group Plan.
Capability	Means the effectiveness of co-operation and co-ordination arrangements across agencies for the delivery of resources in the event of an emergency.
Capacity	Means the adequacy of resources in terms of quantity, and suitability of personnel, equipment, facilities and finances.
Civil Defence Centre	Means the CDEM Group's local centres for direct involvement with the public for: • the provision of advice and information about an emergency; • temporary shelter for evacuees; • registration of evacuees and relocation to accommodation; and • the provision of welfare services to affected communities.
Civil Defence Emergency Management (CDEM)	Means the application of knowledge, measures and practices that: • are necessary or desirable for safety of the public or property; and • includes, without limitation, the planning, organisation, co-ordination, and implementation of those measures, knowledge and practices (section 4 of the Act). • are designed to guard against, prevent, reduce, recover from, or overcome any hazard or harm or loss that may be associated with any emergency.
CDEM Group area	In relation to a Civil Defence Emergency Management Group, – (a) Means all the districts of the local authorities that are members of the Group; and

Abbreviation	Meaning
	(b) Extends to– i. The landward boundary of the territorial authorities in the Group; and ii. The seaward boundary of the regions of regional councils or unitary authorities in the Group
CDEM Group	Means a Civil Defence Emergency Management Group established under section 12 or re-established under section 22 of the Act. CDEM Group may at times be read to mean the Taranaki CDEM Group with regard to this Plan. District and regional council boundaries will be as gazetted under the Local Government Act 2002.
CDEM sector	Means those agencies with responsibilities under the Act, including local authorities, CDEM Groups, government departments, emergency services, and lifeline utilities.
CEG	Means the Co-ordinating Executive Group established under section 20 of the Act, comprising representatives from local authorities, Emergency Services, District Health Boards, and CDEM Advisory Groups (refer to section 8.1.1 of this Plan).
CIMS	Means the New Zealand Co-ordinated Incident Management System. CIMS is an agreed method of incident management is to be employed by emergency responders for efficient incident management.
Cluster	Means a group of agencies that interact to achieve common CDEM outcomes.
Community	May refer to specific individuals, agencies, stakeholders, organizations, local authorities, iwi authorities, community boards, community representatives etc. that may have a specific role, interest, or responsibility within civil defence.
Controller – alternative group	Means a person or persons appointed under section 26 of the CDEM Act 2002to exercise the functions and powers of the Group Controller in the absence of the Group Controller.
Controller – Group	Means a person appointed under section 26 of the CDEM Act 2002to exercise the functions and powers of the Group Controller or those functions and powers delegated by the CDEM Group during a state of local emergency within the group for which they are appointed.
Controller – Incident	Means the senior first responder to an incident. Incident control may transfer based on statutory or agreed responsibilities for control at particular incidents.
Controller - Local	Means a person appointed under section 27 of the CDEM Act 2002 to exercise the functions and powers of a Local Controller or those functions and powers delegated by the CDEM Group during a state of local emergency within the group for which they are appointed. A Local Controller must follow any directions given by the Group Controller during an emergency.
Coordination Centre	A facility to support the Controller in coordinating a response, or part of it.
Director's guidelines	Means the guidelines, codes, or technical standards issued by the Director of CDEM to any person or organisation with responsibilities under the Act. A civil defence emergency management group plan must take account of the guidelines, codes, or technical standards issued by the Director.
District Councils	Means district councils (in the case of the Taranaki CDEM Group area this includes the New Plymouth, Stratford and South Taranaki District Councils).
District Health Board	Means the provider of publicly funded health services for the population of a specific geographical area in New Zealand (which includes the Public Health Unit).
ECC	Means the CDEM Group's Emergency Coordination Centre for the co-ordination of

Abbreviation	Meaning
	regionally significant events and/or the oversight of decision making and critical resources during a single district local emergency. Normally this would be established at TEMO, but particular circumstances may necessitate an alternative location.
Emergency	Means a situation that: a) Is the result of a happening, whether natural or otherwise, including (without limitation) any explosion, earthquake, eruption, tsunami, land movement, flood, storm, tornado, cyclone, serious 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 b) 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 c) Cannot be dealt with by emergency services, or otherwise requires a significant and co-ordinated response under the CDEM Act 2002(Section 4 of the Act).
Emergency services	Means the New Zealand Police, Fire and Emergency New Zealand, and providers of health and disability services (section 4 of the Act).
EMIS	Means Emergency Management Information System.
EOC	Means the CDEM Group's Emergency Operations Centres (run by district councils) for the co-ordination of local response activities by all local responders, the management of local welfare centres, and the care of local communities.
Evacuation	Means the temporary relocation (either spontaneous or organised) 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 to be safe. Arrangements for pre-emergency and mandatory evacuation are detailed below.
Evacuee	Means a person unable or unwilling to stay in their usual place or residence as a result of an incident or emergency. May also be referred to as an IDP (Internally Displaced Person).
Fire service	Means services provided by Fire and Emergency New Zealand. Their main objectives are to reduce unwanted fires, protect and preserve life, prevent or limit injury, and prevent or limit damage to property, land and the environment.
GeoNet	GeoNet is a partnership between the Earthquake Commission (EQC), GNS Science, and Land Information New Zealand (LINZ). The GeoNet project comprises a network of geophysical instruments, automated software applications and skilled staff to detect, analyse and respond to earthquakes, volcanic activity, large landslides, tsunami and the slow deformation that precedes large earthquakes
GIS	Means a geographic information system, which includes mapping software and its application with remote sensing, land surveying, aerial photography, mathematics, photogrammetry, geography and tools that can be implemented with GIS software. GIS captures, stores, analyses, manages and presents data that is linked to location.
GNS Science	Means the Institute of Geological and Nuclear Sciences.
HAZAG	Means the Hazards Advisory Group.
Hazard	Means something that may cause, or contribute substantially to the cause of, an emergency (section 4 of the Act) and involves all hazards, whether from natural or technological/human-made sources.

Abbreviation	Meaning
Health	A state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." [World Health Organisation 1948]
AHCC	Means the Area HAZMAT Coordination Committee.
Incident Controller	Means an Incident Controller in terms of the New Zealand Co-ordinated Incident Management System. This person may also be appointed by a Group Controller where a lead agency cannot be clearly identified or the incident is not discreet enough to allow normal incident management rules to apply.
Joint Committee	Means the CDEM Group, a Joint Standing Committee established under section 12 of the Act.
LAG	Means the Lifelines Advisory Group.
Lead agency	Means the organisation with the primary mandate for managing the response to an emergency, as specified in Appendix 1 of the National CDEM Plan 2015.
Lifeline utility	Means an entity named or described in Part A Schedule 1 of the Act, or that carries on a business described in Part B of Schedule 1 of the Act. These include Radio New Zealand, Television New Zealand, International Airports, specific provincial airports, specific port companies, the gas industry, the electricity industry, the water industry, the waste water and the sewerage industry, the telecommunication industry, the roading industry, the fuel industry and the rail industry.
Lifelines Utilities Coordinator (LUC)	Means a person appointed to coordinate the response of all lifeline utilities as defined by Schedule 1 Part A & B of the CDEM Act.
Local authority	Means a Regional Council or Territorial Authority (Local Government Act 2002).
Local response	Means a response to an emergency where the emergency affects a single district, or part of a district.
MBIE	Means the Ministry of Building, Innovation and Employment
MCDEM	Means the Ministry of Civil Defence Emergency Management.
MPI	Means the Ministry for Primary Industries (formerly MAF)
MSD	Means the Ministry of Social Development.
National Civil Defence Emergency Management Plan Order	Means the National Civil Defence Emergency Management Plan 2015 or any subsequent amendment made by Order in Council pursuant to section 39 of the Act.
National Controller	Means the person who is the National Controller in accordance with section 10 of the CDEM Act 2002.
National significance	Means as per Section 4 of the CDEM Act 2002 any case where the Minister of Civil Defence or the Director of Civil Defence Emergency Management considers that: • there is likely to be significant use of resources; or • there is widespread public concern or interest; or • it is likely that the area of more than one CDEM 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

Abbreviation	Meaning
	the environment (including the global environment).
NCMC	Means the National Crisis Management Centre.
NGO	Means a non-governmental organisation.
NPDC	Means the New Plymouth District Council.
Pandemic	Means an epidemic (a sudden outbreak) that becomes very widespread and affects a whole region, a continent or the world.
Peace time	Means then time where there is no emergency event to respond to or recover from, where the CDEM Group focus on readiness and reduction activities.
RAG	Means the Rural Advisory Group.
Recovery Manager, Group and Local	Means a Manager appointed by the CDEM Group under Section 29 or 30 of the CDEM Act 2002 to give effect to Group and/or Local co-ordination of recovery during and following an emergency.
Regional Council	Means a regional council named in Part 1 of Schedule 2 of the Local Government Act 2002. Regional Council may at times also be read as meaning the Taranaki Regional Council.
Risk	Means the chance of something happening that will have an impact on people and/or property – measured in terms of consequences and likelihood (refer to section 2).
SDC	Means the Stratford District Council.
SITRep	Means a situation report in an emergency issued by the CDEM Group.
STDC	Means the South Taranaki District Council.
State of emergency	Means a state of national emergency or a state of local emergency as per the Act.
State of local emergency	Means a state of local emergency declared under section 68 or section 69 of the Act.
State of national emergency	Means a state of national emergency declared under section 66 of the Act.
TDHB	Means the Taranaki District Health Board.
TEMO	Means the Taranaki Emergency Management Office of the Taranaki CDEM Group located at 45 Robe Street, New Plymouth.
Territorial authority	Means a city council or a district council named in Part 2 of Schedule 2 of the Local Government Act 2002.
Transition period	Means a period of time after an emergency in which there is a period of transition notified under Section 94 of the Act.
TRC	Means the Taranaki Regional Council.
TSVAG	Means the Taranaki Seismic Volcanic Advisory Group.
WCG	Means the Welfare Coordination Group

ANNEX B
Risk Profile process and outcome

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Disaster risk reduction and the Sendai Framework

The Sendai Framework for disaster risk reduction

Throughout the world, people are becoming aware of the importance of disaster risk reduction. In 2015, 187 governments from different United Nations countries agreed on a 15-year plan to make the world safer and more resilient. It's called the Sendai Framework for Disaster Risk Reduction because the meeting took place in a city called Sendai, in Japan.

The Sendai Framework sets out a way to deal with risks, hazards, and disasters. It also talks about those who might be more vulnerable to a disaster, and how we can all become more resilient. While earlier frameworks have dealt with similar themes, Sendai is different because:

1. It emphasises the importance of disaster RISK management, as opposed to disaster management. Risk is the chance of something happening combing with how bad the impacts could be. The difference is that Sendai now focuses more on what we can change to reduce the impacts before they happen, as well as how to manage the impacts of disasters. To do this we need to understand risks and how to reduce them.
2. It contains seven (7) global targets and sets out how we can monitor whether we are achieving them.
3. Sendai talks about a wide range of hazards including technological and biological and not just natural, hazards. It also connects health and education to resilience: in other words if individuals are healthy and informed before a hazard emergency, and know how to stay healthy and informed during one, they will be less vulnerable.
4. Sendai discusses the role of everyone in disaster risk reduction, not just governments and Civil Defence Emergency Management. Everyone has a role in reducing risk and increasing resilience to disasters.

Communities and individuals who understand hazards and risks, who are empowered and listened to, can play an important role in their own protection. For instance, when individuals speak out and their needs are prioritized, they contribute to long-term development after an emergency and build safer communities for everyone ("building back better").

In New Zealand we usually use the term emergency management rather than disaster risk reduction but the principles and approach are the same. Taranaki has chosen to retain the term disaster risk reduction in its strategic goals.

Disaster risk reduction in the New Zealand context is about understanding risks and managing them in the emergency management 4 Rs framework: reduction, readiness, response and recovery. Disaster risk reduction should happen nationally, regionally, and individually – in communities, businesses, and families. Effective disaster risk reduction involves engaging with and listening to everyone - including children and young people and the disabled – those who are usually left out.

What is a hazard?

A hazard is an event or process, either natural or human-made, which can cause harm to people, their belongings, and their environment. Our planet's surface is moving and changing every day, leading to earthquakes, tsunami and other natural hazards. Changes in the atmosphere and ocean create weather and storm hazards. Technological and biological hazards include pollution, fires and diseases. All of these hazards have the potential to create emergencies when they affect people and the things we value.

Sometimes hazards can be both natural and technological: such as when a storm causes a ship to run aground and spill oil. Some hazards, such as volcanic eruptions, can cause new hazards as a result – such as landslides, lahars and fires.

What is risk?

In general terms, risk is measured by considering a hazard and understanding the possible consequences and their likelihood of that hazard occurring. These two factors (consequences and likelihood) provide a standard way to describe risk: how likely that this will happen and how bad will it be?

While the size and location of natural hazards cannot always be avoided, sometimes their likelihood can be reduced or better prepared for. If we can't change the hazard we can try to control the consequences. The consequences of a hazard depend on the degree of

vulnerability of the people who may be affected and their level of **exposure** to the hazard.

Vulnerability means those physical, economic, social and environmental factors, which influence whether a community or a person will experience harm during and emergency. For example, these factors could include disabilities, language barriers, or being financially or physically dependent on others. Being vulnerable can make the impacts of hazards worse, because it can make it harder to prepare for, cope with, and recover from emergencies. When we talk about vulnerability of things such as building or infrastructure it means that they are not as strong, or they are made of materials that make them more likely to be damaged. For example, a wooden house is less vulnerable to earthquake shaking than a brick house because wood is more flexible than bricks, but wood is at the same time more vulnerable to other hazards such as fires. If we can reduce the vulnerability of people and things we can reduce the losses we experience during emergencies.

Exposure means what could be harmed by hazards – how many people or things, what type of things could be harmed, and how do we value the things we care about? If we consider exposure to a certain type of hazard such as a flood – where could it happen and what would be affected? How many people? How many houses? How many schools? What businesses? What community facilities? What essential services? How much could it cost to fix?

For emergency management planning, it is important to understand that the vulnerability and exposure of communities will affect how bad the consequences of the hazards will be.

Figure 10: The intersection of hazard, exposure, and vulnerability yields the risk.

Risk analyses have become almost a standard procedure in dealing with natural hazards. They provide a powerful aid in decision-making and offer a structured, systematic and consistent method to understand, characterize and quantify risk so it can be managed.

All three components, the hazard assessment as well as the exposure and vulnerability analysis include data collection, modelling, and monitoring of vulnerability factors. From these three assessments, the specific risk can be derived.

Risk analysis process

The methodology for CDEM risk analysis is based on the risk profile template supplied by the Ministry for Civil Defence Emergency Management (MCDEM) in the CDEM Group Planning (Director's Guidelines) for CDEM Groups [DGL09/15]. This template is largely based on the Australian and New Zealand Standards for Risk Management (AS/NZS ISO 31000:2009)[30].

There are two steps to completing MCDEM's risk analysis and evaluation process:

1. Identify and analyse the hazards
2. Evaluate the risk and manageability of the hazards

[30] Standards Australia Limited/Standards New Zealand, 2013, *Joint Australian/New Zealand Handbook*, SA/SNZ HB 436:2013.

Step 1: Identify and analyse the hazards

The first part of the process involves identification and analysis of the region's hazards. In preparation for the review of the Group Plan, officers compiled a list of hazards for a workshop meeting, which they initially based on the list used in the previous Group Plan.

In consultation with GNS Science, officers developed a draft consolidated list prior to the workshop for consideration by workshop participants. This list was further grouped into four sub-sections: Natural, Technological, Biological and Other. The 'Other' category included Space Hazards and Solar Flares. Some participants did not consider they had sufficient knowledge on these hazards, or that these hazards were not considered credible for Taranaki, and they were therefore removed from the final hazard list.

Other hazards that were in the original list were subsumed within a wider description. For instance, *Liquefaction* is included under *Earthquake,* and *Tornado hazards* are included under *Severe Thunderstorm*. Wind hazards have been grouped together (*severe storm/cyclone/severe wind/ tornado hazards*) and *civil unrest* has been subsumed within *terrorism*.

Thirty-three (33) representatives from sixteen (16) organisations attended the workshop including CDEM, emergency services, health, rural fire, engineers, and lifelines staff. The full list of representatives invited and attended/ did not attend is contained in Appendix 1 of the GNS Science report. [31]

The risk analysis process then continued by considering the likelihood and consequences of each hazard using certain criteria or 'descriptors', as shown in the following two figures:

Level	Descriptor	Detail description
A	Almost certain	Is expected to occur in most circumstances
B	Likely	Will probably occur in most circumstances
C	Possible	Might occur at some time
D	Unlikely	Could occur at some time
E	Rare	May occur in exceptional circumstances

Table 7: Likelihood descriptors used by participants.

Level	Descriptor	Detail description
1	Insignificant	No injuries, little or no damage, low financial loss
2	Minor	First aid treatment, minor building damage, medium financial loss
3	Moderate	Medical treatment required, moderate building and infrastructure damage, high financial loss
4	Major	Extensive injuries, high level of building and infrastructure damage, major financial loss
5	Catastrophic	Deaths, most buildings extensively damaged, and major infrastructure failure, huge financial loss

Table 8: Consequence descriptors used by participants.

[31] Woods, R.J.; Saunders, W.S.A., 2016, Taranaki Civil Defence and Emergency Management Group Plan: Risk Assessment Workshop and Analysis, GNS Science Consultancy Report 2016/143.

Prioritization is based on an analysis of both consequence and likelihood. Therefore, a major hazard that is very unlikely may be a lower priority than a frequently occurring minor hazard.

Likelihood	Consequences				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A Almost certain	Moderate	High	Very high	Extreme	Extreme
B Likely	Low	Moderate	High	Very high	Extreme
C Possible	Low	Moderate	Moderate	High	Very high
D Unlikely	Very low	Low	Moderate	High	Very high
E Rare	Very low	Very low	Low	Moderate	High

Table 9: Qualitative risk matrix used by participants.

The outcome of this part of the process is a list of hazards with ratings prioritised from very low impact to extreme impacts – as summarised in the following table:

Participants then applied a qualitative risk matrix for the likelihood and consequence ratings to determine an overall risk rating for each hazard:

Hazard	Likelihood	Consequences[32]	Averaged **r**ating	Qualitative Matrix **r**ating
Infectious human disease and pandemics	Likely	Catastrophic	Very high	Extreme
Plant and animal pests incursion	Almost certain	Moderate	Very high	Very high
Severe storm/cyclone	Almost certain	Moderate	Very high	Very high
Severe wind	Almost certain	Moderate	Very high	Very high
Volcanic: Taranaki	Possible	Catastrophic	Very high	Very high
Flooding	Almost certain	Moderate	Very high	Very high
Major transport accident	Likely	Major	Very high	Very high
Infrastructure failure: electricity	Almost certain	Moderate	Very high	Very high
Earthquake	Likely	Major	High	Very high
Landslide	Almost certain	Minor	High	High
Drought	Likely	Moderate	High	High
Urban fire	Likely	Major	High	Very high
Infrastructure failure: communications	Likely	Moderate	High	High
Animal epidemic	Possible	Major	High	High
Hazardous substances incidents	Almost certain	Minor	High	High
Infrastructure failure: water supply	Likely	Moderate	High	High

[32] (i.e., across the social, built, natural, and economic environments).

Infrastructure failure: roading	Almost certain	Minor	High	High
Infrastructure failure: gas	Likely	Major	High	Very high
Infrastructure failure: Port	Likely	Major	High	Very high
Coastal erosion/flooding	Almost certain	Minor	High	High
Severe thunderstorm	Almost certain	Minor	High	High
Infrastructure failure: fuel	Likely	Moderate	High	High
Infrastructure failure: dam	Possible	Major	High	High
Terrorism	Possible	Moderate	High	Moderate
Infrastructure failure: wastewater	Likely	Minor	High	Moderate
Infrastructure failure: airport	Likely	Minor	Moderate	Moderate
Infrastructure failure: rail	Likely	Minor	Moderate	Moderate
Tsunami	Possible	Moderate	Moderate	Moderate
Volcanic: distant ashfall	Possible	Moderate	Moderate	Moderate
Rural fire	Likely	Minor	Moderate	Moderate
Heatwave	Possible	Minor	Moderate	Moderate
Civil unrest	Possible	Minor	Moderate	Moderate
Snow	Likely	Insignificant	Low	Low

Table 10: Hazard and risks summary of likelihood and consequences analysis, evaluation and prioritisation.

Step 2: Evaluate the risk and manageability of the hazards

The MCDEM risk evaluation process goes on to assess three additional rating elements, namely: seriousness, manageability, and growth. This is where a CDEM-based risk assessment process begins to differ from standard organisational risk assessment models.

An evaluation is undertaken of the seriousness, manageability, and growth of each hazard against the possibility of managing the risk effectively–across the 4 Rs and across the social, natural, built, and natural environments. Each evaluation rating is also weighted: seriousness is worth 50% of the total hazards score; manageability is worth 40%; and growth is worth 10%:

- **Seriousness**: this evaluation rating is essentially another analysis of consequences and is applied to each environment differently (see discussion below).
- **Manageability**: The manageability rating is based on a combination of management difficulty and the level of effort that is currently being applied across the 4 Rs.
- **Growth**: The growth rating is a combination of the probability that the occurrence of the event will grow (through climate change, for instance) and / or there will be changes in community exposure to the event.

Hazard seriousness

Table 11 below shows the measures used to assess hazard seriousness. Tables 12 and 13 below shows how impacts on the four different environments are considered.

In calculating the overall seriousness score, additional weightings are added to each separate environment: a higher weighting is added to the social area (50%), with 25% weighting to built environment impact, 15% to economic and 10%

to natural environment impact. This reflects the higher priority given by CDEM to human life and safety and community resilience.

Level	Descriptor	Detail description
1	Insignificant	No injuries, little or no damage, low financial loss
2	Minor	First aid treatment, minor building damage, medium financial loss
3	Moderate	Medical treatment required, moderate building and infrastructure damage, high financial loss
4	Major	Extensive injuries, high level of building and infrastructure damage, major financial loss
5	Catastrophic	Deaths, most buildings extensively damaged, and major infrastructure failure, huge financial loss

Table 11: Measures of hazard seriousness.

Community/social impact	
Level	Detailed description
1.	No injuries or deaths and/or only little disruption to small number of aspects of society which are overcome almost immediately.
2.	Some minor injuries, and/or noticeable disruption to a few aspects of society in the short-term (i.e. a few days).
3.	Medical treatment required to a number of people, possibly 1-2 deaths, and/or several services are impacted to varying degrees for an extended period (weeks) but damage and service loss is temporary. Displacement of people from a small area for a long period of time.
4.	Extensive injuries/illness to hundreds of people, and/or most social services are severely impacted (cessation) for a long-term period (several weeks/months). Large numbers of permanent closures of businesses/services. Large numbers of displaced people for a long period of time.
5.	Extensive injuries/illness to hundreds of people, and/or normal fabric of society is permanently damaged. Massive loss of business and social services resulting in demographic and other changes. Psychosocial and similar effects take years to recover from.

Table 12: Social, built, economic and natural impacts descriptors used for the evaluation.

Infrastructure/built impact	
Level	Detailed description
1.	Insignificant.
2.	Light damage to buildings, structures of a temporary nature (a few days recovery). Services remain on-line or unavailable for a period of hours only.
3.	Variable light to medium damage to buildings and structures takings days to weeks to recover. Several services off-line for several hours (electricity) to days (water).
4.	Heavy damage to buildings and structures taking months to recover. Most services off-line temporarily, some taking months to restore (e.g. road/rail/ports).
5.	Extensive damage with complete loss of many buildings and structures. Many remaining structures are unrecoverable and condemned. All services off-line, several can never be recovered (e.g. ports).

Economic impact	
Level	Detailed description
1.	Costs <0.5% regional GDP (<$16m)
2.	Costs between 0.5% and 2% regional GDP (<$66m)
3.	Costs between 2% and 5% region GDP (<$165m)
4.	Costs between 5% and 10% regional GDP (<$330m)
5.	Costs > 10% regional GDP (>$330m)
Natural/environmental impact	
1.	Changes or natural perturbations in the environment which are temporary or of inconvenience only.
2.	Temporary changes that result in short term loss of access to, or benefit from, the environment or its resource.
3.	The environment and its resources are still accessible, but permanent changes alter the manner in which it is accessed or benefited from.
4.	Permanent change. Significant loss of resource/amenity which can never be recovered and which has a major economic or social impact.
5.	Major permanent changes to the natural environment affecting social and economic viability of society. Permanent loss of economically vital natural resources such as energy resources (gas etc).

Hazard manageability

The manageability of the hazard for each of the 4 Rs is rated using the descriptors in Table 13 below. The manageability is a combination of how difficult it is to manage the hazard and the current level of effort applied (each category is scored as Low, Medium or High). The highest score of 5 is given to those hazards that are most difficult to manage and have the least effort applied, and vice versa for the lowest score of 1.

Management difficulty	Current effort (4 Rs)	Rating
Low	High	1
Low	Medium	2
Medium	High	
Medium	Medium	3
High	High	
Low	Low	4
Medium	Low	
High	Medium	
High	Low	5

Table 13: Hazard manageability criteria and rating.

Hazard growth rating

The growth rating is a combination of:

- the likelihood that the frequency of the hazard will increase and;
- the likelihood that the community exposure to the hazard will increase

The growth rating is determined using the descriptors in Table 14 below.

Hazards that have a wider impact on communities and the economy are considered to have a moderate probability of increasing community exposure (because of the growing population increasing the number of people that will be potentially affected by hazards). For example, growth in community exposure to infrastructure failure may increase even more significantly as society becomes increasingly dependent on technology.

Event occurrence probability rise	Changing community exposure	Rating
Low	Low	1
Low	Medium	2
Medium	Low	
Medium	Medium	3
Low	High	
Medium	High	4
High	Low	
High	Medium	
High	High	5

Table 14: Growth criteria and rating.

Taranaki Priority Hazards

The final outcome of the risk assessment process is a spreadsheet of weighted scores for each hazard, which is contained in Appendix A: *Full score for all Taranaki Hazards*. The list of hazards with total evaluation scores, which is also replicated earlier in the Group Plan, is set out below in Table 15.

#	Hazard	Evaluation Score
1	Volcanic: Taranaki	15.83
2	Infectious human disease and pandemics	13.22
3	Earthquake	12.88
4	Flooding	11.19
5	Animal epidemic	10.88
6	Volcanic: distant ashfall	10.59
7	Infrastructure failure: dam	9.88

#	Hazard	Evaluation Score
8	Tsunami	9.72
9	Infrastructure failure: water supply	9.26
10	Severe storm/cyclone/wind	9.24
11	Infrastructure failure: gas	8.98
12	Plant and animal pests incursion	8.98
13	Drought	8.98
14	Landslide	8.97
15	Infrastructure failure: electricity	8.86
16	Hazardous substances incidents	8.72
17	Infrastructure failure: Port	8.53
18	Urban fire	8.43
19	Coastal erosion/flooding	8.42
20	Major transport accident	8.42
21	Infrastructure failure: fuel	7.89
22	Infrastructure failure: communications	7.82
23	Infrastructure failure: rail	7.65
24	Infrastructure failure: roading	7.48
25	Terrorism/civil unrest	7.44
26	Infrastructure failure: wastewater	7.35
27	Heat wave	7.19
28	Infrastructure failure: airport	6.87
29	Rural fire	6.11
30	Snow	5.75

Table 15: List of hazards in Taranaki.

More information about priority hazards and risks

It is important for both the Taranaki CDEM Group members and Group Office to direct resources to the management of the top priority hazards. This does not mean that other hazards are not important, but that for the time being, their management is not high priority. This section discusses in more detail the priority hazards and the risk implications for these in Taranaki. More detailed plans of action based on the 4 Rs related to these priority hazards will be developed over the life of this Group Plan.

Although this section of the Plan focuses on the priority hazards, it does not preclude the emergence of other hazards that may become more prevalent and pose a risk for Taranaki communities. Some new risks may not have been identified at the time the Plan was being drafted – these can be described as 'novel crises', such as the effects of emergent disruptive technologies for example – however this Plan provides a framework that can be used and/or adapted at appropriate levels to address new or emerging hazards.

It is particularly important that opportunity is taken to identify, analyse, and address new or emerging risks within organisations, or regionally, in a timely manner. Exercises are also an opportunity to plan for, and practise or test our readiness and capability to address risk events.

Volcanic hazards: Mt Taranaki

LEAD AGENCY: CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	15.83
Likelihood	Almost certain
Consequences	Catastrophic
Manageability	Poor

- Mt Taranaki is an active volcano in a current state of inactivity. Moderate to large eruptions of the mountain have occurred on average every 500 years with smaller eruptions occurring about 90 years apart.
- An eruption of Mt Taranaki is the region's key geological hazard. A severe eruption could result in extensive damage to infrastructure, lifelines, rural production and the natural environment and may result in several deaths and injuries.
- The latest research in 2013 has led to an increase in the forecasted probability of Taranaki erupting. The new data and modelling increased the estimate of an eruption in 2014 from 1.6 to 3.1 percent in any year.[33]
- The GeoNet volcanic-seismic network monitors all earthquakes in the Taranaki region. During volcanic unrest these may indicate magma movement within the earth's crust below the volcano. Three GNSS sites are located on or near Mt Taranaki to monitor ground deformation that may indicate volcanic activity.[34]
- A volcanic eruption today has the potential to affect Taranaki for a long period of time, both because of its after-effects and the potential for intermittent or ongoing volcanic activity.[35]
- An eruption of Mt Taranaki could produce volcanic hazards such as tephra falls, pyroclastic density currents, lava flows, lahars, flooding, debris avalanches, sector collapses, lightning and volcanic gases. During unrest and eruption significant earthquakes and ground deformation can also occur.[36]
- As well as Egmont National Park, many of Taranaki's towns and rural areas could be affected, ranging from Inglewood and Egmont Village (located in the zone which poses most danger to human life – the Red Zone) to New Plymouth and Oakura (the area most sheltered from volcanic hazards except ash fall - the Green Zone).
- Townships closer to and around the mountain (Bell Block, Waitara, Okato, Opunake, Stratford, Eltham, Manaia and Kaponga) are in the Orange Zone and could be severely affected, necessitating evacuation. Urenui, Hawera, Patea and Waverley (the Yellow Zone) will be affected by ash fall but the impact will depend on the severity of the eruption. All river valleys flowing from the mountain could carry destructive pyroclastic flows and may be affected by remobilisation of flow material at later dates
- Ash fall (tephra) may have minor impacts on public and severe impacts on animal health, primary production and infrastructure. Depending on the composition of the ash, and the strength and direction of the wind, ash could be blown into neighbouring regions such as Manawatu and Whanganui to the south, Waikato and Auckland to the north, and Bay of Plenty / Hawke's Bay to the north-east[37].
- Taranaki's economic environment could be severely affected, particularly the dairy industry and the oil and gas sector. The reticulated gas and electrical supply throughout the North Island would likely be disrupted.

[33] Green R M, Bebbington M S, Cronin S J, & Jones G. (2013); 'Geochemical precursors for eruption repose length; *Geophysical Journal International*, 193(2), 855-873

[34] Scott, BJ, Sherburn, S (2017); Taranaki Seismic and Ground Deformation Monitoring: July 2016 to June 2017; GNS Science

[35] Johnston, D et.al (2011); Volcanic hazards management at Taranaki volcano: Information Source Book; GNS Science Report 2011/37

[36] ibid. p. 9

[37] ibid. p. 11

Infectious human disease and pandemics

LEAD AGENCY: TARANAKI DISTRICT HEALTH BOARD

Risk evaluation score	13.22
Likelihood	Likely
Consequences	Catastrophic
Manageability	Poor

- Risks to public health, whether from a primary or secondary source of risk, are a significant threat to Taranaki. A pandemic can overwhelm the resources of a society due to the exceptional number of people affected.
- The impacts of a pandemic cause a loss of human capacity through illness or death, which can affect infrastructure, information and communications systems, essential services, and food supply.
- Community resilience is even more important for a pandemic than for other hazard responses because assistance may be unavailable given the numbers of people affected.
- Infectious disease pandemics are usually characterised by the global spread of a new type of virus, for an extended period of time, which can cause unusually high rates of illness and sometimes mortality.
- As influenza is a highly contagious viral disease of the respiratory tract, it is considered to be the mostly likely event to cause a large-scale health emergency or pandemic.
- Minor influenza outbreaks (epidemics) already typically occur during winter and influenza is directly responsible for several deaths each year in New Zealand. However, pandemic influenza is different from seasonal influenza — it can occur at any time of year and can affect any age group – not just the young or elderly. There is no certainty about when it will occur, how large a future pandemic will be, or where it will originate.
- New Zealand has some advantages in being geographically isolated with a limited number of well-controlled entry points, however, while it may be possible to delay the impact the effects would still be significant.
- Whether minor or severe, pandemics will have adverse effects on economic activity and business and consumer confidence, which could take some time – even years – to recover.
- The Taranaki District Health Board and its Public Health Unit, on behalf of the Ministry of Health, are the lead agencies for infectious human disease and pandemic emergencies and have management plans in place for such an emergency.

Earthquake hazards

LEAD AGENCY: CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	12.88
Likelihood	Likely
Consequences	Major
Manageability	Poor

- Earthquakes generated on faults in the earth's crust can cause fault rupture, ground shaking and liquefaction at the ground surface. New Zealand has experienced several large earthquakes in its written history.
- Earthquake size is a quantitative measure of the size of the earthquake at its source. The Richter Magnitude Scale measures the amount of seismic energy released by an earthquake[38]. It is a base-10 logarithmic scale. The earthquake that hit Christchurch on Tuesday 22 February 2011 was a magnitude 6.3 earthquake.
- GNS Science calculates the mean return period for a Modified Mercalli scale intensity 6 plus earthquake event at 21 years for Hawera and 32 years for New Plymouth.[39]
- However, although a number of active fault lines run underneath Taranaki, (Inglewood, Waverley and Oaonui areas as well as off-shore), the region is not considered a high-risk area for earthquakes. Less than 2% of New Zealand's earthquakes (about 200–300) are recorded annually in Taranaki. Only a handful of that number (up to ten) are felt by people in the region and reported.[40]
- Nine GeoNet seismometers are located in the region to detect and record local and regional earthquakes. The information is transmitted by WiFi radio and internet communications to the GeoNet data centre where the location and size of the earthquake is calculated and distributed within a few minutes.
- The depth and distribution of earthquakes in Taranaki has remained stable since measurements began in 1994. Most of the shallow earthquakes are centred west of Mt Taranaki, with only a few events beneath or close to the mountain. Deep earthquakes are mainly located in the Hāwera area, in the southeast, and east of Taranaki.
- In 2013, a GNS Science investigation found that, due in part to the region's geology and low earthquake risk, and the fact that only a few coastal areas have the types of soil that might liquefy, the probability of liquefaction in Taranaki is low and restricted to a few areas – including Port Taranaki, Tongaporutu, Patea coastal and river margins, and lower Waitotara Valley.[41]
- The impact of a severe earthquake on Port Taranaki would be of local and national economic significance due to oil and gas exports.
- A large earthquake can damage infrastructure over a wide area and create lengthy repair times. Fault rupture will sever underground services, such as water and gas pipes, that cross the fault, and can damage or destroy built structures.
- Because of its frequent earthquake history New Zealand is now a world leader in earthquake engineering. The building code applies to both new and old buildings.

[38] https://www.gns.cri.nz
[39] Dellow, G.D., Ries, W., *Liquefaction Hazard in the Taranaki Region*, GNS Science consultancy Report 2013/57, April 2013.
[40] Taranaki Regional Council, State of the Environment Report 2015
[41] Dellow, G.D., Ries, W., *Liquefaction Hazard in the Taranaki Region*, GNS Science consultancy Report 2013/57, April 2013

Flood hazards

LEAD AGENCY: TARANAKI REGIONAL COUNCIL / LOCAL TERRITORIAL AUTHORITIES / CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	11.19
Likelihood	Almost certain
Consequences	Moderate
Manageability	Poor

- Flooding is one of the most expensive and common hazards in New Zealand. Although Taranaki's 530 or so named waterways are relatively small in size and length and our flood plains are small, high rainfall often results in frequent high flows.
- Taranaki is prone to high rainfall and also storms, particularly northerly cyclonic storms, which periodically cause localized flooding problems.
- Flooding can cause damage to critical infrastructure by damaging or obstructing bridges and roads, power lines, and other power supply infrastructure. It can cause environmental and public health issues for water supplies if water treatment and sewerage treatment systems are overcome.
- Flood damage to houses requires inspection and clearance from environmental and public health agencies prior to any return by residents, as well as restoration of necessary services (clean drinking water, sewage, electricity).
- Commercial and industrial activities are also at risk of damage or closure or loss of supplies due to flooding. Flooding of industrial premises can create a risk of hazardous chemicals leaking into flood waters.
- Land use and increased urbanisation increases the likelihood of flooding, as it decreases the amount of land that water can drain into and increases the number of impervious surfaces (paving, road surfaces, hard landscaping).
- Climate change is predicted to make Taranaki's summers drier and winters wetter. This may mean more frequent extreme events, such as longer droughts, more intense rainfall, and an increased flooding risk.
- The Regional Council has primary responsibility for flood prevention and damage, together with flood forecasting and public warnings using information and data from their own rainfall and river level recorders, and from MetService and NIWA.
- The Regional Council owns and maintains flood protection schemes on the Waiwhakaiho and Waitara Rivers and undertakes channel maintenance and management on the Waitotara River jointly with South Taranaki District Council.
- Once floodwaters enter a watercourse constructed as part of a storm water system, however, they become the responsibility of the appropriate local district council.
- New Plymouth District Council controls and manages the detention dams on the Waimea, Huatoki and Mangaotuku Streams and two tributary detention dams, together with diversion tunnels, culverts, and earth embankments (the New Plymouth detention dam scheme).

Animal epidemic

LEAD AGENCY: MINISTRY FOR PRIMARY INDUSTRIES

Risk evaluation score	10.88
Likelihood	Possible
Consequences	Major
Manageability	Poor

- Animal epidemics (including those that affect poultry) are a significant threat to Taranaki. Given the importance of the agricultural sector, any outbreak would have a particular, and long-lasting, effect on the regional economy.
- Animal diseases such as Foot and Mouth Disease, avian influenza, or Bovine Tuberculosis can reduce livestock productivity and/or cause a collapse of export trade. These diseases are highly contagious and may spread rapidly.
- Foot-and-mouth disease (FMD) is a highly contagious viral disease affecting all cloven-hoofed animals (hooves split into two toes) such as cattle, sheep, pigs, goats and deer. It does not affect horses, dogs, cats or poultry. It very rarely infects humans and is not considered a threat to human health.
- Due to our geographical isolation and strict border controls the risk of FMD arriving here is low, and to date, New Zealand has never had an outbreak. However the disease is highly contagious (it can be carried on infected animals, by air, and on contaminated equipment and vehicles) and emphasis is placed on keeping it out of the country.
- The preferred approach to a FMD outbreak is to eradicate the disease by destroying and then burying or burning infected and suspect animals.
- An outbreak of FMD in New Zealand would seriously impact New Zealand's economy through the suspension of all trade in animal products and major disruption to primary industry businesses (such as farms, animal product processing businesses, rural contracting businesses and transport).
- Given the importance of the agricultural sector to Taranaki, an FMD outbreak would have a particular, and long-lasting, effect on the regional economy.
- Bovine TB is an infectious disease caused by the bacterium *Mycobacterium bovis*. Although it can affect a wide range of animals the species most at risk of contracting the disease in New Zealand are cattle and deer.
- Possums and ferrets are the main carriers of Bovine TB in New Zealand. About half of new herd infections in TB risk areas can be traced back to infected possums or ferrets.
- *TBfree* and *OSPRI* run nationwide livestock testing and pest control programmes to eliminate the disease and infected animals – both from livestock and carriers – are slaughtered.
- Other diseases, such as bovine spongiform encephalopathy (BSE or 'mad cow disease') may not become apparent until long after infection has occurred.
- The Ministry for Primary Industries (MPI) is the lead government agency for animal epidemics.

Volcanic: distant ashfall

LEAD AGENCY: CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	10.59
Likelihood	Possible
Consequences	Moderate
Manageability	Poor

- Volcanic eruptions are unique compared to other natural hazards because of their widespread impacts and their duration. Generally, the longest-lived of volcanic impacts, ashfall has been known to continue (possibly on and off) for days to months, or in a worst-case scenario, can continue for years.
- Depending on the wind direction, ashfall from volcanic events elsewhere in the country could affect Taranaki and vice versa: ashfall from an eruption of Mt Taranaki could affect neighbouring regions.
- While not life-threatening, ongoing ashfall does have some health impacts, especially due to clean-up accidents and respiratory problems.
- Distant ashfall may affect air transport and may restrict air space for a period of time. This will not only affect travel to and from the region, but air travel through our region to other parts of the country, and will affect tourism. Distant volcanic ashfall may also affect road and rail transport.
- Distant ashfall has implications for lifelines infrastructure such as electricity. The 1995 Ruapehu eruption caused damage to the electricity networks in in neighbouring regions. Ashfall will affect Taranaki's agriculture and farming industries, in potentially both negative and positive ways.
    - Ashfall can damage buildings through ash loading, and affect water supplies, wastewater and stormwater. All effects have a significant and continuing economic impact that will have to be accounted for.
    - The cost of ash debris disposal is not insignificant and will have to be borne by local councils

Infrastructure failure: dam

LEAD AGENCY: DAM OWNER / LIFELINE UTILITY / CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	9.88
Likelihood	Possible
Consequences	Major
Manageability	Challenging

- The impact of infrastructure failure of dams is related to whether there are residential areas or other infrastructure downstream of the relevant dam and whether a failure or breach of the dam would create a major flooding impact.
- There are several large dams in the Taranaki region, in both private and public ownership, that could potentially have negative downstream effects and more detailed information is included in the *Taranaki Flood Response Plan*.
- New Plymouth District Council's flood protection network includes three major flood detention dams and two tributary detention dams. There are also three dams within Pukekura Park, including the Main Lake dam, which has been assessed as a large dam.
- The New Plymouth City dams were designed to retain water in extreme weather events and have been successful in reducing the frequency of flooding in the New Plymouth urban area. An emergency in relation to the New Plymouth City dams would only occur if the dams failed while they were full and this is highly unlikely because in any given year there is only a 1% chance of the dams being full. However, although the likelihood of such an event is rare, the consequences are high, with rapid inundation occurring for between 100 and 500 properties.
- Major private dams include the Mangorei and Patea Dam Schemes, owned by TrustPower. TrustPower will be the initiating lead agency in the event of an emergency affecting any of its schemes. Copies of TrustPower's Emergency Action Plans and Flood Management Procedures for the schemes are held at the EOC.
- Dam owners are required to classify their dam according to the potential impact its collapse would have (low, medium, or high) and to register that classification with their regional council. This classification is regularly reviewed, which means that changing risk factors such as new downstream development or changing hydrological conditions can be taken into account.
- Owners must also prepare dam safety assurance programmes, which include emergency action plans, and provide an annual compliance certificate for medium or high potential impact dams.
- Regional councils process building consents for dams, administer and monitor dam safety management (including holding a dam register) and develop dam policy.

Tsunami

LEAD AGENCY: NZ POLICE / CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	9.72
Likelihood	Possible
Consequences	Moderate
Manageability	Challenging

- A tsunami is a series of water surges caused when a large volume of water in the sea, or in a lake, is rapidly moved by earthquakes, seabed slips, or volcanic eruptions. The time it would take a tsunami to reach Taranaki's shores is dependent on the proximity of the tsunami source: far away or close to home.
- Local area source tsunami for Taranaki may occur as a result of earthquakes in the Western Cook Strait and offshore Manawatu areas. A locally sourced tsunami may have a travel time of less than 30 minutes.
- A distant tsunami (for example, sourced in South America or the South to South-west Pacific region) may take up to 18 hours to reach the west coast.
- Tsunami activity can continue for 20-30 hours after the first wave event. While a tsunami is not identified as a significant hazard in the Taranaki region, some degree of tsunami risk exists for New Zealand's entire coastline.
- In 2012, local authorities contracted a report on Taranaki's tsunami risk. The report found that while most of Taranaki's steep coastline is not susceptible to tsunami, however, some low-lying communities, and areas on the coast or in river estuaries do have a higher risk. Those communities include Tongaporutu, Urenui, Onaero, and parts of Waitara, Bell Block, New Plymouth, Oākura, Opunake and Pātea.
- The tsunami risk for Port Taranaki is moderate, however, a large tsunami damaging the port would have significant local and national impact, as it may prevent imports and exports of oil and gas-related products. A small tsunami might disrupt shipping movements, on a precautionary basis, for a few hours.
- A small tsunami may result in unusual tides or currents that can be dangerous to swimmers or cause damage to berthed boats.[42]
- A large tsunami can cause widespread flooding and destruction such as that seen off the west coast of Northern Sumatra on 26 December 2004
- A 2013 GNS Science report considered the potential for tsunami to be generated by faults around New Zealand and the Pacific for different time frames and estimated the expected maximum tsunami heights at the coast, taking into account a range of uncertainties. Although the 2013 report indicated a slight increase in predicted wave heights for Taranaki over the long term, most results estimate tsunami heights at no more than eight metres, even in worst case scenario conditions such as a locally sourced tsunami occurring in storm conditions at high tide.[43]

[42] http://www.bom.gov.au/tsunami/info/faq.shtml
[43] Power, W.L., *Review of Tsunami Hazard in New Zealand (2013 update)*, GNS Science Consultancy Report 2013/131

Infrastructure failure: water supply

LEAD AGENCY: LIFELINE UTILITY / CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	9.26
Likelihood	Likely
Consequences	Moderate
Manageability	Challenging

- Each of Taranaki's three councils manage water supplies that serve approximately 80% of the total population of Taranaki. The water sources for these supplies are either surface water (rivers and streams) or bore-water.
- The major natural hazards that may cause long-term major urban water supply failure are prolonged and/or repeated volcanic eruptions (particularly ash-falls contaminating surface water sources), and prolonged droughts. These hazards affect surface water supplies more than bore-water supplies.
- Water demand can be expected to increase significantly for volcanic eruptions. Water would be used to flush ash from roofs, for increased abattoir kills, and for fighting fires. Surface water sources are impacted by prolonged ash-falls, which makes the water difficult to treat, and therefore limits the quantity of treated water able to be supplied.
- Surface water sources are also impacted by prolonged droughts that can limit the volume of source water available for supply.
- Bore-water sources, while relatively unaffected by ash-falls and drought, are susceptible to bacterial contamination causing widespread and long-term water shortages.
- The Lifelines utility coordinators at Taranaki CDEM Group Office would liaise with the affected councils with respect to a water supply failure response.

Severe storm/ cyclone/wind

LEAD AGENCY: CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	9.24
Likelihood	Almost certain
Consequences	Moderate
Manageability	Challenging

- Taranaki is exposed to high winds, tornadoes and cyclones as a result of weather systems coming over the Tasman Sea.
- Wind speed on the ground varies according to local topography and location within the region. Wind accelerates over ridges, hilltops and coastal escarpments — the steeper and nearer the top of the slope, the greater the wind speed. Factors such as whether the site is surrounded by substantial buildings or trees, and whether the site is urban or rural, also influence wind speed but to a lesser degree.
- The MetService issues a severe weather warning when widespread gales are expected over certain speeds or a severe-weather watch if these conditions are expected to occur in a 24–72 hour period.
- High winds, ex-tropical cyclones and depressions of subtropical origin from over the Tasman Sea are often accompanied by heavy rain causing flooding and have affected Taranaki before: most notably Cyclone Bola in 1988.
- Because of their high probability and potentially widespread consequences, high winds are a significant hazard in Taranaki. Around two to five wind warnings are issued for Taranaki each year.
- The most common effects of high winds are damage to buildings, particularly roofs, and infrastructure such as power lines. Driving can be difficult and fishing expeditions may need to be cancelled.
- The region is also exposed to wind effects related to Mount Taranaki (called orographic effects) but Mount Taranaki does not influence the development of tornadoes in the region.
- New Plymouth city is a high wind-speed area. Low wind-speed areas are located in the area east and north of the mountain.
- Exotic plantation forests are particularly susceptible to wind damage, which can affect wood quality. Dead wood debris creates a risk of wildfires and of forestry slash entering rivers and streams and damaging bridges or other structures.
- On average, one tornado occurs in the Taranaki region each year and a severe tornado occurs about once in every four years. Seventy per cent of tornadoes in the region occur in or near New Plymouth city and have caused extensive property damage, injury and fatalities in the past.
- With climate change, NIWA expects strong westerlies to increase in frequency and intensity this century, along with major cyclones.
- Between November and April tropical cyclones, containing belts of sustained strong winds rotating around an area of low pressure, form in the tropics to the north of New Zealand. The heaviest rain and highest winds of a tropical cyclone, sometimes more than 200km/h, are mostly confined to a belt 10—20km wide around the centre or 'eye' of the storm.
- Tropical cyclones are fuelled by warm water and either weaken or change their structure as they travel over increasingly cool seas away from the tropics. Sometimes, as ex-tropical cyclones head south toward New Zealand and hit colder air, they can evolve into large and damaging storms. However, they retain the circulation pattern and the large amounts of moist air of the former tropical cyclone. Of the 10 or so tropical cyclones that form on average each year in the tropical southwest Pacific, only one or two are likely to affect New Zealand as ex-tropical cyclones.
- The frequency of tropical cyclones is unlikely to increase with climate change. However, the rise in average sea surface and air temperatures will provide tropical cyclones with more energy, so they are likely to become more intense in the future.

Infrastructure failure: gas

LEAD AGENCY: LIFELINE UTILITY / CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	8.98
Likelihood	Likely
Consequences	Major
Manageability	Challenging

- New Zealand's natural gas comes primarily from gas fields in the Taranaki region, and mostly from the two largest fields, Maui and Kapuni.
- Taranaki's supplies of gas to the rest of the country and internationally – through gas production stations in Oaonui and Kapuni (South Taranaki) – are of national significance.
- A volcanic eruption affecting Taranaki, the source of all New Zealand's gas, could disrupt gas supply throughout the country.
- Electricity generation uses most of New Zealand's extracted gas. The remainder is used to produce petrochemicals or is reticulated for industrial, commercial and residential use.
- Natural gas is a non-renewable resource. Supply will be determined by the rate of use and by the discovery and exploitation of new gas fields.
- Most of Taranaki's electricity comes from Contact Energy's gas-fired Combined Cycle Power Station and Peaker Plant located in Stratford.
- Any hazard or event that affects access to commercial and residential gas or electricity supplies is costly.
- As well as volcanic unrest or eruption, the production stations and pipelines that supply gas are vulnerable to various geological and other hazards, including earthquake and liquefaction, tsunami, floods and landslides. Gas supply may also be affected by staff shortages during an influenza pandemic.
- Engineering lifeline groups play a significant role in raising the awareness of infrastructure vulnerability, and promoting and advocating engineering, planning and other initiatives to reduce risk.

Possible effects of gas infrastructure failure include:

- reduced capacity for industry and businesses (for example, food processors) to operate
- disruption to heating, cooking, and hot water for homes and essential facilities such as hospitals
- reduced gas-fuelled electricity generation

Plant and animal pests incursion

LEAD AGENCY: MINISTRY FOR PRIMARY INDUSTRIES / TARANAKI REGIONAL COUNCIL

Risk evaluation score	8.98
Likelihood	Almost certain
Consequences	Moderate
Manageability	Poor

- New Zealand's relative geographical isolation has meant that it has been protected historically from many predators and pests. However, our modern reliance on trade and tourism means that there are now more pathways by which serious pests may arrive. They can arrive as hitchhikers with imports, either on the goods themselves, or by their mode of transport. They can arrive as the result of inadvertent contamination or by deliberate or illegal introduction.
- Biosecurity and pest management is vital to Taranaki's environmental and economic well-being, with weeds, wasps, rats, possums and feral cats among thousands of harmful species that cost the region millions in control and lost revenue.
- Weeds and invertebrate pests are a serious threat to our native flora and fauna, as are pathogenic micro-organisms such as Didymo and those responsible for the kiwifruit vine disease 'PSA'.
- A pest that is benign in its country of origin may have significant negative consequences here. Moreover, some of our outwards trade may be affected if certain pests are detected.
- The effects of pests will also depend on the technical feasibility of response options; the availability of effective chemical, biological or other controls; and the public acceptability of these options.
- Wide-scale responses to new pest or disease incursions require rapid access to resources, and can quickly exceed the capability of communities to respond. Central government through MPI plays a large role in these responses, while regional government and industry sectors have a greater role in long-term pest management.
- The extent of the effect on New Zealand's trade depends on the extent of closure of export markets, the amount of additional screening required to demonstrate freedom from the pest, and consumer behaviour, which may be based on a perception of risk rather than the actual risk. Restoring markets after an incursion may take several years.

Drought

LEAD AGENCY: MINISTRY FOR PRIMARY INDUSTRIES

Risk evaluation score	8.98
Likelihood	Likely
Consequences	Moderate
Manageability	Challenging

- Drought is a natural phenomenon. As a hazard, drought is a prolonged period when rainfall is lower than normal for a specific locality. As a result, soil moisture levels may become insufficient for plant growth, and restrictions are often placed on water supply for domestic use, stock and irrigation.
- Droughts are one of New Zealand's most common and costly hazards, because they can affect a very large area and the effects linger for several years afterwards.
- Droughts develop over time. Although the start of a drought is not easy to identify, its end may be clear, if it is broken by heavy rain or a period of sustained rainfall.
- Droughts can have significant and ongoing psychological and social impacts on our farming communities and require difficult farm management decisions.
- Like heavy rain, drought is related to topography. Taranaki is not as susceptible to droughts as parts of the country which lie in the lee of mountain ranges.
- As droughts develop, monitoring of water resources intensifies, and water use restrictions may be imposed.
- Water restrictions may include apportioning, restricting, or suspending water abstraction or domestic water use and may be imposed by regional or district councils.
- A number of industries in the gas-fired electricity generation and petrochemical sectors depend on their ability to continuously abstract water from rivers for cooling purposes. Low river levels could force these industries to reduce or cease production. In the case of electricity, this would mean both hydro generation and gas-fired generation being curtailed simultaneously, leaving the region with extremely limited capacity for commercial generation. Some smaller peaker plant electricity generation capacity would still remain operative.'

Landslide

LEAD AGENCY: CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	8.97
Likelihood	Almost certain
Consequences	Minor
Manageability	Challenging

- A landslide is the downward movement of rock, soil, or vegetation. However, 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
- Most landslides in New Zealand are triggered by earthquakes or intense or prolonged rainfall, although there may be other contributing factors. New Zealand has had some massive prehistoric landslides.
- Earthquake-induced landslides in New Zealand are strongly controlled by the amount of ground shaking and the angle of the slope. Rainfall-induced landslides, like earthquake-induced landslides, are dependent on the slope angle but are also strongly influenced by other factors such as vegetation cover, soil depth, drainage patterns, and the frequency of intense rainstorms (more than 100mm of rain in 24 hours)
- New Zealand has a relatively high number of landslides compared with other countries because of the country's steep slopes, active tectonics, and high rainfall in some areas. Generally, however, the country's low population density and settlement patterns mean there are few deaths and comparatively limited damage.
- High rainfall leading to flooding can also cause erosion and landslides, especially during major storms. Landslides are the natural hazard most frequently responsible for damage to property and infrastructure, including road closures.
- Steep slopes with unstable geology that have been cleared of vegetation are more susceptible to landslides. For that reason, in Taranaki the eastern hill country, the slopes of Mount Taranaki, and the Pouakai and Kaitake ranges are more susceptible.
- Modification of the urban landscape can also increase the incidence of landslides. Although New Plymouth is assessed as having low landslide risk, an increase in rainfall as a result of climate change may increase the risk in the 21st century.
- Sustainable management of soil and land is essential for the region's environmental and economic future, and protection of state highways from landslides is of national importance.
- An important impact of landslide in rural areas is the loss of productivity due to pasture damage and burial, also stock and forestry losses.

Infrastructure failure: electricity

LEAD AGENCY: CIVIL DEFENCE EMERGENCY MANAGEMENT

Risk evaluation score	8.86
Likelihood	Almost certain
Consequences	Moderate
Manageability	Challenging

- During 2013 the Taranaki region produced 19% of New Zealand's electricity. Most of that electricity comes from Contact Energy's gas-fired Combined Cycle Power Station and Peaker Plant located in Stratford.
- Trustpower and other smaller local hydroelectric schemes also supply electricity to Taranaki.
- All electricity is distributed through the national grid via high tension pylons.
- Taranaki's electricity production also supplies the national grid during peak winter loads and any damage to this supply would put pressure on national as well as local supplies.
- Electricity infrastructure, particularly transmission and distribution lines, is vulnerable to natural hazards like earthquakes, volcanic eruptions, lahars, tsunamis, wind, lightning strikes, and snow. It is also vulnerable to loss of gas and water supplies. An influenza pandemic could also affect electricity supply if illness causes staff shortages.

The consequences of a widespread or long-term electricity outage include:

- Welfare issues, particularly heating, sanitation, and medical facilities for vulnerable groups such as the elderly and sick
- Water and wastewater pump system failures and subsequent sewage releases
- Disruption to communications, air-traffic control and fuel supply (as many fuel pumps rely on electricity)
- Economic losses from businesses unable to operate without ATM and EFTPOS transactions
- Loss of refrigerated food
- Farm animal welfare issues
- Reduced security and lighting
- School closures.

These consequences can be reduced where local emergency generation is available.

Full scores for all Taranaki hazards

Hazard identification	Total score	Risk rating	Seriousness 50%					Manageability 40%					Growth 10%
			Social 50%	Built 25%	Economic 15%	Natural 10%	Weighted -total	Reduction	Readiness	Response	Recovery	Weighted -total	Weighted-Total
Volcanic: Taranaki	15.83	Very high	2.20	1.05	0.75	0.42	8.84	4.33	2.50	3.33	4.00	5.59	1.40
Infectious human disease and pandemics	13.22	Very high	2.30	0.25	0.69	0.10	6.68	2.33	2.50	3.33	3.00	5.23	1.31
Earthquake	12.88	High	1.80	0.90	0.57	0.28	7.10	3.00	2.00	4.33	4.50	4.62	1.16
Flooding	11.19	Very high	1.30	0.80	0.42	0.24	5.52	3.33	1.50	2.33	2.50	4.53	1.13
Animal Epidemic	10.88	High	1.70	0.25	0.69	0.18	5.64	2.00	2.50	3.33	3.50	4.19	1.05
Volcanic: distant ashfall	10.59	Moderate	1.55	0.65	0.39	0.18	5.54	5.00	2.50	2.67	2.50	4.04	1.01
Infrastructure failure: dam	9.88	High	1.30	0.70	0.29	0.24	5.05	1.67	2.00	3.00	3.00	3.87	0.97
Tsunami	9.72	Moderate	1.30	0.65	0.36	0.16	4.94	4.33	2.00	1.67	2.50	3.83	0.96
Infrastructure failure: water supply	9.26	Moderate	1.30	0.60	0.30	0.10	4.60	1.67	2.00	2.00	2.00	3.73	0.93
Severe storm/cyclone/wind	9.24	Very high	1.13	0.66	0.23	0.13	4.29	4.17	2.38	2.22	1.67	3.96	0.99
Infrastructure failure: gas	8.98	Moderate	1.20	0.55	0.41	0.10	4.51	1.33	2.00	2.00	2.00	3.58	0.89

Hazard identification	Total score	Risk rating	Seriousness 50%					Manageability 40%					Growth 10%
			Social 50%	Built 25%	Economic 15%	Natural 10%	Weighted -total	Reduction	Readiness	Response	Recovery	Weighted -total	Weighted-Total
Plant and animal pests incursion	8.98	Extreme	1.00	0.25	0.39	0.32	3.92	2.67	2.50	3.33	3.50	4.05	1.01
Drought	8.98	High	1.10	0.35	0.42	0.14	4.02	3.33	3.50	2.33	4.00	3.96	0.99
Landslide	8.97	High	1.00	0.70	0.24	0.18	4.24	3.00	2.50	2.67	1.50	3.78	0.95
Infrastructure failure: electricity	8.86	Very high	1.20	0.60	0.30	0.10	4.40	1.67	2.00	2.00	2.00	3.57	0.89
Hazardous substances incidents	8.72	High	1.30	0.45	0.33	0.20	4.56	1.67	2.00	2.00	3.00	3.33	0.83
Infrastructure failure: Port	8.53	High	1.00	0.60	0.45	0.12	4.34	1.33	2.00	2.00	2.00	3.35	0.84
Urban fire	8.43	Moderate	1.10	0.80	0.24	0.14	4.56	1.67	1.00	1.67	2.00	3.10	0.77
Coastal erosion/flooding	8.42	High	0.70	0.45	0.21	0.28	3.28	3.67	3.00	2.67	3.50	4.12	1.03
Major transport accident	8.42	High	1.50	0.50	0.15	0.12	4.54	1.33	2.00	1.33	1.00	3.10	0.78
Infrastructure failure: fuel	7.89	High	1.00	0.45	0.33	0.10	3.76	3.33	2.00	2.33	1.50	3.30	0.83
Infrastructure failure: communications	7.82	Moderate	0.90	0.45	0.33	0.10	3.56	1.67	2.00	2.67	1.50	3.41	0.85

Hazard identification	Total score	Risk rating	Seriousness 50%					Manageability 40%					Growth 10%
			Social 50%	Built 25%	Economic 15%	Natural 10%	Weighted -total	Reduction	Readiness	Response	Recovery	Weighted -total	Weighted-Total
Infrastructure failure: rail	7.65	Moderate	0.80	0.60	0.33	0.10	3.66	1.33	2.00	2.33	2.00	3.19	0.80
Infrastructure failure: roading	7.48	High	0.90	0.50	0.30	0.10	3.60	1.67	2.00	1.67	2.50	3.10	0.78
Terrorism/civil unrest	7.44	Moderate	0.95	0.43	0.24	0.11	3.47	2.50	3.25	3.06	2.67	3.18	0.79
Infrastructure failure: wastewater	7.35	Moderate	0.90	0.50	0.21	0.14	3.50	1.67	2.00	2.00	1.50	3.08	0.77
Heatwave	7.19	Moderate	0.90	0.25	0.18	0.10	2.86	5.00	4.00	4.33	3.50	3.47	0.87
Infrastructure failure: airport	6.87	Moderate	0.80	0.55	0.21	0.10	3.32	1.00	2.00	1.33	2.00	2.84	0.71
Rural fire	6.11	Moderate	0.70	0.40	0.15	0.16	2.82	2.33	1.50	1.67	1.50	2.63	0.66
Snow	5.75	Low	0.50	0.40	0.15	0.10	2.30	2.67	3.00	3.33	3.00	2.76	0.69

Hazard identification		Total score	Risk rating	Seriousness 50%					Manageability 40%					Growth 10%
				Social 50%	Built 25%	Economic 15%	Natural 10%	Weighted-total	Reduction	Readiness	Response	Recovery	Weighted-total	Weighted-Total
1	Volcanic: Taranaki	15.83	Very High	2.2	1.05	0.75	0.42	8.84	4.33	2.5	3.33	4	5.59	1.4
2	Infectious human disease and pandemics	13.22	Very High	2.3	0.25	0.69	0.1	6.68	2.33	2.5	3.33	3	5.23	1.31
3	Earthquake	12.88	High	1.8	0.9	0.57	0.28	7.1	3	2	4.33	4.5	4.62	1.16
4	Flooding	11.19	Very High	1.3	0.8	0.42	0.24	5.52	3.33	1.5	2.33	2.5	4.53	1.13
5	Animal epidemic	10.88	High	1.7	0.25	0.69	0.18	5.64	2	2.5	3.33	3.5	4.19	1.05
6	Volcanic: distant ashfall	10.59	Moderate	1.55	0.65	0.39	0.18	5.54	5	2.5	2.67	2.5	4.04	1.01
7	Infrastructure failure: dam	9.88	High	1.3	0.7	0.29	0.24	5.05	1.67	2	3	3	3.87	0.97
8	Tsunami	9.72	Moderate	1.3	0.65	0.36	0.16	4.94	4.33	2	1.67	2.5	3.83	0.96
9	Infrastructure failure: water supply	9.26	Moderate	1.3	0.6	0.3	0.1	4.6	1.67	2	2	2	3.73	0.93
10	Severe storm/cyclone/wind	9.24	Very High	1.13	0.66	0.23	0.13	4.29	4.17	2.38	2.22	1.67	3.96	0.99
11	Infrastructure failure: gas	8.98	Moderate	1.2	0.55	0.41	0.1	4.51	1.33	2	2	2	3.58	0.89
12	Plant and animal pests incursion	8.98	Extreme	1	0.25	0.39	0.32	3.92	2.67	2.5	3.33	3.5	4.05	1.01
13	Drought	8.98	High	1.1	0.35	0.42	0.14	4.02	3.33	3.5	2.33	4	3.96	0.99
14	Landslide	8.97	High	1	0.7	0.24	0.18	4.24	3	2.5	2.67	1.5	3.78	0.95
15	Infrastructure failure: electricity	8.86	Very High	1.2	0.6	0.3	0.1	4.4	1.67	2	2	2	3.57	0.89

Hazard identification		Total score	Risk rating	Seriousness 50%					Manageability 40%					Growth 10%
				Social 50%	Built 25%	Economic 15%	Natural 10%	Weighted-total	Reduction	Readiness	Response	Recovery	Weighted-total	Weighted-Total
16	Hazardous substances incidents	8.72	High	1.3	0.45	0.33	0.2	4.56	1.67	2	2	3	3.33	0.83
17	Infrastructure failure: Port	8.53	High	1	0.6	0.45	0.12	4.34	1.33	2	2	2	3.35	0.84
18	Urban fire	8.43	Moderate	1.1	0.8	0.24	0.14	4.56	1.67	1	1.67	2	3.1	0.77
19	Coastal erosion/flooding	8.42	High	0.7	0.45	0.21	0.28	3.28	3.67	3	2.67	3.5	4.12	1.03
20	Major transport accident	8.42	High	1.5	0.5	0.15	0.12	4.54	1.33	2	1.33	1	3.1	0.78
21	Infrastructure failure: fuel	7.89	High	1	0.45	0.33	0.1	3.76	3.33	2	2.33	1.5	3.3	0.83
22	Infrastructure failure: communications	7.82	Moderate	0.9	0.45	0.33	0.1	3.56	1.67	2	2.67	1.5	3.41	0.85
23	Infrastructure failure: rail	7.65	Moderate	0.8	0.6	0.33	0.1	3.66	1.33	2	2.33	2	3.19	0.8
24	Infrastructure failure: roading	7.48	High	0.9	0.5	0.3	0.1	3.6	1.67	2	1.67	2.5	3.1	0.78
25	Terrorism/civil unrest	7.44	Moderate	0.95	0.43	0.24	0.11	3.47	2.5	3.25	3.06	2.67	3.18	0.79
26	Infrastructure failure: wastewater	7.35	Moderate	0.9	0.5	0.21	0.14	3.5	1.67	2	2	1.5	3.08	0.77
27	Heatwave	7.19	Moderate	0.9	0.25	0.18	0.1	2.86	5	4	4.33	3.5	3.47	0.87
28	Infrastructure failure: airport	6.87	Moderate	0.8	0.55	0.21	0.1	3.32	1	2	1.33	2	2.84	0.71
29	Rural fire	6.11	Moderate	0.7	0.4	0.15	0.16	2.82	2.33	1.5	1.67	1.5	2.63	0.66
30	Snow	5.75	Low	0.5	0.4	0.15	0.1	2.3	2.67	3	3.33	3	2.76	0.69

ANNEX C
Constituting Agreement for the Taranaki CDEM Group

To be inserted after Taranaki CDEM Joint Committee adoption at December 2017 meeting

Constituting Agreement

Taranaki Civil Defence Emergency Management Group

1. Parties

Each of the following local authorities is a party to this agreement and a member of the Taranaki Civil Defence Emergency Management Group:

- Taranaki Regional Council
- New Plymouth District Council
- Stratford District Council
- South Taranaki District Council.

2. Definitions

In this Agreement:

"Act" means the Civil Defence Emergency Management Act 2002

"CEG" means the Coordinating Executive Group established under section 20 of the Act

"CDEM" means civil defence emergency management

"CDEM Group" means the Taranaki Civil Defence Emergency Management Group established under section 12 of the Act

"EOC" means the Emergency Operations Centre

"Group Plan" means the Civil Defence Emergency Management Group Plan defined under section 48 of the Act

"Party" means a party to this Agreement

"Taranaki CDEM area" means the Taranaki CDEM Group area as defined in the Civil Defence Emergency Management Act (2002), as it relates to the area defined by the areas contained within New Plymouth, Stratford, and South Taranaki districts and its western boundary extending 12 nautical miles into the sea to align with the seaward boundary of the Taranaki Regional Council.

"TEMO" means the Taranaki Emergency Management Office.

3. Term of Agreement

This Agreement shall commence when all the parties have signed the Agreement.

This Agreement shall remain in force until changed by resolution of the CDEM Group.

4. Purpose of Agreement

The purpose of this Agreement is to set out fundamental elements and arrangements for civil defence emergency management in Taranaki, including the individual and collective roles and responsibilities of the parties, the CDEM delivery model, the budget development process, and funding arrangements. These arrangements form the basis for the CDEM Group Plan, the forward statutory plan document for the Taranaki CDEM Group.

5. Roles and responsibilities

Section 17 of the CDEM Act 2002 sets out the roles and responsibilities of members of the CDEM Group.

All local authorities are both individually as well as collectively responsible for each of the functions set out in section 17.

The parties acknowledge the role played by many other agencies and organisations in assisting in the delivery of effective civil defence emergency management in Taranaki.

5.1 Local authority roles and responsibilities

5.1.1 Taranaki Regional Council

The Taranaki Regional Council's responsibilities are essentially to support regional coordination for CDEM in Taranaki and to provide all the services of the administering authority necessary for effective and efficient delivery of CDEM services across Taranaki (defined under section 24 of the Act), including any related services as defined by the CDEM Group.

This role will include the following functions and activities based on the 4 Rs as well as the administering authority function:

Reduction

- Provide regional hazards and risk monitoring management support and advice to TEMO as required by the Group, such as river flow, river height, wind speed and gust, rainfall, and soil moisture monitoring.
- Implement methods for natural hazards under section 11.1 of the *Regional Policy Statement for Taranaki 2010*

Readiness

- Support regional coordination at the Group ECC during response and recovery by support for TRC staff training and professional development

Response and recovery

- Provide CDEM personnel for regional coordination roles at the Group ECC during response and recovery
- Provide support for fulfilling key CDEM Group appointments such as Group and alternate Controllers, Welfare Managers and Recovery Managers
- Provide EOC support for the region's district councils in local CDEM coordination and delivery as required

Administering authority

- Provide secretariat services for the CDEM Group and CEG (convening meetings, providing venues, distributing agendas, providing minutes and catering)

5.1.2 Territorial authorities

The responsibilities of the region's three district councils – the New Plymouth, Stratford and South Taranaki district councils – relate primarily to local CDEM coordination and delivery within their local authority areas. Territorial authorities also have lifeline utility responsibilities under the Act.

This role will include the following functions and activities based on the 4 Rs as well as the lifeline utility responsibilities:

Reduction

- Provide support and assistance for civil defence in Taranaki by linking district policy and planning to objectives with the CDEM Group Plan and the *Regional Policy Statement for Taranaki 2010*
- Undertake implementation of methods for natural hazards under section 11.1 of the *Regional Policy Statement for Taranaki 2010*

Readiness

- Develop and maintain capability and capacity to lead local CDEM coordination and delivery by:
    - Provide leadership roles: Controller, information gathering and planning, Welfare Manager and Recovery Manager and alternates, for either the Group or local level
    - Supporting the region's district council staff to undertake professional development, training and participation in exercises
    - Developing a local EOC capability and ensuring all systems and processes, and facilities and resources, are robust (such as communications, impact assessment, welfare delivery, local recovery management)
    - Supporting TEMO in the preparation and delivery of community resilience programmes

Response and recovery

- Activate local CDEM response and recovery when required
- Provide CDEM personnel for coordination and delivery roles at the local EOC or regional ECC during response and recovery
- Provide support for fulfilling key CDEM Group appointments such as alternate Controllers, Welfare Managers and Recovery Managers
- Provide liaison with TEMO
- Provide support for other territorial authorities and TEMO with CDEM delivery as required

Lifeline utility responsibilities

- Fulfill responsibilities under section 60 of the CDEM Act 2002 to ensure territorial authority lifeline utilities are able to function to the fullest possible extent during and after an emergency.

5.1.3 Provider of related services

The Provider of related services responsibilities are to deliver all the services required by the CDEM Group necessary for effective and efficient delivery of CDEM services across Taranaki.

This role will include the following functions and activities:

- Provide Group Office accommodation and related services
- Employ TEMO staff and maintain management oversight of TEMO administrative functions
- Provide budget advice, financial management and reporting for the CDEM Group
- Enter into contracts with service providers on behalf of the Group
- Provide general administrative functions – records, files, correspondence etc.

5.2 Collective CDEM Group roles and responsibilities

5.2.1 The CDEM Group

The responsibilities of the CDEM Group are to:

- Ensure hazards are effectively managed
- Set the strategic direction for the Group via the Group Plan and implementation via annual work plans
- Ensure, maintain and provide resources for effective CDEM including staff and training within TEMO
- Ensure capability and capacity across CDEM and CEG members
- Provide assistance to other CDEM Groups
- Promote and raise public awareness
- Monitor and report on progress on implementation of plans
- Lead the development and implementation of strategy work and work programmes.

5.2.2 The CEG

The responsibilities of the CEG are to:

- Lead the development and implementation of strategy and work programmes as approved by the CDEM Group
- Oversee development, management and monitoring of annual CDEM budgets
- Oversee development and approval of CDEM Group and CEG agendas and minutes
- Provide oversight and management of TEMO staff for CDEM work programme deliverables

- Provide strategic advice to the CDEM Group
- Monitor and review work programmes
- Coordinate input into annual TEMO and CEG member plan processes
- Each member to ensure effective liaison, championing and implementation of CDEM initiatives within their respective organisations.

5.2.3 TEMO

The responsibilities of TEMO are to:

General

- Maintain relationships and robust communication networks with Taranaki CDEM Group partners and other agencies
- Provide project coordination and management including the ongoing development, implementation, monitoring and review of the CDEM Group Plan and supporting CDEM strategy, policy and plans
- Prepare in consultation with CEG, the annual report of the CDEM Group's activities, budget and performance to the Group for adoption and publishing once adopted
- Represent the CEG on national bodies and projects
- Monitor and respond as appropriate to activities and developments at national level (including legislative or regulatory change or national level guidance)
- Participate in CEG and advisory groups, and other events or collaborations as appropriate

Reduction

- Hazard, risk information, and levels of risk will be discussed with communities to enable them to make informed decisions on reduction works and on the acceptability of any residual risks
- Coordinate risk reduction scientific research and risk analysis in a balanced, practical, and achievable way using best practice methods
- Identify and coordinate risk reduction activities
- Promote consistent risk reduction and prevention messages
- Provide support to the region's district councils and the Taranaki Regional Council on linking hazard risk research to local planning and implementation

Readiness

- Work alongside the region's district councils to build and maintain local CDEM response and recovery capability
- Coordinate and deliver public education and engagement
- Provide professional development and training for CDEM personnel
- Coordinate the development of inter-agency response plans and assist in the development of agency-specific response plans, to specific hazards

- Support communities to prepare for emergencies through liaison with community groups and through the preparation, exercising, and maintenance of community response plans
- Coordinate development of community volunteer capability
- Maintain the Group ECC in a ready state

Response

- Monitor and respond to the adverse effects of emergencies on behalf of the CDEM Group and disseminate warnings
- Provide support for local and CDEM Group responses

Recovery

- Assist with recovery operations at the local and CDEM Group levels.

6. CDEM delivery model

The overriding principle for CDEM delivery across the Group is based on a centrally coordinated and locally delivered approach. This means that regionally there will be CDEM coordination, support and administration across the CDEM Group area with local CDEM coordination and delivery based on territorial authority (district council) areas.

The following elements form the basis of the CDEM delivery model across the 4 Rs:

- The CDEM Group Plan establishes the framework for comprehensive, integrated and coordinated CDEM across all members of the CDEM Group and covering risk reduction, readiness, response and recovery activities for all hazards
- A Group-wide CDEM Group Annual Business Plan is developed to support the Group Plan and implement CDEM initiatives and programmes
- Annual individual performance work plans are developed to direct the day-to-day activities of each CDEM staff member
- To maintain accountability to the CDEM Group, plans will be prepared for adoption by the CDEM Group, via the CEG
- The Taranaki Regional Council is responsible for the provision of administrative services for the CDEM Group
- The region's three district councils are responsible for developing and maintaining organisational capability and capacity to lead local CDEM coordination and delivery
- Localised emergencies will be responded to and supported locally and led by the region's district councils
- Regional scale events will be responded to by local responses, coordinated and supported, and if necessary, directed at a regional level
- Communities are supported in an emergency by welfare services delivered at community level
- The CDEM Group is regarded as a single organisation, not individual CDEM organisations.

It is important for the effective implementation of the delivery model that a close working relationship exists between the emergency management staff and management of each local authority through the CEG representative.

7. Budget development process

Each year, a draft budget will be prepared by TEMO, under the direction of the CEG and for the consideration and agreement of the CDEM Group, noting that the agreed Group budget will be referred to the region's four local authorities for adoption.

By 30 November of each year, TEMO and the provider of related services will provide an indicative budget to the four councils for the purposes of annual planning and budgeting. By the end of February each year, TEMO and the provider of related services will provide a finalised draft for consideration by the four councils. This is for inclusion in councils' annual or long-term planning processes. The four councils have until 30 April of each year to provide feedback to the CDEM Group, CEG, TEMO and the provider of related services on the draft budget. This allows for the CDEM budget to be finalised prior to the adoption of each council's annual or long-term plan.

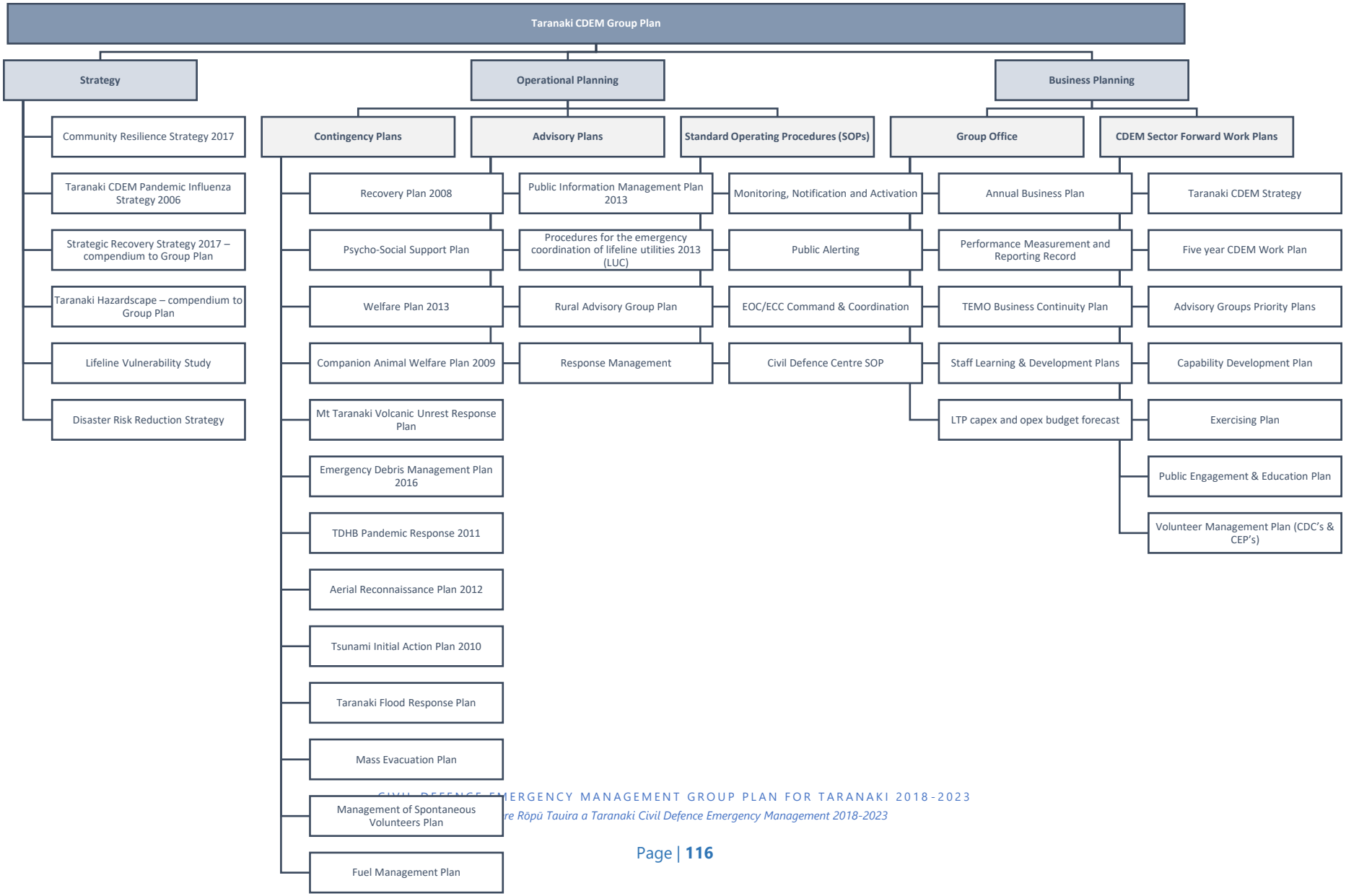
8. Funding arrangements

The parties agree to the following funding split to pay for the costs of CDEM in Taranaki:

Taranaki Regional Council:	34% of the approved budget
New Plymouth District Council:	40% of the approved budget
South Taranaki District Council:	18% of the approved budget
Stratford District Council:	8% of the approved budget

It should also be noted that the above funding split is to be applied to approved operating budgets and to approved new capital expenditure. Renewal of capital expenditure is to be funded by accumulated depreciation or loan.

ANNEX D
List of CDEM Supporting Plans and Procedures


Taranaki CDEM Group Plan
Strategy
Operational Planning
Business Planning
Community Resilience Strategy 2017
Taranaki CDEM Pandemic Influenza Strategy 2006
Strategic Recovery Strategy 2017 – compendium to Group Plan
Taranaki Hazardscape – compendium to Group Plan
Lifeline Vulnerability Study
Disaster Risk Reduction Strategy
Contingency Plans
Advisory Plans
Standard Operating Procedures (SOPs)
Group Office
CDEM Sector Forward Work Plans
Recovery Plan 2008
Psycho-Social Support Plan
Welfare Plan 2013
Companion Animal Welfare Plan 2009
Mt Taranaki Volcanic Unrest Response Plan
Emergency Debris Management Plan 2016
TDHB Pandemic Response 2011
Aerial Reconnaissance Plan 2012
Tsunami Initial Action Plan 2010
Taranaki Flood Response Plan
Mass Evacuation Plan
Management of Spontaneous Volunteers Plan
Fuel Management Plan
Public Information Management Plan 2013
Procedures for the emergency coordination of lifeline utilities 2013 (LUC)
Rural Advisory Group Plan
Response Management
Monitoring, Notification and Activation
Public Alerting
EOC/ECC Command & Coordination
Civil Defence Centre SOP
Annual Business Plan
Performance Measurement and Reporting Record
TEMO Business Continuity Plan
Staff Learning & Development Plans
LTP capex and opex budget forecast
Taranaki CDEM Strategy
Five year CDEM Work Plan
Advisory Groups Priority Plans
Capability Development Plan
Exercising Plan
Public Engagement & Education Plan
Volunteer Management Plan (CDC's & CEP's)