

# CLUTHA DISTRICT CIVIL DEFENCE EMERGENCY MANAGEMENT PLAN 2012-17

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This Plan became operative on 1 November 2012, and replaces the previous Clutha District Operational Plan 2004

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## GLOSSARY OF TERMS

Commonly used terms and abbreviations used throughout the Plan include:

**4Rs:** Four areas of emergency management: Reduction, Readiness, Response and Recovery.

**The Act:** The Civil Defence Emergency Management Act 2002

**CDEM:** Civil Defence Emergency Management

**CDEM Group:** Established under section 12 of the Civil Defence Emergency Management Act 2002. Unless otherwise stated in the Plan, it refers to the Otago CDEM Group, a joint standing committee with membership comprising the Mayors from the Central Otago District, Clutha District, Dunedin City, Queenstown Lakes District and Waitaki District Councils and the Chairperson of the Otago Regional Council.

**CEG:** Co-ordinating Executive Group Established under Section 20 of the Act. Functions include providing advice to the CDEM Group and any sub-groups of the CDEM Group; co-ordinating and overseeing as appropriate the implementation of decisions of the Group by the Group CDEM Office or by individual members; and overseeing the implementation, development, maintenance, monitoring and evaluation of this Plan.

**CIMS:** Co-ordinated Incident Management System. Establishes a framework to assist in effective, efficient and consistent response to an incident/emergency management.

**Declaration:** A Declaration allows the Controller and others access to statutory powers with the purpose to grant people the necessary authority to protect life and property in extraordinary emergency events. The rationale for declaring a state of emergency is:

- an emergency event has occurred or may occur;
- the safety of the public or property is endangered;
- loss of life, injury, illness, or distress may be caused; or,
- usual services are inadequate to deal with the emergency.

**Emergency:** As defined under the Act: 1. Is the result of any 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 2. 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 3. Cannot be dealt with by emergency services, or otherwise requires a significant and co-ordinated response under the Act.

**Emergency Services:** The New Zealand Police, New Zealand Fire Service, National Rural Fire Authority, rural fire authorities and hospital and health services.

**EOP:** Emergency Operating Procedure refers to a document describing a formally established set of operational procedures that are the commonly accepted method for performing certain emergency management tasks.

**GECC/EOC:** Group Emergency Coordination Centre / Emergency Operations Centre. An established facility where the response to an event may be managed and supported.

**ICP:** Incident Control Point. A facility where site response to an incident is managed and controlled.

**Lead Agency:** The organisation with the legislative authority; or because of its expertise and resources, agreed authority; primarily responsible for control of an incident

**Lifeline Utility:** An entity named in or described in section 1 of the Act. Within Otago, these include Radio New Zealand, Television New Zealand, airports, port companies, gas, electricity, water, waste water, sewerage, telecommunications, roads, fuel, and rail industries.

**Local Authority:** Means a Regional Council or District/City Council.

Other Acronyms include:

**CDC:** Clutha District Council

**CODC:** Central Otago District Council

**DCC:** Dunedin City Council

**LTP:** A Council's Long Term Plan

**MCDEM:** Ministry of Civil Defence and Emergency Management

**NZTA:** New Zealand Transport Agency

**ORC:** Otago Regional Council

**QLDC:** Queenstown Lakes District Council

**WDC:** Waitaki District Council

# 1 INTRODUCTION

*This section provides the context and background of the plan including an overview of the integrated risk management approach and a picture of the local setting. The section also describes the structure and governance of the Otago CDEM Group that Clutha District is a part of. At the end of the section there is a description of the Clutha District CDEM Work Programme and methods for monitoring and evaluating the achievement of CDEM objectives.*

## 1.1 INTRODUCTION

The Clutha District Civil Defence Emergency Management (CDEM) Plan is part of a hierarchy of Plans which also includes the National CDEM Plan and the Otago Group CDEM Plan. The purpose of this structure is to enable the effective and efficient management of hazards and risks within the Clutha District, and to ensure a coordinated approach for hazards and risks beyond the District.

The Clutha District CDEM Plan sets out the local emergency management activities and operational arrangements for the district, and aims to:

- Increase awareness of the hazards and associated risks in the Clutha District.
- Strengthen relationships between agencies involved in CDEM at a local level.
- Encourage cooperative planning and action between local emergency services, agencies and organisations as well as the community.
- Contribute to the Otago CDEM Group Plan by delivering a more coordinated, effective and consistent CDEM programme.
- Outline the arrangements for the Clutha District using an integrated risk management approach addressing Reduction, Readiness, Response and Recovery.

This Plan has been primarily developed for the CDEM and Emergency Services sector, which will use and be directly affected by the Plan. However, the Plan is also for other individuals and groups that could at times be involved in CDEM activities, and of course for the general public who should benefit from the plan.

## 1.2 BACKGROUND

The CDEM Act 2002 states that local authorities must be a member of a CDEM Group (section 12) and must plan and provide for civil defence emergency management within their district (section 64). The Clutha District is part of the Otago CDEM Group, and as a member a key responsibility is the development and implementation of a comprehensive local CDEM Plan, which is consistent with the Group Plan.

The Plan is NOT the document that CDEM personnel will use to guide their actions during an emergency. That role will be filled by various local and event-specific plans and standard operating procedures. However, this Plan DOES set out the framework that emergency responses will work under, and will guide the work programmes to ensure that the information, resources and documentation are there when needed in an emergency.

Importantly, the Plan also establishes the relationships that will be called upon when an event goes beyond the scope or capacity of an individual agency.

This is the second edition of this Clutha District CDEM Plan, and replaces the previous version (Clutha District Operational Plan 2004). It has been developed in consultation with the CDEM Group members, CDEM and Emergency Services staff, and other key agencies, and follows a process of consultation and review.

### 1.3 INTEGRATED RISK MANAGEMENT

Civil Defence Emergency Management in New Zealand uses an integrated risk management approach when dealing with hazards. This integrated approach is written into the National CDEM Framework including the CDEM Act and is described by the four areas of activity, known as the 4Rs.

- **Reduction:** Identifying and analysing long-term risks to human life and property from hazards; taking steps to eliminate these risks if practicable, or 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 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.

### 1.4 THE LOCAL SETTING

The Clutha District is situated in the southern part of the Otago Region. It covers an area of approximately 6362 square kilometres, mainly in farmland with a number of townships and small communities spread throughout the District (see Figure 1: Clutha District map).

The key geographical feature is the Clutha River, which runs through the centre of the District, and splits into two branches (Koau and Matau) before running into the sea. Other main rivers are the Pomahaka, which flows into the Clutha River at Clydevale, and the Taieri River, which forms part of the northern boundary of the District. There are a number of moderate ranges, but no alpine areas.

### 1.5 THE OTAGO CDEM GROUP

The Otago CDEM Group is a consortium of local authorities working in partnership with emergency services and other key stakeholders to deliver CDEM at a regional and local level. The Otago CDEM Group area consists of the Waitaki District, Dunedin City, Clutha District, Central Otago District and Queenstown Lakes District.



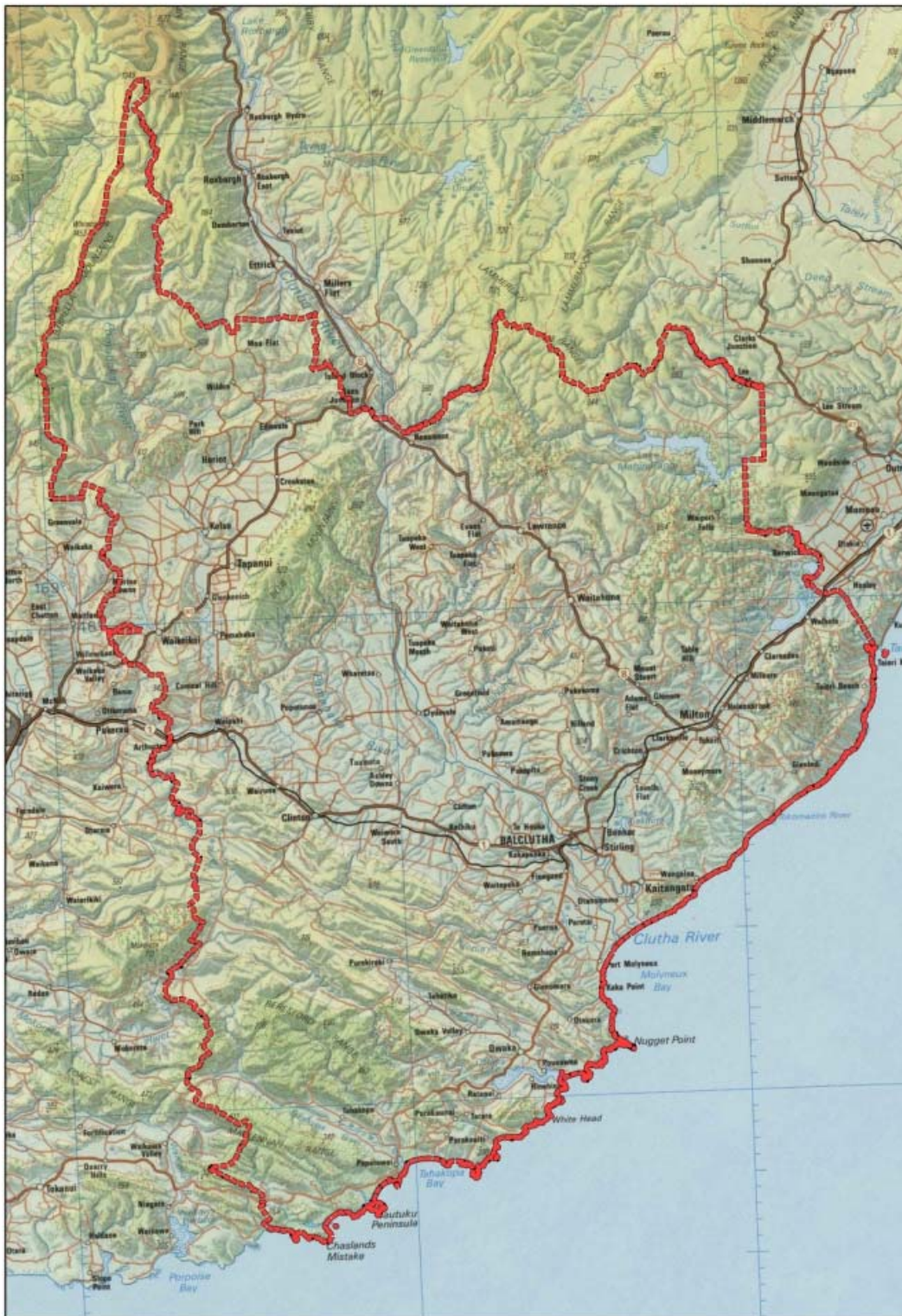


Figure 1: Clutha District map



## **JOINT COMMITTEE**

The Group is governed by a joint committee set up under section 12 of the CDEM Act, which is made up of the five local mayors and the Chairperson of the Otago Regional Council (or persons acting on their behalf). The functions of the Group are detailed in section 17 of the Act, and include developing, approving, implementing and monitoring a CDEM Plan. The joint committee has adopted a Group CDEM Plan, which includes Goals and Objectives, information on each of the Four Rs and governance and management arrangements, and a five-year work programme.

## **COORDINATING EXECUTIVES GROUP (CEG)**

The Joint Committee is supported by the Coordinating Executives Group (CEG), made up of the Chief Executives of the six councils (or persons acting on their behalf), plus senior representatives from the NZ Police, NZ Fire Service, St John Ambulance, the Southern District Health Board, and the Ministry of Social Development. The Group Controller and a representative from MCDEM sit in as observers on the CEG. The CEG is responsible for implementing the decisions made by the Joint Committee, providing advice to the Group and overseeing the group's annual work programme and member contributions. To help with CDEM planning and to ensure consistency across the group, the CEG has established four planning committees that are comprised of nominated representatives throughout the Otago region. These committees are referred to throughout the plan.

## **GROUP EMERGENCY MANAGEMENT OFFICE**

The Group Emergency Management Office is based at the Otago Regional Council and is the administrative authority for the Otago CDEM Group, Joint Committee and the CEG. It provides such services as secretariat for CDEM group meetings, accounting for CDEM Group finances and budgets, publishing of CDEM Group plans and reports as well as entering into contracts on behalf of the group members. The Group Office also employs an Emergency Management Coordinator to help facilitate and coordinate the day-to-day planning, project work and activities of the CDEM Group and its members.

## **LOCAL EMERGENCY MANAGEMENT OFFICES**

Each member of the CDEM Group has their own local emergency management office. Local offices are responsible for delivering CDEM activities within their own area that contribute to the joint activities of the group. Activities are carried out under the integrated risk management approach of the 4 R's and are discussed under each section of this plan. Local CDEM Offices are responsible for employing their own staff and the number of staff generally depends on the size of the territorial authority and the type of activities they undertake.

## **1.6 THE CLUTHA DISTRICT EMERGENCY MANAGEMENT OFFICE**

The Clutha District Emergency Management Office is managed by Clutha District Council within the Regulatory Services Department. Council has appointed a full-time Civil Defence Emergency Management Officer who reports directly to the Planning and Environment Manager. However, other staff across the Council also contribute to overall CDEM activities, in roles including management, planning, communications, infrastructure, and administration.

The role of the Emergency Management Office is focused on building community resilience through enhancing operational capacity and community readiness to cope with emergencies as well as coordinating an effective response and ensuring the best possible recovery. The

Office achieves this by undertaking a broad range of CDEM reduction and readiness initiatives including:

- Coordinating CDEM planning and activities within the District and with the wider Otago Group to address the areas of risk reduction, readiness, response and recovery.
- Preparing CDEM plans, policies and procedures.
- Maintaining the EOC and related equipment and materials
- Preparing and delivering public education programmes.
- Training and exercising CDEM staff and volunteers.
- Working with other agencies and volunteers involved in emergency management.
- Monitoring and responding to hazard advisories, warnings and emergencies that arise.
- Contributing to Group activities and functions.

In the event of an emergency the Clutha District Council provides trained staff, facilities and resources in support of the response, for both the Emergency Operations Centres (Council head office, Balclutha) and Ward Centres (Service Centres around the District). Key CDEM appointments are made on the basis of the individual involved rather than being tied to specific council positions, and include volunteers from outside Council. The Emergency Management Office maintains a list of people appointed to key CDEM positions (for at least two shifts) and meets with them regularly.

## **FINANCIAL ARRANGEMENTS**

The Emergency Management Office is funded by the Clutha District Council. The administrative and day-to-day costs incurred as part of the activities and functions the office undertakes to achieve the objectives outlined within the annual work plan, including for personnel, facilities and resources, are budgeted for in the Council's Long Term Plan and Annual Plan. This includes costs associated with the Clutha District's contribution to group activities such as representation on the Joint Committee, CEG and Group Committees.

The costs incurred during and following an emergency will need to be met initially by the Council but with reimbursement by central government in accordance with national policy. It is the responsibility of the Council to claim for any reimbursement or financial assistance and a clear record of expenditure, authorisation and purpose needs to be maintained during the emergency.

Organisations, agencies and other CDEM stakeholders are responsible for meeting all their own costs incurred as a result of the emergency whether directly requested by the local authority or by the CDEM group, unless written authorisation has been granted by the Local Controller.

## **WORK PLANS**

The Clutha District develops an annual work programme that aligns with the goals and objectives set by the Group and the local emergency management office. The work programme is developed prior to July each year, and describes the activities the District is planning to implement over the coming 12 months – both local activities within the District, and contributions to wider Group activities.

## 1.7 CONTEXT OF THIS PLAN

The Clutha District Civil Defence Emergency Management Plan is part of a national suite of plans, including the National CDM Plan, Group Plans (including the Otago CDEM Group Plan), and local authority plan's such as this one. This Plan gives effect to the high level plans, as set out below:

NCDEM goal	NCDEM objectives	Otago CDEM Group objectives	Clutha CDEM Plan provisions
1 Increasing community awareness, understanding, preparedness and participation in civil defence emergency management	1a Increasing the level of community awareness and understanding of the risks from hazards 1b Improving individual, community and business preparedness 1c Improving community participation in CDEM 1d Encouraging and enabling wider community participation in hazard risk management decisions	1a Increase the level of business and community awareness through public education and consultation. 1b Improve community participation and preparedness through community-based planning.	Sec 3.2 Sec 4.2.1  Sec 4.2.2
2 Reducing the risks from hazards to New Zealand	2a Improving the co-ordination, promotion and accessibility of CDEM research 2b Developing a comprehensive understanding of New Zealand's hazardscape 2c Encouraging all CDEM stakeholders to reduce the risks from hazards to acceptable levels 2d Improving the co-ordination of government policy relevant to CDEM	2a Improve understanding of Otago's hazardscape and associated risks. 2b Undertake long-term, strategic reduction of the risks from hazards through collaborative work within the group and with other stakeholders.	Sec 3.2  Sec 3.2

NCDEM goal	NCDEM objectives	Otago CDEM Group objectives	Clutha CDEM Plan provisions
3 Enhancing New Zealand's capability to manage civil defence emergencies	3a Promoting continuing and co-ordinated professional development in CDEM	3a Enhance professional development for all emergency management personnel through training, exercises and learning from other CDEM Groups	Sec 4.3.1
	3b Enhancing the ability of CDEM Groups to prepare for and manage civil defence emergencies	3b Strengthen the coordination and cooperation amongst all relevant sectors in planning for and responding to an emergency	Sec 4.3.2 Sec 4.3.3
	3c Enhancing the ability of emergency services to prepare for and manage civil defence emergencies	3c Develop and maintain appropriate documentation to describe key activities, functional responses and protocols in support of the CDEM Group Plan	Sec 4.3.3
	3d Enhancing the ability of lifeline utilities to prepare for and manage civil defence emergencies		
	3e Enhancing the ability of government agencies to prepare for and manage civil defence emergencies		Sec 4.4
	3f Improving the ability of government to manage an event of national significance		Sec 4.5
4 Enhancing New Zealand's capability to recover from civil defence emergencies	4a Implementing effective recovery planning and activities in communities and across the social, economic, natural and built environments	4a Strengthen recovery capability and capacity across all agencies and the wider community.	Sec 6
	4b Enhancing the ability of agencies to manage the recovery process		

**Table 1: Context of CDEM Plan provisions**

## 2 CLUTHA DISTRICT'S RISK PROFILE

*The risk profile section provides the risk management context and hazardscape of Clutha District. It describes and systematically analyses the district's environment, the risks associated with hazards, and discusses emergency management implications relevant to the district.*

Knowledge of the District's vulnerability to hazards is fundamental to guiding the activity and effort applied to risk reduction, readiness, response and recovery programmes. The characterisation of the risk environment in this section provides a basis for sound prioritisation of resources and effort in CDEM planning. It also provides a snapshot in time of the risk profile, as a baseline for ongoing monitoring and evaluation of risk reduction programmes.

### 2.1 CLUTHA DISTRICT ENVIRONMENTS

The risk management context for the Clutha District is comprised of the people, the land, the buildings/infrastructure and the economy, commonly referred to as the social, natural, built and economic environments. Analysing these elements helps to understand the unique combination of factors that influence CDEM planning.

#### 2.1.1 SOCIAL ENVIRONMENT

##### POPULATION

The Clutha District has a population of 17,550 (Statistics New Zealand estimate June 2011). The population is spread across the District, with approximately one-quarter in the main town of Balclutha, another quarter in the smaller towns of Milton, Kaitangata, Tapanui, Lawrence, Owaka, Stirling, Clinton and Kaka Point, and the remainder of the population dispersed among smaller townships and the rural farming areas.

##### POPULATION

Within the District's population, 51% are male and 49% female. The median age within the District is 38.8 years, slightly older than the national median age of 35.9 years. The proportions of people aged less than 15 years or older than 65 years are both greater than the national average, but there is a dip in the age distribution between 20-29 years old. Key drivers for this are that young people leave the district for educational or employment opportunities elsewhere, while older people come to the district from elsewhere for lifestyle and family reasons.

##### ETHNICITY

Clutha District has relatively low ethnic diversity, with 80.0% European (compared to 67.6% nationally), and 9.0% Maori (14.6% nationally).

##### EMPLOYMENT

The main employment sectors in the District are based on rural activity, with primary production (dairying, sheep and beef farming, and forestry) the largest sector followed by manufacturing (meat, dairy and wood processing).

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## **2.1.2 BUILT ENVIRONMENT**

### **URBAN**

The Clutha District does not have one main urban centre. The largest town is Balclutha (2011 population estimate 4060), which is also the main servicing centre. However, a further 4,670 people live in the smaller towns of Milton, Kaitangata, Tapanui, Lawrence, Owaka, Clinton, Kaka Point and Taieri Mouth. Those towns all reflect the rural nature of the District, with few large or multistorey buildings.

### **ELECTRICITY**

Electricity is delivered to the Clutha District from the National Grid via a deviation from the 110kV Gore-Halfway Bush line to the Balclutha substation. There are also three 220kV and two other 110kV lines which pass through the District.

There are two 110kV feeds into the District, from Gore and Halfway Bush, both going to the Balclutha Substation. The local distribution network is operated by OtagoNet, with electricity distributed from the Balclutha Substation to local township substations at 33kV, and the distributed to consumers at 11kV.

Electricity is generated at two wind farms – Mahinerangi (36MW) and Mount Stewart (7.65MW) – and at various hydro stations on the Waipori Scheme (83MW), and two stations on the Deep Stream Hydro Scheme (5MW). All the electricity generated is supplied into the local distribution network. In total, the District produces sufficient electricity annually to power over 40,000 homes. However, due to industrial demands, generation variability, and the fact that much of the electricity generated goes to Dunedin City, the District is still dependant on importing electricity from the national grid to maintain a consistent supply.

### **TELECOMMUNICATIONS**

Telecommunications in the Clutha District consist of both fixed line and wireless /cellular communications. Wireless /cellular communications however are still somewhat dependant on the fixed line network and the connections made through a national fibre optic cabling network. Cables come into the district from via two routes – A Telecom New Zealand cable which runs along State Highway 1, and a Telstra Clear cable which runs along the Main Trunk Rail line.

Based on the 2006 Census, households in the Clutha District have the same access to telephones as the national average (91%), but lower access to a mobile phone (72% compared to 74% nationally), and internet (53% compared to 60% nationally). The District's large area and relatively dispersed population means that levels of service vary widely, with some areas having little or no cellphone coverage and limited broadband availability. In recent years cellphone and satellite based communications have become more popular, with some new subdivisions having no landline communications.

The Government's Rural Broadband Initiative will see some new fibre and cellphone installation around the District. However, it appears that this will improve service to areas of existing coverage and then later in the programme, with the only significant new coverage being to Papatowai.

### **TRANSPORT**

The Clutha District is traversed by three State Highways – SH1 which runs north to south through the District (including Waihola, Milton, Balclutha and Clinton), SH8 which goes inland from Clarksville (3km south of Milton) to Central Otago, and SH90 which connects Gore to Raes



Junction on SH8 via Tapanui. The District also has a very extensive local roading network – at 2916km, the third-largest in New Zealand. Local roads are a mix of some sealed (27%) and mostly unsealed (73%). The Main Trunk Rail line runs north-south through the District.

There are no commercial airports within the District, although there is an aerodrome at Balclutha and numerous rural airstrips on farms around the District. There is a fishing port at Taieri Mouth and boat ramps in most coastal communities, but they are suitable for small craft only.

## **WATER, WASTEWATER AND STORMWATER**

The Clutha District Council operates 23 water supply schemes, including 11 rural schemes, 6 urban schemes, and 6 urban areas supplied from rural schemes. Overall, 30% of the water is used for domestic consumption, and the remainder for farming purposes. Sewage is reticulated and treated from most townships (12 in all). The only significant unreticulated townships in the District are Taieri Mouth, Pounawea, and Papatowai, all small coastal communities which have neither public water nor sewerage systems.

Stormwater is managed via a range of methods, from simple roadside ditches in rural areas to major piped schemes in urban areas. In Balclutha, Milton, Stirling and Kaitangata pipes and floodgates are required to drain stormwater through floodbanks, and in Balclutha and Milton this is assisted by stormwater pumps during heavy rainfall and or high river events. In many locations there are connections between District Council urban stormwater schemes and Otago Regional Council scheduled drains and flood protection works.

### **2.1.3 ECONOMIC ENVIRONMENT**

The Clutha District’s economy is strongly based on the rural sector, especially dairy, sheep and beef farming, and forestry, along with downstream processing. Clutha’s contribution is relatively high – despite having only 22% of Otago’s land area, Clutha has 46% of production dairy cows, 48% of lambs raised and 66% of plantation forest area.

Based on a recent Otago Economic Profile by Business and Economic Research Ltd in 2011 Clutha District’s GDP was \$847 million dollars. Primary industry (including agriculture, horticulture and forestry) and manufacturing are the sectors that make the biggest contribution to the Clutha District’s economy.

The contribution of the various sectors to GDP and employment is set out below:

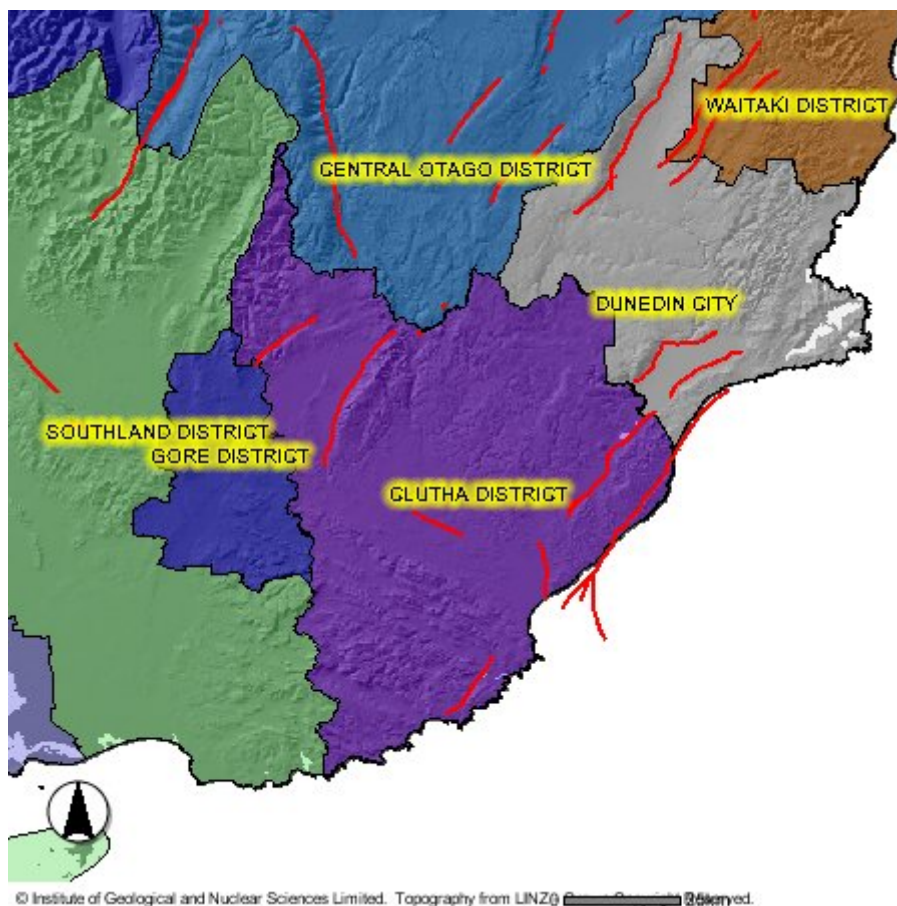
	<b>GDP (%)</b>	<b>Employment (%)</b>
<b>Primary Industry</b>	\$369m (43.6%)	3,143 (37.5%)
<b>Manufacturing</b>	\$184m (21.8%)	1,728 (20.6%)
<b>Construction</b>	\$32m (3.8%)	475 (5.7%)
<b>Wholesale/Distribution</b>	\$38m (4.5%)	326 (3.9%)
<b>Retail</b>	\$48m (5.6%)	963 (11.5%)
<b>Business Services</b>	\$95m (11.2%)	364 (4.3%)
<b>Arts and Recreation</b>	\$3m (0.3%)	37 (0.4%)
<b>Social Services</b>	\$78m (9.2%)	1,338 (16.0%)
<b>TOTAL</b>	<b>\$847m</b>	<b>8,373</b>

**Table 2: Employment and GDP contributions**

## 2.1.4 NATURAL ENVIRONMENT

The Clutha District is highly developed, being mostly flat to rolling farmland, with forestry generally on hill country. The main exceptions to this are the Catlins – a coastal area with significant tracts of indigenous forest in the southern part of the District – and the high ranges of the Blue Mountains and the Lammerlaw Range.

The District has a number of significant waterways, in particular the Clutha River (New Zealand's largest by volume) and the Taieri, Waipori and Pomahaka Rivers, the Lake Waipori – Waihola wetland complex, and Lake Mahinerangi.



**Figure 2: Active Fault Lines**

In terms of the underlying geology, the District has a schist bedrock overlain by various sedimentary layers. The two main faultlines are the Akatore Fault – which runs parallel to the coast from Taieri Mouth to around Toko Mouth, and the Titri fault which follows a similar orientation along the eastern side of the Waihola-Waipori area and the Tokomairiro Plain. Other known faults include the Castle Hill fault (east side of Clutha delta), Clifton Fault (south of Clydevale parallel to the Clutha and Pomahaka Rivers), Blue Mountains fault (western side of the mountain range), the Spylaw fault (Leithen Burn to Heriot), Tuapeka Fault (Beaumont) and the Settlement Fault (Catlins Lake to Papatowai). Return periods range from 2000 years to 10,000, although some are unknown. For faults where an estimate of likely severity can be made, they are classified as up to moderate.

The climate of the District is temperate:

Mean annual rainfall 678mm

Mean daily maximum temperature (summer) 19.6 degree

Mean daily maximum temperature (winter) 10.0 degrees

Mean sunshine hours 1631

Mean days with snow lying 1.6

## 2.2 CLUTHA DISTRICT HAZARDSCAPE

The combination of all hazards within an area is commonly referred to as the hazardscape. The Clutha District is vulnerable to a wide range of significant hazards including floods, earthquakes, severe weather, tsunami, storm surge, rural fire, pandemics, infrastructure failures and industrial or transportation accidents.

Hazards are interactive and can have many effects on the environment. They can also trigger additional hazards - for example an earthquake can weaken floodbanks, and flooding can lead to land subsidence. Additional hazards such as these are dealt with as part of the response to the main primary hazard.

Risks are defined by the likelihood of the hazard occurring and the consequences of the hazard if it does occur. While evaluating the risk can provide priorities for CDEM planning it doesn't determine which disaster will actually occur next. Hazards in this plan are therefore assessed individually based on their own likelihood of occurring and their own consequences. The main hazards considered relevant to the Clutha District are:

- **Floods** occur when the amount of water in a river exceeds the capacity of the river channel and inundates adjacent land. Flooding is relatively frequent in the Clutha District, and is the most common cause of a CDEM response. In most cases flooding which causes damage is the result of local rainfall, with the areas most frequently affected being Milton, West Otago and the Catlins. However, there is also the potential for flooding as a result of inland rainfall raising the level of the Clutha River, which can threaten Clydevale, Balclutha, Stirling, Kaitangata, Inchclutha and the Clutha Delta.
- **Earthquakes** are caused by the sudden release of accumulated strain along a fault. Although the Clutha District has relatively low direct risk compared to other parts of New Zealand, it could be affected by small-moderate earthquakes on faults within the District or as a result of moderate to large earthquakes on the Alpine Fault. A damaging earthquake could occur at any time, without warning, and can be followed by aftershocks that continue for days, weeks or months.
- **Severe Weather** which can affect the District includes heavy rainfall, strong winds, heavy frosts and snowstorms. These events can generally be predicted and weather forecasts allow time to prepare for a potential disaster, but if the damage is severe or the event continues for some days then there can be significant impacts.
- **Tsunami** is a constant risk due to New Zealand's location on the Pacific "Ring of Fire". Warning times and impacts depend on the location of the earthquake or undersea landslide which triggers the tsunami. The greatest risks are from South American events (which could generate a multi-metre tsunami with around 12 hours warning time), and from the Puysegur Trench off Fiordland (which could also generate a multi-metre tsunami but with only 1-2 hours warning). Events in the mid Pacific are less of a threat as the District is shielded by the rest of New Zealand. The Otago Regional Council has published a 2012 report "Community vulnerability to elevated sea level and coastal tsunami events in Otago" which gives detailed information on the risks and vulnerabilities.

- **Storm surge** is a rise in sea level due to extreme low pressure systems during a storm. By its very nature, it often occurs together with flooding and strong winds. The Otago Regional Council report “Community vulnerability to elevated sea level and coastal tsunami events in Otago” mentioned above also gives detailed information on the risks and vulnerabilities to storm surge.
- **Rural Fires** are defined as any unexpected fire in an open space, such as a gorse-covered hillside, grassland or forest. A rural fire hazard is created when fire threatens lives, properties, commercial plantations or areas of natural or cultural significance. Clutha District is moderately susceptible to rural fire hazards due to the potential for warm gusty, nor-westerly winds and the substantial amount of forested land. In general, rural fires are dealt with by the Clutha District Council in its role as Rural Fire Authority, but in a large event or one which threatened a township there could be a need for CDEM support.
- **Pandemics** are characterised by the global spread of a virulent pathogen that can cause unusually high rates of illness and mortality for an extended period of time. A pandemic can overwhelm the resources of a society due to the exceptional number of people affected. The Clutha District has some advantages in being geographically isolated with relatively low population density. However if a pandemic were to arise within the district the effects could be significant. A pandemic is likely to affect the ability of society and the economy to function normally, and can indirectly lead to a subsequent deterioration of infrastructure services through high absentee rates in the workforce as people fall ill or stay at home to care for the sick.
- **Infrastructure Failures** are caused by external factors such as natural hazards or terrorism or internal causes such as lack of maintenance or planning. Clutha District like the rest of New Zealand is highly reliant on its infrastructure: electricity, telecommunications, water services and transportation networks. The more reliant people are on infrastructure, the more vulnerable they are to infrastructure failure. While a single infrastructure failure can be a significant event, the disruption from multiple infrastructure services is potentially very severe. For example, telecommunications supply and water services depend on electricity. Thus if electricity is disrupted to the District the effect could potentially be disastrous to peoples way of life.

## 2.3 IMPLICATIONS FOR CLUTHA DISTRICT CDEM

Based on the Clutha District’s environments and hazardscape as outlined above, there are a number of implications for Civil Defence Emergency Management in the District:

- The District has a relatively dispersed population. While this is positive in that there is less chance that a large number of people will be impacted by any single event, it also poses a challenge by making it more difficult to coordinate and concentrate CDEM effort.
- The importance of primary production and processing to the District means that it is particularly vulnerable to events that disrupt these sectors such as flooding and snowfall.
- The large number of dairy farms means that many workers and their families arrive in the District for short periods of time, making it more difficult to ensure that they are well-informed about CDEM risks and activities.

- In some communities, especially coastal townships and Lawrence, the high proportion of tourists and holiday home owners can create particular issues for CDEM. They cannot be informed and advised regarding emergency preparedness in the same way as the resident population, and they can have very different needs during and after an event placing added pressure on resources.
- Groups that have been identified as particularly vulnerable in a CDEM emergency include those aged over 65 and under 15 years, which are both relatively over-represented in the District.
- Some areas within the District, particularly those away from the main centres such as the Catlins and West Otago have little or no cellphone coverage and limited broadband availability, which has wide-ranging emergency implications.
- Transportation within the district is limited almost entirely to roads, with very limited capacity for airplanes or boats. This means that there is a huge dependency on the roading network to be functioning in an emergency, not only for residents but for emergency services and the transportation of other goods and services such as fuel. While helicopters are available and potentially very useful, in a large-scale event they are likely to be in high demand.
- Water and wastewater services for much of the population are dependent on the operation of a large number of reticulated systems. As with the dispersed population this has both advantages and disadvantages, with it being less likely that one event will affect a large number of schemes, but more difficult to manage resilience and response across all the schemes.
- The frequency of flooding means that the District's CDEM structures and general population are relatively well-prepared to deal with these events. However, this also means that there is a relatively lower level of preparedness for sudden impact events such as earthquakes.

## 3 REDUCTION

*This section provides an overview of the initiatives used to reduce the risks in the Clutha District. It describes the principles of reduction and explains the activities used to achieve CDEM objectives including CDEM research, lifelines resilience, plans and policies, and reduction planning.*

### 3.1 INTRODUCTION

Reduction involves identifying and analysing long-term risks to human life and property from natural or man-made hazards; taking steps to eliminate these risks if practicable and, if not, reducing the magnitude of their impact and the likelihood of them occurring.

Risk reduction is achieved through integrated risk management and methods such as hazard mapping and monitoring, land-use planning, improved building design and construction, physical mitigation works, public awareness and education, sustainable land management, regulation and monitoring, upgrading infrastructure resilience and emergency management planning.

Risk reduction involves many stakeholders including central government, local authorities, emergency services and lifeline utilities, as well as individuals and communities. It is also guided by many pieces of legislation, policies and plans, both at local and national levels. Therefore successful, comprehensive risk reduction requires a collaborative, multi-agency and all of government approach.

Past risk reduction efforts in the Clutha District have included flood mitigation works such as stop banks in Balclutha and Kaitangata and flood pumps at Milton, hazard mapping, land-use planning (eg the Milton 2060 project to reduce vulnerability to flooding in the Tokomairiro Plain) and the incorporation of national building codes into local policy which address the risks associated with earthquakes, floods and severe weather. In addition, individual agencies such as lifeline utilities continually design and upgrade their networks and procedures to have resilience to hazards.

Reduction has been identified by the Clutha District Council as a key area for further work in the term of this Plan.

#### REDUCTION PRINCIPLES

Reduction principles help to clarify, guide and prioritise reduction activities that all contribute towards increasing community resilience. There are three reduction principles for the Clutha District, based on the Otago Group principles, which are:

- To identify and co-ordinate reduction activities among key stakeholders and the community.
- To prioritise reduction activities taking into account the impact on human life and safety, the economy and the built and natural environment as well as the manageability of the risk and the likelihood of it occurring.
- To develop practical, achievable objectives and methodologies to reduce risk in the District.



## 3.2 REDUCTION ACTIVITIES

Risk reduction is unlike the other '4 Rs' areas, as much or most of the required activity sits outside the scope of CDEM structures, and often also outside the wider functions of councils and other emergency management agencies. It also often has a high cost compared with other elements of CDEM – it can involve costly infrastructure programmes that can be difficult to justify economically, especially when compared to other activities with more immediate and tangible outcomes. It can also involve planning controls under the Resource Management Act, which place restrictions and impose costs on private landowners.

Reduction activities in the Clutha District fall into two key areas – improving understanding of hazards and risks, and undertaking work to reduce those risks.

### IMPROVING UNDERSTANDING

A fundamental part of reducing risk is to first understand what the risks are. Our current understanding of the District's hazardscape has been outlined in Section 2.

Recent work to improve understanding has included an assessment of the vulnerability of coastal Otago communities to storm surge and tsunami hazard, and investigation of the hazard associated with flood events in Milton and the Tokomairiro Plain.

Future work within the term of this Plan includes:

- Use and promotion of the Otago Natural Hazards Database (NHDB) which is being developed by the Otago Regional Council. The NHDB will provide ready access to hazard information, and so will allow better analysis of risks within the Clutha District, and the provision of better information to other agencies and the general public.
- An investigation into the vulnerability of the Clutha Delta to natural hazards, including the effects of predicted changes in climate, in order to assist long-term sustainable occupation and land use in this area.
- Consideration of new information and understanding arising from investigations into the Canterbury Earthquakes. This will include a review of Council's Policy on Earthquake-Prone buildings, which will be done in collaboration with the other councils in Otago.

### RISK REDUCTION ACTIVITIES

The recent MCDEM Monitoring and Evaluation exercise identified that Risk Reduction was an area of relatively low effort, both within the Clutha District and across the Otago Group as a whole. Most of the major risks occur across more than one Council area, so it will be more efficient and effective if reduction activities are coordinated with other Councils. Also, as risk reduction involves agencies and infrastructure outside of CDEM structures and Council, much of activity will need to involve collaboration with a range of other organisations (eg scientific agencies, infrastructure operators, network utilities). Overall leadership of this is intended to come from the Otago Group (as set out in the Otago CDEM Group Plan). Responsibility for specific actions will then sit with the various organisations (individually and in collaboration), with the Risk Reduction Committee coordinating and monitoring this work and reporting back to the CEG.

Specific activities involving the Clutha District include:

- Consultation with coastal communities to consider and address the implications of the Otago Regional Council's 2012 report "Community vulnerability to elevated sea level and coastal tsunami events in Otago". This is likely to involve provision of information

to residents, protection of critical infrastructure, preparation of warning systems, and community-specific response planning.

- Development and adoption of District Plan provisions for Milton and the Tokomairiro Plains as a result of the Milton 2060 investigations. This will include new land use controls for affected areas. As well as the District Plan review, there is also a need to provide information and improve community preparedness.
- Review of the more general provisions of the District Plan relating to natural hazards.
- Utilisation of the Otago Natural Hazards Database.
- Response to the Clutha Delta vulnerability investigation.
- Upgrades to Council infrastructure to reduce vulnerability to hazards. This includes: completing additional water reservoir tanks in Tapanui, Lawrence, Balclutha, and Milton; providing for alternative water supply across Balclutha Bridge via fire hose; purchasing and installing generators to provide alternative electricity supply for critical infrastructure such as water treatment plants and community halls; and the ongoing maintenance and upgrading of water, sewer and stormwater systems to improve functioning and resilience.
- An area of significant concern is the maintenance of critical points on the roading network, especially bridges, as NZTA funding has been reduced and it is likely that Council's levels of service for roading will reduce as a result. Of particular concern is the Clydevale bridge over the Clutha River, which is already subject to operating restrictions.
- Contribution to the Group Reduction Committee, which is coordinating work on shared infrastructure such as electricity distribution networks and telecommunications.

## 4 READINESS

*The readiness section provides an overview of the initiatives used to prepare the Clutha District for an emergency. It describes the principles of readiness and explains the activities used to achieve CDEM objectives including public education, community planning, business continuity planning, coordinated incident management, professional development, training and exercises, operational planning and readiness planning.*

### 4.1 INTRODUCTION

Readiness involves 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. Readiness can be divided into two distinct but related aspects:

- **Community readiness** focuses on the ability of communities, private businesses, families and individuals to be able to meet their own needs during and after an emergency.
- **Organisational readiness** focuses on the readiness of emergency services, local authorities, large non-government organisations and other CDEM stakeholders to be able to meet not only their own needs during an emergency but also the needs of their community.

The purpose of the readiness section is to provide an overview of current levels of readiness and to provide assurance that the Clutha District has the capacity and capability to respond to and recover from a civil defence emergency. The section also identifies readiness issues and priorities which the District needs to focus on.

#### READINESS PRINCIPLES

Readiness principles help to clarify, guide and prioritise readiness activities that contribute towards increasing community resilience. The readiness principles for the Clutha District are:

- Communities, private businesses, families and individuals have the responsibility to meet their own needs during and after an emergency.
- Risk management should form part of normal business operations and planning should include both business continuity and emergency management arrangements.
- Successful emergency management is reliant on good planning activities and preparedness arrangements with involvement from all stakeholders including the public.
- The Clutha District Council will at all times maintain an appropriate level of readiness by monitoring actual and potential events and being able to provide support when required.

#### PRIORITIES

As part of the preparation of the Otago CDEM Group Plan, a risk prioritisation model was used to identify priorities for readiness improvements in relation to specific hazards. It found that

the most difficult hazards to 'be ready for' are those that have little or no warning time and that have very long return periods such as earthquakes and local source tsunamis. The high priority hazards that had the most effort applied to warning systems and community readiness were floods, storms, human pandemic and regional/distal tsunami. Overall, the Group area was assessed as being least ready for earthquake, dam failure and local tsunami; and most ready for flooding, pandemic, and regional / distal tsunami.

Within the Clutha District a similar situation applies. The District is relatively well-prepared for flooding, pandemic, and regional / distal tsunami. These are events which the District has experience in preparing for and responding to, and involve a moderate amount of advance warning. The District is least prepared for earthquake and local tsunami, as there have been no actual events in recent decades and there is little or no advance warning. While there is a residual risk from dam failure, any flood flows from a dam breach in the Clutha River would have attenuated by the time they reach the District and so could be handled within normal flood response protocols.

## **4.2 COMMUNITY READINESS ACTIVITIES**

### **4.2.1 AWARENESS AND PREPAREDNESS**

All individuals and communities need to be aware of hazards and risks, and how to prepare for and cope in an emergency. The National Public Education Programme (2006-2016) provides the overall direction for developing and delivering public education while local and regional strategies offer specific advice about local hazards, risks and preparedness steps.

The Otago CDEM Group has identified public education as the foundation for improving levels of community resilience, and has developed a Public Education Strategy. Activities within the Clutha District will fit within, and contribute to, that Strategy.

Specific activities include:

- Contributing to Group and National education programmes (eg "What's the Plan Stan" and "Turtle Safe"), and delivering them within the District.
- Providing information through Council newsletters, website and other publications.
- Targeted advertising campaigns, generally either in conjunction with a Group or National campaign, or in response to specific local events and issues.
- Visits to schools, businesses and community groups.
- Provision of information displays and material for relevant events and functions.

### **4.2.2 COMMUNITY PARTICIPATION**

Communities in the Clutha District can be isolated during an emergency event, and even when they are not isolated there may be delays in outside resources being available to assist. This makes it imperative that communities can survive with little or no outside assistance, particularly during the early stages of a response. Council is working to address these issues by working with local communities.

Specific activities include:

- Meeting with key community groups at least once per year.

- Maintaining CDEM Ward Centres at Tapanui, Lawrence, Milton and Owaka, and setting up new Ward Centres in Kaitangata and Balclutha.
- Contributing to two-monthly meetings of the Clutha District Emergency Services Trust.
- Working with communities to develop specific responses to their hazards and risks. This will include all coastal communities covered by the Otago Regional Council's 2012 report "Community vulnerability to elevated sea level and coastal tsunami events in Otago", and a fire evacuation plan for the Tahakopa Valley.
- Promotion and sale of "Grab and Go" bags for personal preparedness.

## 4.3 ORGANISATIONAL READINESS

### 4.3.1 STAFF CAPACITY AND CAPABILITY

Professional development is a core component of all readiness activities. Appropriate performance during an emergency can often be attributed to strong working relationships being established and exercised prior to emergency events.

Specific activities include:

- Specific training for key EOC positions. For some positions this training is available nationally (Controllers, Public Information Managers and Recovery Managers), and all people identified for those roles will undertake that training as part of preparing for the role. For other roles, training will be conducted either in-house or in conjunction with the Otago Group, so as to have at least two shifts of trained personnel for all key positions.
- Monthly meetings of key CDEM staff from within the Council, and twice-yearly meetings of all key positions, to ensure all personnel are kept up to date.
- Further training and exercises will be undertaken in collaboration with the Otago Group, to help ensure that professional development is locally relevant and cost-effective, while also improving cooperation and interoperability by having staff from various agencies working together.
- Contribute to development and implementation of a Group professional development strategy and training programme.

### 4.3.2 OPERATIONAL PLANNING GROUPS

Emergency management operational planning covers a wide range of activities and a number of emergencies that are extremely varied in duration, frequency, intensity, nature and consequences. Integrated and coordinated planning facilitates consideration of all the consequences of the threat or impact of an emergency event on a community. In addition to the planning undertaken by the Otago CDEM Group and Clutha District Council, there are a number of other groups and structures that contribute to operational planning (eg Emergency Services Coordinating Committees, Hazardous Substances Technical Liaison Committee, Rural Fire Authorities, and the Group Welfare Advisory Committee).

Council will continue to be part of the Clutha Emergency Services Trust, and will contribute to or work with other groups as required.

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### 4.3.3 PLANS AND PROCEDURES

All organisations and agencies that are involved in civil defence emergency management should prepare plans that outline their arrangements for contributing to the response of and recovery from an emergency. Planning provides a methodical way to think through and develop arrangements for addressing every stage of an emergency. It describes a desired outcome, outlines effective ways for achieving it, and communicates expectations of all response and recovery partners. Planning takes place at all levels and involves multiple stakeholders. To ensure that arrangements are representative, realistic and recognised by all partners it is essential that plans are co-ordinated horizontally and integrated vertically so that a common operational focus can be achieved.

#### Group Plans

Within the Otago Group there are a number of current or proposed plans that involve the Clutha District:

- Otago CDEM Group Plan
- Welfare Plan
- Lifelines Plan
- Recovery Plan
- Group Tsunami Plan
- Group Alpine Fault Earthquake Plan
- Group Dam Failure Plan
- Public Education Strategy

#### Clutha District Plans

In addition to joining together to form a CDEM Group and produce a CDEM Group Plan, territorial local authorities must plan and provide for civil defence emergency management within their own districts (s.64(1) CDEM Act 2002). Within Clutha District, the following are relevant:

#### Handbooks and Guidelines

Handbooks and Guidelines are written and designed for quick reference, to provide statements by which to determine the best course of action. Handbooks and Guidelines can also outline roles and responsibilities, identify tasks, and establish accountability. The Clutha District does not have specific documents of its own, but uses various guidelines from the MCDEM website library (eg Best Practice Guidelines, Director's Guidelines, Technical Standards, and handbooks and research on various specific topics).

#### Standard Operating Procedures

Standard Operating Procedures (SOPs) are instructions or documents that describe the procedure to be followed in carrying out a specific operation. There are currently SOPs for each CDEM operations centre - Balclutha Head Office, and Service Centres (CDEM Ward Centres) in Milton, Owaka, Lawrence and Tapanui. SOPs are also to be developed for Kaitangata and Balclutha Ward Centres.

#### Event-Specific Response Plans



Event-Specific Response Plans are documents that consider the consequences of the major hazards that might impact the district. Event specific planning provides the opportunity to anticipate actions and systematically identify potential problems and workable solutions. Event-specific planning also provides a means for coordination, integration and synchronisation therefore it is essential that all CDEM stakeholders are involved in the process.

The Clutha District currently has an “Adverse Events Plan” which deals with the rural response to weather-related events. Dealing with the large numbers of farmers and stock across the District is beyond the resources of the Council itself, so this Plan sets out how the farming community itself will manage its response.

Balclutha has an Urban Evacuation Plan, which particularly deals with the risk of flooding on the flat central area of the town. The Plan was developed in consultation with the business sector, community service and health providers, and emergency services.

There is also a Tsunami Warning Operational Instruction. Once a Group Tsunami Plan is developed, this will then be carried through into a Clutha District Tsunami Plan.

### **Recovery Plan (Proposed)**

Recovery planning is an essential element in emergency management and outlines the structure, roles and responsibilities of various local organisations and the process by which the recovery component of the emergency will be undertaken. The Clutha District Recovery plan will be developed to be consistent with the group recovery plan which is currently in development.

## **4.4 WARNING SYSTEMS**

Warning systems are used to advise agencies, authorities and/or the public of possible events, to allow them to prepare for a potential or actual emergency. The effectiveness of warning systems is dependent on the timely delivery and receipt of the threat information, recipients’ understanding of what they should do, and the readiness and response plans in place to guide the response.

The Clutha District Council can receive warnings from a number of sources, depending on the nature of the threat involved:

### **National Warning System**

The national warning system is maintained and operated by the Ministry of Civil Defence and Emergency Management to issue civil defence warnings received from responsible agencies to CDEM Groups and local authorities, government agencies and lifeline utilities registered with the national warning system.

MCDEM issues warnings or advisories via the national warning system when an event poses a threat or potential threat to people and/or property and may result in an emergency or when it considers there is sufficient public interest to state that an event does not pose a threat. The type of warning or advisory issued will depend on the type and nature of the event and its potential impact.

Warnings and advisories are sent to the Clutha District Emergency Management Office by SMS text message (notice that a warning or advisory has been issued) and email (which contains the details of the warning or advisory). The Emergency Management Office must be capable of receiving, acknowledging and responding to national warning messages within 30 minutes. Acknowledgement of the warning or advisory is to be sent to the Otago Group CDEM office.

The SMS text message is delivered to two staff members and Council’s after-hours contact service. The after-hours service will work through a list of names until contact is made, to ensure that the message has been received. The details are then accessed via the email, which goes to a wider distribution list.

### Otago Group Warning System

The Group CDEM Office coordinates the issue, dissemination, and confirmation at the regional level in accordance with Standard Operating Procedures. The procedures outline the agencies responsible for issuing warnings, levels of warnings and explanations of warning criteria. Individual Local Authorities and Emergency Services are then responsible for further disseminating the warnings as appropriate, in accordance with their own Standard Operating Procedures. Systems are to be tested regularly, both within the Group and as part of national tests.

### Other Agencies Involved

There are a number of agencies involved in the surveillance, monitoring, assessment of hazards and issuing alerts and warnings to incidents or events that may be a pre-cursor to an emergency (see Table below).

Hazard	Monitoring / Alerting Agency
Tsunami (distant and regional source)	Pacific Tsunami Warning Centre via MCDEM
Forecasting and alerts / warnings / watches / outlooks / advisories for heavy rain, gales, snow, thunderstorms, swells, surge	NZ MetService
Longer term forecasting of weather and climate trends	NZ MetService & NIWA
Flood warnings for major rivers, including interpretation of meteorological information and notification when river level ‘trigger’ points are reached	Otago Regional Council
Earthquake – notification of magnitude, location and other information following an earthquake	GNS
Public health warnings, including pandemic	Ministry of Health & District Health Boards
Weather conditions likely to increase the possibility of wildfire.	National Rural Fire Authority and local Rural Fire Authorities
Animal disease outbreaks and pest invasions.	Ministry for Primary Industries
Infrastructure failure	Agency responsible for infrastructure
Criminal acts and major accidents	NZ Police

**Table 3: Monitoring and alerting agencies**

### Public warnings

Public warnings may be issued by the MCDEM, by the Otago CDEM Group, the Clutha District CDEM Office or by the NZ Police or NZ Fire Service. On receiving the warning people should follow the instructions given or listen to their local radio or TV stations for further information.

The general public can be alerted to an impending emergency using a variety of systems, including radio and television, public address system announcements, signposting, websites, email, text messages, 0800 telephone numbers and the continuous sounding of sirens. The method depends on the nature and type of event, the communication systems available and the particular community affected.

Clutha District's dispersed population and patchy cellphone coverage mean that a variety of methods must be used. In a number of cases local arrangements are developed by community groups (eg 'phone trees', neighbourhood contact lists, or volunteer firefighters). Sirens are not used in the District due to their limited coverage and reliability issues.

## **4.5 COMMUNICATION SYSTEMS**

The ability to effectively communicate in the lead up to, during and after an emergency is a critical component of operational capability. CDEM stakeholders expect all responding agencies to be able to effectively communicate with each other at all times. The Clutha District uses a variety of communication systems to ensure effective and resilient inter-agency communication. These include landline phone, cellular phone, satellite phone, facsimile, email, VHF radio, HF radio and EMIS.

EMIS stands for Emergency Management Information System, which is a national web-based integrated information system for disaster response that provides graphical real-time information to responders. The system allows end-to-end functionality including such features as standardised reporting, data logging, an alerting function and a library repository. EMIS is currently being implemented through the country, and is intended to become the standard system for providing and aggregating information from local to regional and national levels.

## 5 RESPONSE

*This section provides an overview of the initiatives that are used to manage an emergency in the Clutha District. It describes the principles of response and discusses response arrangements. This includes information on the emergency management structure, levels of response, activation and notification, Emergency Operation Centre, functions and capabilities, stages of response, declarations, mass evacuation, volunteer management and roles and responsibilities.*

### 5.1 INTRODUCTION

Response describes the actions taken immediately before, during or directly after a civil defence emergency to save lives, protect property and support communities to recover. These response arrangements have been established to ensure that all available resources are effectively applied to plan for and manage the consequences of emergencies that affect the Clutha District. While the first priority during an emergency is the safety of life, response planning aims to minimise all the effects of an emergency and ensure that people are given early support to recover.

The purpose of the response section is to provide key stakeholders, partner organisations and the community with an outline of the response principles, priorities, systems and organisational framework intended to be activated, deployed and coordinated during emergencies in the Clutha District.

#### Principles

Key principles for response are:

- Command, control and coordination of incidents, emergencies and disasters will be dealt with using the Coordinated Incident Management System (CIMS).
- The response will escalate only to the level required to manage the Incident. Incident Control Points and EOCs will be flexible and able to be established by Controllers to a size and structure appropriate to the incident.
- The CDEM Group, through its Group ECC located at the Otago Regional Council, will activate to the level required to monitor, support, coordinate and/or direct as appropriate to the event.
- All agencies will be responsible for their own response under their own plans, but as coordinated by the lead agency.

### 5.2 LEVELS OF EMERGENCY

Response relationships, roles, activities and EOC operation change as an Incident escalates into an Emergency. The Otago Group recognises five levels of Incident/Emergency, which are consistent with those described in the National CDEM Plan:

Event Type	Event Status / Procedures	GECC / EOC Roles	Controllers' Roles
<b>1 Local Incident:</b> Can be dealt with by Emergency Services and/or Local Authority resources alone. Specialists may be required for specific circumstances.	No Declaration. CIMS structures and principles used to manage Incident. Lead agency depends on Incident type.	EOCs may be alerted or be partially operative in support of the Lead Agency.	Local controller notified if EOC involved.
<b>2 Local multi agency Incident:</b> Can be dealt with by Emergency Services and/or Local Authority resources though remote support (ICP) likely to be required. Specialists may be required for specific circumstances.	No Declaration. CIMS structures and principles used to manage Incident. Local authority may assume coordinating role for functions agreed on the day.	EOC in Key Support Agency role. Local Authority EOC partially or fully activated and co-ordinating agreed functions. Possibility of GECC partially activated in monitoring role	Local Controller coordinating the agreed functions. Group Controller notified.
<b>3 Imminent or State of Local Emergency involving a single TLA:</b> The event may not or cannot be able to be managed without the adoption of emergency powers.	Declaration of state of local emergency in a single TLA is being considered, or has been deemed necessary. Declaration can be for an entire district or one or more wards.	EOC fully activated and is coordinating response and management of the emergency. GECC and adjacent EOCs alerted or partially activated to monitor the situation and ready to respond if the situation deteriorates.	Local Controller exercising statutory powers. Group Controller supporting the Local Controller, and giving consideration to further escalation. Adjacent CDEM Groups and National Controller notified.
<b>4 Imminent or State of Local Emergency that is regionally significant:</b> The event impacts on one TLA but requires response and resources from outside that TLA, OR The event impacts on two or more TLAs within Otago, OR Co-ordinated assistance is required to support an adjoining CDEM Group.	Declaration of state of local emergency in Otago is being considered, or has been deemed necessary, that involves the entire CDEM Group area or one or more districts, OR an adjacent CDEM Group requires assistance.	GECC and all EOCs fully activated. NCMC and adjacent GECCs may be alerted or partially activated to monitor the situation and be ready to respond if the situation deteriorates.	Group Controller exercising statutory powers. National Controller giving consideration to further escalation. Local Controllers responding to priorities set by the Group Controller.
<b>5 Imminent or State of National Emergency.</b>	Declaration of state of national emergency is being considered, or has been deemed necessary.	NCMC, GECCs and all EOCs fully activated	National Controller exercising statutory powers Group Controller responding to priorities set by the National Controller. Local Controller responding to priorities set by the Group Controller

**Table 4: Levels of Emergency**

Responses to an event can occur progressively – eg the Clutha District EOC may initially take a monitoring role for localised flooding in a part of the District, activate fully if the flooding worsens, and eventually seek support from the GECC if outside help is required. This approach is appropriate, as the scale of each agency's response should be in proportion to the event.

However, the points where the level and control change must be definite and clear, and communicated immediately to all agencies.

### 5.3 EMERGENCY OPERATING CENTRES

There are three levels of Centres:

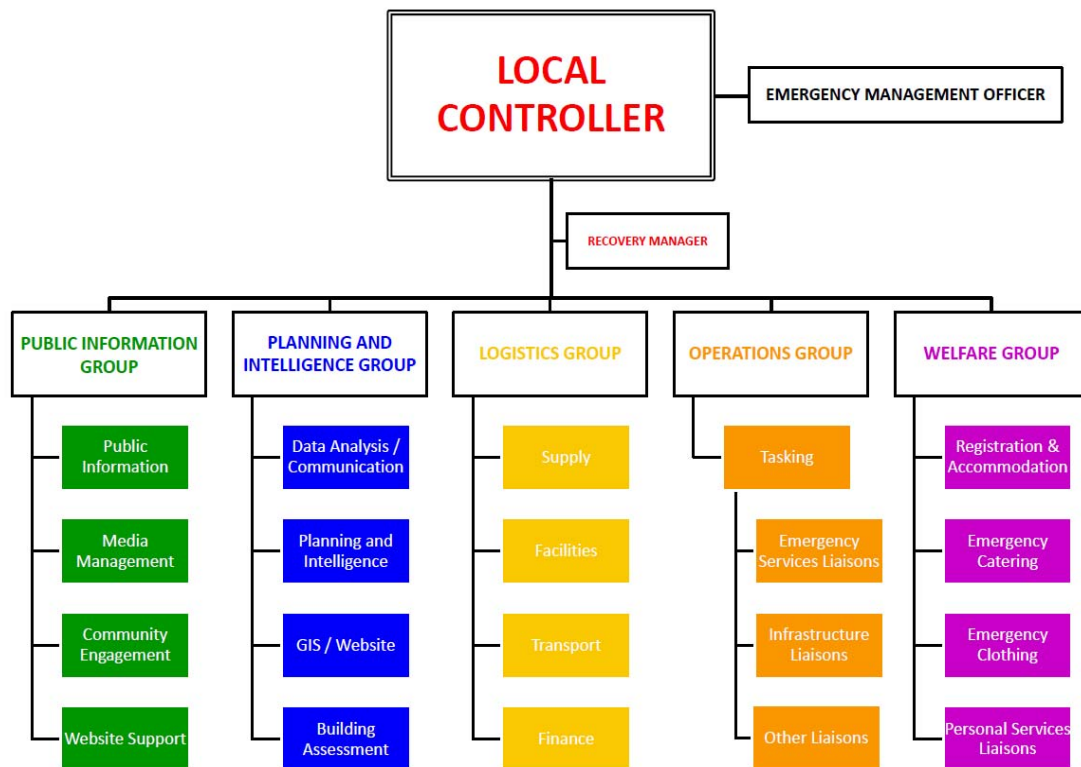
Clutha District Emergency Operating Centre (EOC) is operated by the Clutha District Council. Its role is to co-ordinate the response of local emergency agencies within the authority’s area, including logistics, welfare, information management, media advise and recovery preparation. Once the EOC is activated, the GECC must be notified and kept informed. Other EOCs are also operated by other territorial authorities and emergency response agencies.

The Group Emergency Coordinating Centre (GECC) is based at the Otago Regional Council, and focuses on coordination, and where required direction, of the event through tactical and strategic management.

The National Crisis Management Centre (NCMC) co-ordinates events of national significance and the MCDEM is responsible for its operation.

The Clutha District EOC is located at the Clutha District Council Head Office, Balclutha, with a back-up site available at South Otago High School in Balclutha. It is predominantly staffed by personnel from the Council that have been trained in civil defence emergency management functions but it also include liaisons from emergency services, specialist advisers and other representatives from relevant organisations. During a major emergency, other CDEM stakeholders such as the police may activate their own EOC but will still work in with the District EOC. The EOC operates in accordance with the Coordinated Incident Management System (CIMS), as set out below, with different elements of the structure activated as required, and at a scale appropriate to the event.

Figure 3: CIMS structure





### 5.3.1 ACTIVATION AND NOTIFICATION

During small scale events, the emergency can be managed by an Incident Controller preferably at the incident control point. The Incident Controller should contact the local CDEM organisation if coordination or support is required.

During larger scale events the Local EOC will operate to coordinate local agencies. Agency liaison officers or advisors may be required in the Local EOC to co-ordinate resource allocation and provide critical information. The Local EOC and Welfare Centres are activated at the direction of the Local Controller, guided by information from the Civil Defence Officer, emergency services and other responders. The Group Controller will be informed of any activation. Local EOCs will provide regular reports to the GECC.

Where an emergency potentially involves more than one Territorial Local Authority, the Group ECC will be activated. Initially this may just be to provide liaison, coordination and support for the local EOC or EOCs. However, if responses or resources need to be directed between TLA areas, or more than one TLA has declared a State of Emergency, then it becomes a Level 4 Event under the direction of the Group Controller.

Within the District there are also Ward Centres, based in Milton, Lawrence, Tapanui and Owaka, with Centres also being developed in Kaitangata and Balclutha. These operate under the control of the EOC, and provide local level response in accordance with CIMS. As required, Welfare Centres, Reporting Centres and Community Facilities may also be established.

## 5.4 EOC STAFF ROLES AND RESPONSIBILITIES

The functions and capabilities of each group are discussed below and may be carried out by one person or by several depending on the availability of personnel. Activation of each group is determined by the local controller.

### CONTROL GROUP

The Control Group provides the mechanism for establishing priorities for emergency actions and for ensuring a timely response, making the most effective use of available resources and for providing the necessary authority. The Control Group consists of the following positions:

- **Local Controller** – responsible for the overall direction and coordination of all civil defence emergency management activity for the duration of the event and for facilitating a smooth transition from response to recovery. This involves facilitating regular briefings with relevant CDEM stakeholders, monitoring agencies in their roles, leading and supervising staff and approving media releases, situation reports and action plans. The Clutha District Council Chief Executive is the Controller, with three Alternate Controllers selected from Council staff and suitably experienced volunteers.
- **Recovery Manager** – responsible for coordinating the recovery activity in the area. The recovery manager is appointed from day one of the emergency to ensure that there is a smooth transition from response to recovery. Further information about the role of recovery manager can be found in section 6.
- **Emergency Management Officer** – responsible for the overall management of the Emergency Operations Centre and associated functions including community civil defence centres and emergency evacuation/welfare centres. The emergency management officer is also the primary adviser for the local controller and responsible for ensuring efficient and effective response and recovery.

## PUBLIC INFORMATION GROUP

The Public Information Group is responsible for the timely dissemination of consistent, accurate and clear information to the general public and relevant news media agencies. This promotes effective leadership and decision-making, and enables the people affected by the emergency to understand what is happening and how to take the appropriate actions to protect themselves. This group is also responsible for facilitating access to operational areas for the media and VIPs where practical and safe to do so. The public information group is comprised of the following components:

- **Public Information** – responsible for collecting, analysing and disseminating consistent information to the general public and CDEM stakeholders. The public information component is also responsible for communicating warnings and evacuation messages to people at risk from the emergency as well as identifying the appropriate delivery channels. Another key responsibility of the public information component is to operate a call centre to manage public enquiries.
- **Media Management** – responsible for managing the media by providing and monitoring news information, organising media conferences with spokespeople and for facilitating safe access to operational areas. This component is also responsible for monitoring media reports, identifying stories of interest and clarifying or confirming information as necessary.
- **Community Engagement** – responsible for facilitating communication between community civil defence centres and the emergency operations centre. Community civil defence centres not only provide a nearby location that public can go to for information but it also provides a mechanism for the emergency operations centre to gain a community perspective to help prioritise district-wide resources.
- **Website Support** – responsible for helping maintain the website and social networking sites in an emergency to ensure information is consistent and relevant.

## PLANNING AND INTELLIGENCE GROUP

The Planning and Intelligence Group is responsible for the collection, interpretation, display and dissemination of information about the event and for predicting likely developments. This section is also responsible for the preparation of reports, plans and briefing material and for maintaining an information service (e.g. maintaining an incident board) to provide up-to-date information to emergency personnel and the public (through the Public Information Group). The Planning and Intelligence Group comprises of the following components:

- **Data Analysis/Communication** – responsible for gathering, analysing and classifying all incoming transmissions into the emergency operations centre and for directing messages to the appropriate function(s).
- **Planning and Intelligence** – responsible for the processing of information about the emergency to create a situation report. ‘Situation Reports’ need to be disseminated to all relevant stakeholders in order for them to have good situational awareness, any information missing from the report the planning and intelligence function will need to find it. The planning and intelligence function is also responsible for formulating ‘Action Plans’, contingency plans and alternative strategies for the Control Group’s consideration and for disseminating these plans to relevant CDEM stakeholders.
- **Geographic Information Systems (GIS) / Website** – responsible for interpreting operational data, converting it to a more understandable form and preparing specialised mapping information and graphics. The GIS / Website component is also

responsible for providing technical website support and user-friendly graphical information to the public information group.

- **Building Assessment** – responsible for the assessment of buildings within the disaster area and classifying them according to the severity of damage. The building assessment component is also responsible for cordoning off unsafe buildings and at risk areas.

## LOGISTICS GROUP

The Logistics Group is responsible for coordinating and allocating resources and for considering future resource requirements. This involves being able to identify, prioritise and track all resources acquired as part of the emergency response. This group takes on great responsibility in long-term or extended operations. The logistics group comprises of the following components:

- **Supply** – responsible for organising and managing the supply of personal, equipment and consumable resources.
- **Facilities** – responsible for preparing and managing locations for work, sleeping, eating and maintenance of equipment.
- **Transport** – responsible for providing transport for personnel, supplies and food, arranging refuelling, mechanical maintenance and security of equipment and, where necessary, managing traffic.
- **Finance** – responsible for the management of all financial aspects of the civil defence emergency including purchase orders, equipment hire and other financial matters.

## OPERATIONS GROUP

The Operations Group is responsible for coordinating the operational activities directly related to resolving the incident. These include providing emergency services, reinstating essential services and other actions that may resolve the incident such as demolitions. The Operations Group comprises of the following components:

- **Tasking** – responsible for creating, assigning and monitoring tasks. Tasking is also responsible for assigning resources to tasks so they must work closely with the logistics group.
- **Emergency Services Liaisons** – responsible for keeping the emergency operations centre informed of the situation, organisational responses and for accepting operational taskings. Emergency services liaisons include the police, fire service, ambulance service, rural fire authorities and hospitals.
- **Infrastructure Liaisons** - responsible for the evaluation and restoration of infrastructure and essential community services including electricity, telecommunication, water services and transport systems and for keeping the emergency operations centre informed of their status.
- **Other Liaisons** – responsible for providing expert advice and analysis on the situation and for providing the professional services to help respond to the emergency. Examples of other liaisons include scientists, engineers and planners from organisations such as the Otago Regional Council, GNS, NIWA and MetService.

## WELFARE GROUP

The Welfare Group is responsible for providing access to services for those who, as a result of the emergency (including evacuees, volunteers and staff), require food, clothing, shelter and/or personal services. The Group is to welcome, reassure and meet the immediate

requirements of people in need, and others seeking advice and help as quickly as possible. The welfare group comprises of the following functions:

- **Registration and Accommodation** – responsible for receiving and registering people, providing reassurance, establishing their needs and directing them to the required services. Only those people requiring support need to register. This component is also responsible for arranging emergency accommodation for people. (Hotels, motels and house share will be considered before establishing an evacuation centre).
- **Emergency Catering** – responsible for providing food and refreshments to evacuees, volunteers and emergency workers. Emergency catering also needs to be considered for those within isolated homes and communities.
- **Emergency Clothing** – responsible for the provision of essential clothing, blankets and toiletries to replace items destroyed, inaccessible, lost or contaminated.
- **Personal Services** – responsible for the provision of assistance to allow disaster victims to meet their essential personal needs and includes support services to overcome grief, shock, financial embarrassment and other related reactions.

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#### 5.4.1 STAGES OF RESPONSE

The response process can be described as having four main stages. These are summarised below:

##### STAGE ONE: ACTIVATION OF THE EOC

One of the first tasks when advised of a likely emergency is to quickly determine whether the emergency's nature, size or severity warrants activating the Emergency Operation Centre. Emergency operations are directed and coordinated from this centre. Staffing levels and resources should be sufficient to permit the centre to function smoothly and effectively, irrespective of the duration of the emergency.

##### STAGE TWO: INITIAL ASSESSMENT AND ACTION PLAN

The Initial Assessment stage requires a short-term (initial) action plan to establish the extent of the impact. The Initial Action Plan will revolve around getting information about the people and property at risk, the status of infrastructure and the status of access to areas. Once a reasonable picture of the extent of the impact has been determined, a common operating picture has been established, it is then time to prioritise the response and create an Action Plan. The purpose of an Action Plan is to provide direction and information to the EOC management team, agency managers and other groups/individuals involved in the response to an emergency.

##### STAGE THREE: IMPLEMENTATION CYCLE

The next stage of the response process is to implement the action plan. Implementation involves continuous adjustment and taking stock, as individuals and organisations in the impact area evaluate and report on the consequences of the emergency. The sharing of information in an emergency is critical. A common operating picture must be maintained so all stakeholders react to the same information. Thus the implementation cycle comprises of four perpetual and overlapping phases:

- **Phase 1:** Analyse the situation: size up the situation and determine the best way to deal with it. This is commonly referred to as the appreciation.
- **Phase 2:** Develop an operational plan: complete an operational plan detailing the resources and work effort necessary to deal with the situation.

- **Phase 3:** Implement the operational plan: communicate the operational plan to those who will implement it by verbal orders/internal briefings and/or written orders, then monitor and review it through the cycle.
- **Phase 4:** Evaluate the response: to determine and implement steps to improve future operational plans.

#### **STAGE FOUR: TRANSITION TO RECOVERY AND EVALUATION**

These stages overlap. Recovery involvement and input is required during the implementation phase, to ensure that services, infrastructure and personnel will be well-placed to facilitate the recovery phase. Depending on the nature of the event, recovery can continue for much longer than the immediate response.

## **5.5 OTHER RESPONSE FUNCTIONS AND PROCESSES**

### **5.5.1 LEAD AND SUPPORT AGENCIES**

There is a wide range of potential lead and support agencies depending on the nature of the event. In the event that a declaration is made, the Lead Agency may change, either by existing mandate or by direction from the Controller. If such a change is made, it must be duly recorded and immediately notified to all those involved.

### **5.5.2 DECLARATION**

For the Clutha District, the Mayor may declare a state of local emergency covering the district. If the mayor is absent, the Deputy Mayor or the Chair of the Regulatory Services Committee can act as their delegate and make the declaration. The Chairperson of the Otago Group (or a delegate in their absence) can also declare for the Clutha District as it is part of the Group's area.

For the declaration to be valid, the approved person must sign the declaration form; similarly for extending or terminating a local state of emergency. Once a declaration has taken place, the declaration must be notified to the public and published in the New Zealand Gazette. The state of local emergency comes into effect immediately on the making of such a declaration.

Declaring a state of local emergency gives the Controller and others access to statutory powers under the CDEM Act to protect life and property in extraordinary emergency events.

#### **Factors to consider before making a declaration include:**

- Are the provisions of other legislation (eg Health Act, Police Act, Forest and Rural Fires Act) insufficient to meet the needs of the event?
- Does the event meet the definition of an 'emergency' under Section 4 of the CDEM Act 2002? (See Glossary of terms for definition)
- Would the emergency powers of the CDEM Act 2002 assist in the management of the event?
- Is / will insufficient coordination occur locally without a declaration?
- Would a declaration make it more likely that central government agencies will respond appropriately?

- Would a declaration give the public a higher level of assurance?

Prior to making a declaration, other relevant agencies (including any other affected local authorities or emergency services) should be consulted if possible. Where the circumstances allow, a declaration should be made early rather than late, in daylight rather than in darkness, should be proactive, and should be well-publicised.

Before a declaration terminating a state of local emergency is made, all arrangements for recovery management should be in place.

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### 5.5.3 VOLUNTEER MANAGEMENT

There are likely to be two types of volunteers; those from a specific organisation such as the Red Cross, Salvation Army and SAR (organised volunteers) and those members of the general public who offer their services after the disaster has occurred (spontaneous volunteers). Organised volunteers may be given tasks directly by the EOC (eg request from the Welfare Group to set up a community kitchen). Spontaneous volunteers will generally only be used where they can work under the control of another agency which is itself given tasks through the EOC.

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### 5.5.4 EVACUATION

Mass evacuation may be necessary during an emergency, if the preferred option of supporting people in situ is not advisable. In order to minimise the impact on people and the community, an evacuation must be well-planned, with the community kept informed and supported throughout the process.

Evacuation should take place only when the risk of staying in place is greater than the risk of shifting. Evacuations can produce long-term negative effects such as causing psychological trauma; disrupting community cohesion, employment and economic continuity. Therefore evacuation is only to be undertaken as a last resort and done so in a well-managed and organised manner.

In the event of an evacuation, information to the public should contain the assurance of a well-managed emergency response and the message that people should remain calm and follow the instructions of emergency services personnel. The public will require regular information updates that should be kept simple and disseminated in as many forms and to as many outlets as possible such as radio, television, newspapers, flyers, mobile public announcement systems and the internet.

The process for evacuation is as follows:

- **Phase 1: Decision:** The decision phase constitutes the period when intelligence from the field is measured and a choice is made whether to order an evacuation or advise people to 'shelter in place'.
- **Phase 2: Warning:** This phase occurs when notifications are issued to the public advising them of the situation and what action they should take.
- **Phase 3: Evacuation:** This phase describes the actual physical evacuation of occupants from an area.
- **Phase 4: Shelter:** The shelter phase incorporates the registration process, accommodating evacuees, and the assessment and provision of welfare and recovery requirements.

- **Phase 5 Return:** The return phase involves an assessment of the evacuated area, issuing an all clear, coordinating the physical return of evacuees and the continuation of recovery provisions.

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### 5.5.5 MONITORING AND DEBRIEF

During a state of emergency, the Controller will ensure that functions and powers are exercised in a responsible and considered manner and that the level of response is appropriate to the situation.

There will be an organisational and agency debrief at the conclusion of any event for which there has been an activation of the EOC. This allows for those involved to evaluate the response and provide opportunities for improvement which can be incorporated into future planning. There may be both a hot debrief immediately after the event, and a detailed debrief a few days or weeks after. A copy of the findings will then be communicated to all relevant agencies involved in the event.

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### 5.5.6 SUPPORT FROM OUTSIDE THE DISTRICT

An emergency in the Clutha District may require resources from elsewhere in Otago, which would be managed by the Otago CDEM Group, or from other CDEM Groups. The specific nature of the support that a Group can provide during the response and recovery phase of an emergency will depend on the circumstances at the time, including the extent to which the emergency has affected other Districts and Groups. The support outlined below is therefore conditional and will be provided on a best endeavours basis:

- Personal - Persons trained in EOC and welfare centre operations, communications specialists, response team members, public information staff, technical and other specialists from within councils and supporting agencies.
- Equipment and materials - Stocks on hand of particular items or supplies.
- Logistics management - management of rail, sea and air facilities, supply points and the processes required to manage the allocation of resources.
- Welfare Management - Management of evacuees arriving from an affected area, including registration and arranging food, clothing, temporary accommodation as required.



## 6 RECOVERY

*This section sets out the planning arrangements, frameworks, structures, responsibilities and processes for helping the community to recover from an emergency. The transition from response to recovery, the Recovery Managers role, financial arrangements during recovery and the recovery exit strategy are also covered.*

### 6.1 INTRODUCTION

Recovery is defined as the coordinated efforts and processes to effect the immediate, medium and long-term holistic regeneration of a community following a disaster. It is the process of re-establishing the quality of life of the community following an emergency while taking opportunities to meet future community needs and reduce future exposure to hazards and risks.

Recovery generally operates without discrete legislative powers and relies in large part on the active collaboration of partners and stakeholders for its effectiveness. For significant events, recovery can last much longer than the event itself - weeks or months, with some measures possibly continuing for years.

### 6.2 TRANSITION FROM RESPONSE TO RECOVERY

Recovery starts while the response activities are still in progress as key decisions taken during the response phase are likely to directly influence and shape recovery. The Recovery Manager therefore, prior to the termination of a state of emergency, will work closely with the controller to ensure that the transition from response to recovery is smooth.

During this time the controller will continue to exercise the statutory power to direct and coordinate all resources provided, with the recovery manager focusing on the preparation required for the recovery task.

As the response phase scales down, the controller and recovery manager, as part of the transition from response to recovery, will carry out the following required tasks:

- Prepare a response transition report outlining the actions taken during the response phase, the nature and state of assigned resources, a summary of the nature and extent of the damage and the condition of various aspects (environments) of the community, a forecast of the expected recovery outcomes and proposals for activities to be continued in the recovery phase.
- Chair a transition briefing attended by all key response and recovery personnel to discuss items highlighted within the response transition report.
- Transfer responsibilities and outstanding issues from the response phase which continue into recovery. For example communications and public information
- Acknowledge the transfer and accountability from the controller to the Recovery Manager including funding, expenditure authority and reporting requirements.

- Develop a recovery action plan to document the actions to be taken to facilitate recovery. This will be prepared in consultation with members of the recovery task groups.
- Brief the media to provide assurance to the community that everything that can be done is being done, while outlining the scope and current priorities for recovery and reinforcing any key messages.

The response phase doesn't officially end until the recovery manager accepts the response transition report and acknowledges the transfer of accountability through agreed terms of reference.

## **6.3 STRUCTURE AND STAFFING ARRANGEMENTS**

The Clutha District Recovery Office may be established in response to a major disaster. The office will be located within the Clutha District Council and to ensure that the responsibilities of this office are carried out the Council will appoint a recovery manager.

The role of the Recovery Manager in an emergency is to coordinate the recovery activity within the district. The recovery manager will work in close liaison with the controller, CDEM Group Recovery Manager and relevant government agencies. The recovery manager ensures:

- Planning, prioritisation and management functions are undertaken.
- Effective reporting mechanisms are in place.
- Stakeholders with a role in the recovery process are informed of all local issues.
- Recovery resources are identified and obtained as required.
- Information is provided on the impact of the event on the affected area.
- Emerging issues are identified and solutions sought.

The Clutha District has a designated Recovery Manager and an alternate. Although they do not formally take control until the response phase is complete, they may begin activity during the response phase in order to be fully prepared when the handover occurs.

### **6.3.1 RECOVERY MANAGEMENT STRUCTURE**

The recovery management structure for the Clutha District is based upon the national recovery framework to ensure that recovery activities in the immediate, medium and long-term are coordinated and that tasks are undertaken in parallel to those at local, regional and national levels. Arrangements need to be flexible enough to allow the recovery structure to adjust to the specific nature and duration of the event.

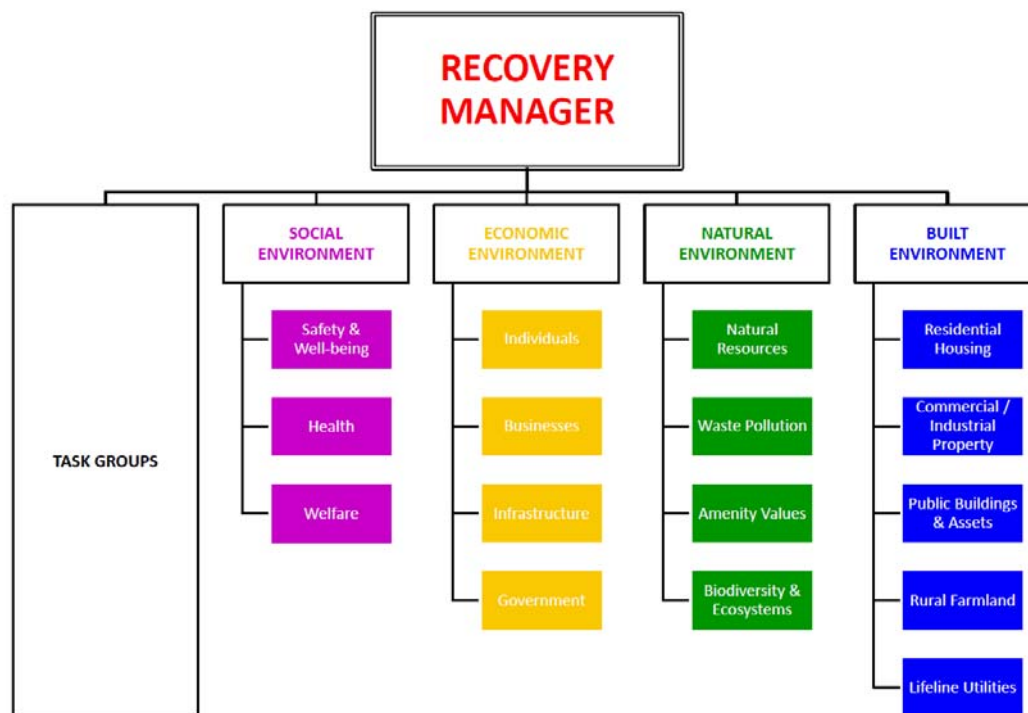


Figure 4: Recovery structure

## 6.4 RECOVERY PROCESSES

The process of recovery is to re-establish the quality of life of the community following an emergency. The following methods and actions guide the setting of recovery objectives and provide a systematic way of organising tasks and activities both before and after activation.

1. **Impact Assessment** – Early and accurate information about the impact on individuals, the community, the physical infrastructure and the environment are critical to managing an effective recovery programme as it identifies the extent and types of losses which effectively establishes the priorities for the whole recovery process. A strategy should be developed to avoid excessive or unwanted services (e.g. establishing multi-disciplinary assessment teams encompassing building assessment and welfare when conducting home visits/surveys).
2. **Information Management** – Information obtained from impact assessments needs to be analysed so that effective decision-making for needs and recovery can be made. Information should be managed using an effective and efficient information management system.
3. **Reporting** – The purpose of reporting is to maintain accountability and transparency, to keep the wider community informed, to gain support and assistance and to record an account of recovery efforts and financial commitments.
4. **Public Information** – In recovery, public information is one of the mechanisms by which the affected community and the wider public are encouraged to participate in the process of restoration and regeneration. Public information is the key to rebuilding community confidence.
5. **Recovery Action Plan** - A recovery action plan is developed following an emergency to document the actions to be taken to facilitate recovery. This will be prepared in consultation with members of the recovery task groups. Recovery Action Plans will

vary according to the type of emergency, its scope and the ability of authorities to manage events in the area.

6. **Establish Recovery Centres** – Following an emergency it may be necessary to establish a recovery centre. A recovery centre supplies a comprehensive range of recovery services from a broad range of agencies at one location which provides a point of focus and belonging in a more familiar environment for people affected by the disaster.
7. **Financial Arrangements** - Government policy on the reimbursement of local government expenditure for recovery activities is set out in section 26 of the National CDEM Plan. Cash donations are the preferred source of aid and Mayoral Relief Funds should be set up to collect and distribute this aid.
8. **Exit Strategy:** An exit strategy is a systematic plan to achieve the withdrawal of formal recovery assistance. The plan includes the arrangements for completing outstanding tasks and outlines the handover responsibilities for the recovery office so that agencies who normally have the lead responsibility can undertake the required services.
9. **Debriefing** – Learning from an emergency is an essential aspect of both the planning process and successful recovery. Debriefs will be done internally (within an organisation) and externally (across organisations) addressing organisational issues, strengths and weaknesses, and ideas for future learning.

Recovery can be a protracted and lengthy process that draws upon local and regional resources. A prolonged recovery phase may require additional resources which can be sourced from elsewhere in the Otago CDEM Group, or from other CDEM Groups; this is coordinated through the Otago Group Recovery Manager.

## 7 MONITORING AND EVALUATION

*This section provides a basis for monitoring and evaluation of the CDEM Plan. It sets out how progress will be monitored and evaluated, and presents a broad 5 year CDEM Work Programme against which progress can be tracked.*

### 7.1 INTRODUCTION

Monitoring and evaluation allow comparisons between actual and desired states and ongoing analysis and improvement of processes and outcomes. Monitoring involves tracking progress against a plan or performance against standards, generally using quantitative data. Evaluation is about measuring effectiveness; it compares what is happening against what was intended by the plan (the goals, objectives and targets) and interprets the reasons for any differences.

The Clutha District CDEM Plan will be monitored and evaluated by:

- The Plan itself is subject to external scrutiny in the process of preparing it, before it is adopted by the Clutha District Council.
- Regular meetings of CDEM personnel to track progress against the Plan and Annual Work Programmes. These will include monthly meetings for key CDEM management staff, and quarterly meetings for all those with key EOC roles.
- Quarterly reports to CEG and the Group Joint Committee on progress against the Annual Work Programme. This provides Executive oversight for CEG members and ensures public accountability through the elected representatives.
- An annual report will be provided to CEG and the Group Joint Committee on progress of the objectives and targets set out in this plan and the Group Plan. Work programmes may need to be adapted where outcomes are not being achieved or improvements or alternatives have been identified.

### 7.2 CDEM PROGRAMME AND TARGETS

Table 5 presents a consolidation of the key tasks (detailed in sections 3-6) which the CDEM Group proposes to undertake in pursuit of its objectives. It is based on the objectives and tasks above, the more general information contained throughout this Plan, and the 2010 Otago CDEM Capability Assessment Report by MCDEM.

This five year work programme will form the basis of each Otago CDEM Group Annual Work Plan, which will set out the details of how the Group Plan objectives and the five year work programme will be met. Individual local authority Annual Work Plans will be consistent with the Group Annual Work Plan, and will include activities to be undertaken by the local authority in support of that Plan. The individual local authorities and the Group will subsequently report on the implementation of those Annual Work Programmes.

	Otago CDEM Group Objectives	Group Work Plan	CDC Work Plan
Community Readiness	1a Increase the level of business and community awareness through public education and consultation.	<ol style="list-style-type: none"> <li>1. Develop and implement a Public Education Strategy</li> <li>2. Monitor and report on progress on the Public Education Strategy.</li> <li>3. Develop and regularly update a Group website with appropriate hazard and CDEM information.</li> </ol>	<ul style="list-style-type: none"> <li>• Contribute to development of Strategy, including Clutha District Action Plan section</li> <li>• Undertake activities in accordance with Strategy and Clutha District Action Plan</li> <li>• Contribute to Readiness &amp; Response Committee monitoring of Strategy</li> <li>• Review and update CDC website and intranet information to ensure it links with Group website and stays current</li> </ul>
	1b Improve community participation and preparedness through community-based planning.	<ol style="list-style-type: none"> <li>1. Territorial Authorities will work with their local communities to develop preparedness and planning as specifically relevant for those communities.</li> </ol>	<ul style="list-style-type: none"> <li>• Meet with key community groups from around the District at least once per year</li> <li>• Visit schools, pre-schools, businesses and other organisations to deliver preparedness information</li> <li>• Work with individual communities to develop hazard-specific responses as required.</li> <li>• Set up and maintain functioning Ward Centres in Tapanui, Lawrence, Milton, Owaka, Kaitangata and Balclutha</li> </ul>
Reduction	2a Improve understanding of Otago's hazardscape and associated risks.	<ol style="list-style-type: none"> <li>1. An assessment of the vulnerability of coastal Otago communities to storm surge and tsunami hazard.</li> <li>2. An investigation into the hazard of eleven alluvial fans in the Queenstown-Lakes and Central Otago districts, where areas of existing development or zones with a high potential for development intersect active alluvial fan areas.</li> <li>3. Investigative work to assess the hazard associated with flood events in the catchments to the east of Milton.</li> <li>4. Development of the Otago Natural Hazards Database (NHDB).</li> <li>5. Further investigation into the risk associated with flood and debris flow hazard for Pipson Creek and the Young River and Buckler Burn rockfall dams.</li> </ol>	<ul style="list-style-type: none"> <li>• Hold joint CDC/ORC meetings with each coastal community identified in ORC Tsunami Risk Report</li> <li>• N/A</li> <li>• Implement 'Milton 2060' Flood Risk Management Strategy.</li> <li>• Incorporate NHDB information into CDEM activities</li> <li>• N/A</li> </ul>
	2b Undertake long-term, strategic reduction of the risks from hazards through collaborative work within the group	<ol style="list-style-type: none"> <li>1. Confirm and prepare Group Recovery Managers</li> <li>2. Establish a Risk Reduction Committee.</li> <li>3. Coordinate and complete Lifelines Studies</li> </ol>	<ul style="list-style-type: none"> <li>• Contribute to these activities through membership of CEG and Risk Reduction Committee</li> <li>• Provide treated water storage capacity of at least 24 hours' average usage volume in all</li> </ul>

	<b>Otago CDEM Group Objectives</b>	<b>Group Work Plan</b>	<b>CDC Work Plan</b>
	and with other stakeholders.	4. Develop Risk Reduction Strategy 5. Implement Risk Reduction Strategy	townships <ul style="list-style-type: none"> <li>• Provide facility for alternative water supply across Balclutha Bridge via fire hose</li> <li>• Procure generator for alternative power at Milton stormwater pumpstation and sewage treatment plant.</li> <li>• Purchase PTO-driven generator for Tapanui Service Centre and Kaka Point Hall, and based on results from those examples potentially purchase further generators for other facilities over time.</li> <li>• Maintain critical road bridges</li> </ul>



	Otago CDEM Group Objectives	Group Work Plan	CDC Work Plan
Group Readiness and Response	3a Enhance professional development for all emergency management personnel through training, exercises and learning from other CDEM Groups	<ol style="list-style-type: none"> <li>1. Undertake a training needs gap analysis to evaluate current levels of training in CDEM and stakeholder organizations and identify gaps in that training.</li> <li>2. Develop a professional development strategy and training programme to address the gaps identified above.</li> <li>3. Facilitate the provision of training in accordance with the programme, including organizing joint training within the region and/or in conjunction with neighbouring regions where that is the most effective way of meeting a training need.</li> <li>4. Maintain a calendar of relevant training opportunities (eg: by MCDEM and other CDEM Groups) and make available to CDEM agencies/stakeholders.</li> <li>5. Develop an exercise programme which is consistent with the National Exercise Programme (NEP) and which ensures that all CDEM Group Members and Strategic Partners are involved regularly. Seek opportunities for joint and multi-agency exercises led by other agencies.</li> </ol>	<ul style="list-style-type: none"> <li>• Prepare staffing rosters for at least two shifts of all key EOC and Ward Centre positions, and identify their desired and current training levels</li> <li>• Develop professional development, training and exercise programme, to bring training for key positions up to desired levels</li> <li>• Implement professional development, training and exercise programme, working in collaboration with other Otago Group and outside agencies where appropriate</li> <li>• Utilise and contribute to Group calendar as appropriate, including taking opportunities for MCDEM training where available</li> <li>• Participate in Group exercise programme as appropriate</li> </ul>
	3b Strengthen the coordination and cooperation amongst all relevant sectors in planning for and responding to an emergency	<ol style="list-style-type: none"> <li>1. Review coordination and processes across CEG members and other CDEM agencies, and develop a strategy for improving coordination and collaboration.</li> <li>2. Communicate with CEG members and other CDEM agencies and encourage reporting to CEG on matters of interest.</li> <li>3. Work with stakeholder groups where relevant in the development of plans and procedures under the Group CDEM Plan.</li> </ol>	<ul style="list-style-type: none"> <li>• Contribute to these activities through membership of CEG and Readiness and Response Committee</li> <li>• Communicate with other CDEM agencies within Clutha District, and provide liaison between those agencies and the Otago Group</li> <li>• Work with stakeholder groups within the Clutha District in the development of plans and procedures under the Otago Group and Clutha District CDEM Plans</li> </ul>
	3c Develop and maintain appropriate documentation to describe key activities, functional responses and protocols in support of the CDEM Group Plan	<ol style="list-style-type: none"> <li>1. Review existing plans at the review frequency identified in each plan. Ensure relevant stakeholder groups are involved.</li> <li>2. Develop the following Group Plans over the 2012-2017 period: <ul style="list-style-type: none"> <li>• Lifelines Plan</li> <li>• Recovery Plan</li> <li>• Tsunami Plan</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>• Review CDC Plan, Action Plans and SoPs to update and align with Group Plan</li> <li>• Contribute to these Plans through membership of CEG and relevant Committees, and then develop Clutha District Plans and SOPs as required to give local effect to those Group Plans.</li> </ul>

	Otago CDEM Group Objectives	Group Work Plan	CDC Work Plan
		<ul style="list-style-type: none"> <li>Alpine Fault Earthquake Plan</li> <li>Dam Failure Plan</li> </ul> <p>3. Review the current Welfare Plan for alignment with latest guidelines</p>	<ul style="list-style-type: none"> <li>Contribute to Welfare Plan through membership of CEG and support for Committee, and then develop Clutha District Plan and SOPs as required to give local effect to Group Welfare Plan</li> </ul>
	3d Provide effective warning systems to enable agencies and the community to respond rapidly to a potential event	<p>1. Develop a regional tsunami plan that identifies:</p> <ul style="list-style-type: none"> <li>Warning and notification arrangements procedures, including links with national warning systems.</li> <li>At-risk communities.</li> <li>Public alerting processes.</li> <li>Media arrangements.</li> </ul> <p>3. Incorporate pre-scripted messages in the Public Information plan.</p> <p>4. Test and exercise warning systems as part of the overall exercise programme.</p> <p>5. Provide signage, maps and education to support Community based plans.</p>	<ul style="list-style-type: none"> <li>Contribute to tsunami plan through membership of Risk Reduction Committee, and any tsunami-focussed sub committees, and then develop Clutha District Plans and SOPs as required to give local effect to the Group Plan</li> <li>Contribute to Public Information plan through membership of Risk Reduction Committee and Public Information subcommittee, and then incorporate Group messages into local information</li> <li>Incorporate warning systems test into local exercises</li> <li>Provide signage, maps and education for local community groups</li> </ul>
	3e Establish and maintain effective and resilient inter-agency communications systems.	<p>1. Agree and implement region wide protocols for inter-agency reporting during an emergency event</p> <p>2. When it becomes available, implement the Emergency Management Information System (EMIS) at the GECC and all EOCs.</p>	<ul style="list-style-type: none"> <li>Contribute to these region wide protocols through membership of Readiness and Response Committee</li> <li>Provide training, hardware and connectivity to implement EMIS, and undertake local system development as required</li> </ul>
<b>Recovery</b>	4a Strengthen recovery capability and capacity across all agencies and the wider community.	<p>1. Incorporate a recovery component in Group and local exercises in order that the recovery capability (particularly at local level) can be developed.</p> <p>2. Investigate a programme for Recovery Managers to meet at least annually to discuss their work, impact of legislation and linkages to reduction activity.</p> <p>3. Develop mechanisms for incorporating lessons learnt from responding to and recovering from an emergency event back into risk reduction planning activities.</p>	<ul style="list-style-type: none"> <li>Contribute to these activities through membership of Recovery Committee</li> <li>Incorporate recovery component in CDC exercises</li> <li>Attend meetings through Recovery Committee</li> <li>Undertake debrief and review following all events where there was a CDEM response</li> <li>Develop response plan with Water Services O&amp;M contractor</li> </ul>

	Otago CDEM Group Objectives	Group Work Plan	CDC Work Plan
Enablers		<ol style="list-style-type: none"> <li>1. Establish new committees</li> <li>2. Confirm Group Office arrangements</li> <li>3. Implement Group Office arrangements</li> <li>4. All Group members confirm GECC/EOC and staff arrangements</li> <li>5. Prepare Annual Work Programmes</li> <li>6. Review Annual Work Programmes</li> </ol>	<ul style="list-style-type: none"> <li>• Contribute to these activities through membership of CEG and Committees</li> <li>• Confirm Clutha District EOC arrangements</li> <li>• Prepare and review Clutha District Annual Work Programmes,</li> <li>• Undertake local implementation of relevant activities</li> </ul>

**Table 5: Key tasks**

**THE CLUTHA DISTRICT COUNCIL LONG TERM PLAN 2012/22 includes the following:**

**CIVIL DEFENCE EMERGENCY MANAGEMENT**, which involves;

- Working with local authorities in the Otago region to plan for hazards and maintain an Otago Group Civil Defence Emergency Management Plan, and a Clutha District Civil Defence Operational Plan.
- Maintaining systems, communications and resources that can be used during an emergency.
- Recruiting and providing Civil Defence training for a network of volunteers throughout the district.
- Promoting Civil Defence emergency awareness and personal preparedness.
- Monitoring known hazards, for example, the Clutha and Pomahaka rivers.
- Responding when actual or potential emergencies arise.
- Assisting with recovery after an event.

**Objective:** Maintain a level of readiness which enables a rapid response to emergency situations.

**Level of Service:** Encouraging and promoting residents to be prepared for a Civil Defence emergency.

**Performance Measure:** Percentage of residents who have personally taken steps to prepare for a Civil Defence emergency:

2010/11 (Actual)	2012/13	2013/14	2014/15	2021/2
53%	60%	61%	62%	70%