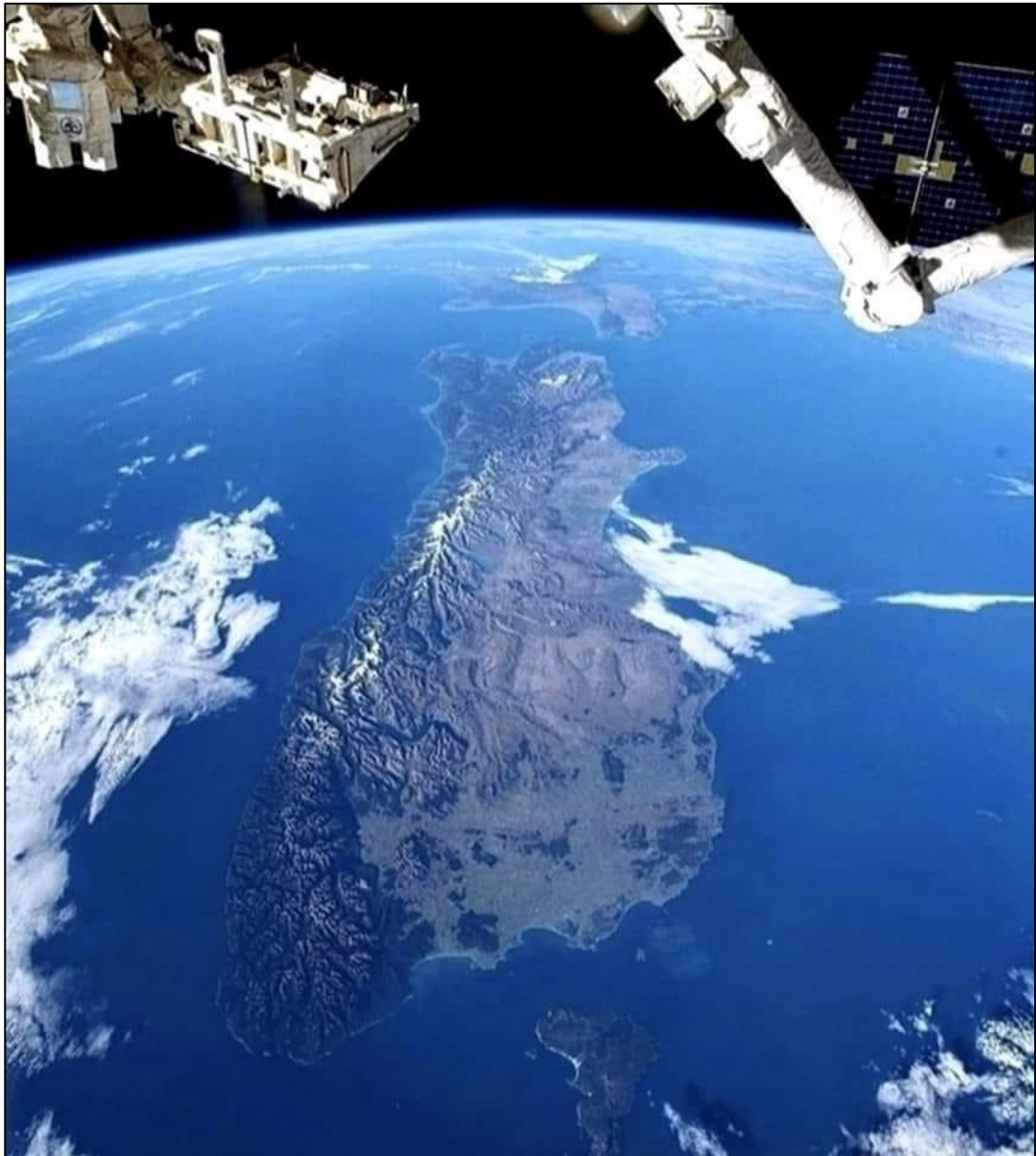


Otago Catastrophic Event Plan: Alpine Fault CATPLAN (AF)



Authority

This plan is prepared under the authority of the Emergency Management Otago Group Manager pursuant to s.3 of the Civil Defence and Emergency Management (CDEM) Act 2002 and the Otago CDEM Group Plan 2018-2028.

It has been endorsed by Otago CDEM Chief Executive's Group (CEG) and Joint Committee (JC). The plan is informed by the draft NEMA CATPLAN Handbook, coordinated with Emergency Management Southland and Emergency Management Canterbury, and integrated with local CDEM Alpine Fault response plans.

The plan is written specifically for the impending day when the Otago Group Controller will coordinate and direct all local Controllers, agencies, organisations and resources responding within Otago. In addition to addressing current gaps in capacity and capability, it forms the basis on which District and multi-agency reduction, readiness and response measures can be discussed and pre-negotiated in the collaborative approach envisaged in the Otago CDEM Group Plan.

Security Rating

UNCLASSIFIED.

Review Schedule

- Initial Action Plan (IAP) drafted as a *D4H Play* 7 December 2023.
- Accompanying Concept of Operations (CONOPs) and *D4H Play* completed May 2024.
- CONOPs reviewed during National Exercise Programme Exercise RU WHENUA 12 June 2024.
- CATPLAN (Alpine Fault) first draft completed July 2024.
- Supporting Plans drafted with partners July 2024.
- Final draft completed 27 August 2024.
- *Draft socialised with partners and stakeholders September-December 2024.*
- *Coordinated Response Phase tested at Otago GECC Command Post Exercise EX OHOTATA 28 November 2024.*
- *Draft further refined by GECC multi-agency Tabletop Exercise (TTX) February 2025.*
- *Otago CATPLAN (AF) ratified by Otago CEG and JC March 2025.*
- *Otago CATPLAN (AF) tested and refined by Command Post Exercise (CPX) Aug 2025.*
- Otago CATPLAN (AF) to be reviewed regularly until the Alpine Fault earthquake occurs.

Amendment Register

v.01 Draft created 7 December 2023

v.02 Draft dated 5 July 2024

v0.3 Final draft completed 27 Aug 24

NB. Text in red remains NOT YET APPROVED or incomplete.

Distribution

NEMA
Emergency Management Canterbury
Emergency Management Southland
West Coast Civil Defence Emergency Management

Otago Regional Council
Queenstown Lakes District Council
Central Otago District Council
Waitaki District Council
Dunedin City Council
Clutha District Council

FENZ
NZ Police
Health NZ
St John
Kai Tahu
NZDF
MPI
MBIE
GNS
Otago Lifelines Group

Point of Contact:

Emergency Management Otago Planning & Projects Advisor

<https://www.otagocdem.govt.nz/>
info@otagocdem.govt.nz

Through EM Otago Duty Officer: Tel: 0800 420 002

References:

- A. Civil Defence Emergency Management Act 2002.
- B. Civil Defence Emergency Management Plan Order 2015.
- C. The Guide to the National Civil Defence Emergency Management Plan 2015.
- D. Coordinated Incident Management System (CIMS) 3rd Ed 2019.
- E. National Disaster Resilience Strategy 2019.
- F. NEMA National Catastrophic Planning Handbook (V0.3 Draft) 2024.
- G. NEMA Response Planning in CDEM. Director's Guideline for Civil Defence Emergency Management Groups [DGL 19/15].
- H. NEMA Impact Assessments. Groups [DGL 22/205].
- I. National Impact Assessments Data Set and Dictionary Technical Standard TS 05/20
- J. NEMA Mass Evacuation Planning. [DGL 07/08].
- K. NEMA Emergency movement Control. [DGL 18/15].
- L. NEMA Logistics in CDEM. [DGL 17/15].
- M. Wellington Earthquake National Initial Response Plan 2018.
- N. AF8 SAFER Framework 2018.
- O. AF8 Alpine Fault Magnitude 8 Hazard Scenario 2016
- P. Otago Civil Defence & Emergency Management Group Plan 2018-2028.
- Q. Otago Civil Defence & Emergency Management Annual Plan 2023-24.
- R. Otago Aviation Emergency Support Plan (AESOP).
- S. Emergency Management Otago Hazard and Environment Analysis (HEA).
- T. Emergency Management Otago Deliberate Planning Process (JMAP).
- U. GECC Business Continuity Plan (BCP).
- V. GECC D4H Play: GECC CAPTLAN (Alpine Fault).
- W. Queenstown Lakes District Council EOC CATPLAN (AF).
- X. Central Otago District Council EOC CATPLAN (AF).
- Y. Waitaki District Council EOC CATPLAN (AF).
- Z. Dunedin City Council EOC PLAN (AF).
- AA. Clutha District Council EOC PLAN (AF).

Executive Summary

The Alpine Fault runs along the line where the tectonic plates under the South Island meet. It connects two *subduction* margins where the ocean floor descends into the Earth's mantle. Historical patterns of earthquakes indicate that it is likely to rupture very soon in geological terms: there is a 75% probability of an Alpine Fault earthquake in the next 50 years.

With an expected magnitude of 8+, this will be considered a *great earthquake* not simply a strong one. The impact of a major rupture of between 400 to 800 km of the Alpine Fault will result in multiple casualties and severe building, infrastructure and geological damage within approximately 100 km of the fault. Communities in the affected areas will be isolated, with highly compromised living conditions from days to months. Emergency Services will be overwhelmed, and food and fuel supplies severely disrupted.

Based on a detailed Hazard and Environment Analysis (Reference S), the expected focus of regional operations will be Queenstown and Wanaka/Cromwell. Cut off by road closures, and probably without power, these tourist destinations will contain tens of thousands of visitors, many of whom will urgently require shelter, food, water, sanitation and hygiene resources.

The Otago CATPLAN (AF) has been developed to assist emergency managers and responding agencies prepare for this complex emergency scenario. It includes a *Concept of Operations* which articulates the *Mission, Intent* and *Endstate* and sets out a detailed *Scheme of Manoeuvre* which features innovative *Risk Reduction* and *Readiness* measures and critical *Response* actions to set the conditions for the enduring regional *Recovery*.

Resources invested now to mitigate predictable risks will save lives and streamline a response that will be inevitably characterised by friction and uncertainty. A concerted effort to improve current readiness levels will also pay dividends. Accordingly, this plan features a proactive approach to *winning* actionable intelligence in the first few hours to create a platform for sound decision-making. Taking early control of aviation assets and other *critical resources*, the Otago Group Emergency Coordination Centre (GECC) will coordinate the movement of key response and agency staff and deliver a MASS RELIEF operation by air and boat directly to the places of greatest need. In order to reduce the scale of the anticipated humanitarian crisis, GECC will support a nationally led air evacuation of Queenstown and subsequently execute regional evacuation operations by boat and road.

Integrated with national and district plans, and compatible with supporting agencies and the operational arrangements of Southland and Canterbury Emergency Management Groups, this plan creates a framework for action during an unprecedented and life-changing catastrophic event.

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- 1.3 Scope.

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- 4.3 Public Information Management (PIM).
- 4.4 MASS RELIEF.
- 4.5 Logistics
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- 4.7 Health.
- 4.8 Welfare Delivery.
- 4.9 Evacuation Contingency Plans (CONPLANS):
 - a. PLAN WAKATIPU VITTLES (NCCMC air evacuation of Queenstown).
 - b. PLAN WAKATIPU DYNAMO (EM Otago lake evacuation of Queenstown).
 - c. PLAN WAKATIPU CONVOY (EM Otago road evacuation of Queenstown).

Section 5: Annexes

- A. EM Otago CATPLAN (AF) CONOPs slides.
- B. Glossary.

Section 1 Introduction

1.1 Purpose

The purpose of the CATPLAN (AF) is to outline the Otago region's preparation for, and the Otago Group Emergency Coordination Centre (GECC) response to, a catastrophic Alpine Fault earthquake—the most severe of the natural hazard risks across Otago.

A *catastrophic* event is defined by NEMA as:

An extreme adverse occurrence that overwhelms the capacity and capability of the emergency management system, delivering widespread devastating impact across five domains: social, cultural, natural, built and economic.

Four features define *catastrophic*:

- The Emergency Management system is overwhelmed or severely impacted by the event.
- The priority needs of communities cannot be met.
- The Response will require international support.
- The Recovery will require a medium to long-term outlook with substantial resource allocation.

Otago CATPLAN (AF) provides authority for all Otago CDEM Group members to prepare for, and respond decisively, in the critical first 48 hours and subsequent response phases.

By establishing the means by which to coordinate national and regional enablers in support of locally delivered responses, the Group Controller will ensure all community needs are met and critical infrastructure is prioritised to promote an effective recovery across the region.

The plan specifically details the Scheme of Manoeuvre to which the GECC will work—especially during the first few days when power and communications may be compromised. To overcome inertia, initial tasks are pre-planned, with Controller's expectations already established. Key actions are articulated using *D4H*, the EM Otago response management tool.

Each of the five Otago districts will develop local response plans which integrate with the regional plan. It is expected that local EOCs will *give effect* to the directions of the Group Controller in the execution of these plans.

1.2 Activation

This plan will be activated by the decision of the Otago Group Controller, or by default.

- Activation by decision: will be communicated via best means (voice/data) by EM Otago staff.
- Activation by default: unconfirmed reports of a major earthquake or felt affects—prolonged and violent shaking with concurrent power blackout and degraded telecommunications.

The GECC Business Continuity Plan (BCP) at Reference F contains a robust series of measures by which the GECC will be functional within an hour or so of the Alpine Fault rupture. Using *best endeavours*, EM Otago staff will open the GECC facility and open the D4H Channel *GECC CATPLAN (Alpine Fault)* to initiate the response.

ORC Council Staff will subsequently report for duty and commence their tasks as per GECC Standard Operating Procedures. This involves the following the *D4H On a page* procedure to:

- Log on to GECC CATPLAN (Alpine Fault) Response Channel.
- Assign/confirm role and enter shift times.
- Review the SITREP and Initial Action Plan 01.
- Review Tasks in Initial Action Plan 01.

District EOC staff will operate under local activation procedures. All efforts must be made for EOCs to establish contact with GECC as soon as practicable. Support Plan 1: C4 refers.

Emergency Services and supporting partners and agencies should similarly activate according to their own plans. Agency Liaison with GECC is a priority. Those pre-assigned Liaison Officers should report to GECC within the hour. Support Plan 1: C4 refers.

1.3 Scope

This plan builds on arrangements under the National Civil Defence Emergency Management Plan Order 2015 at Reference B. It aims to coordinate the immediate actions of response agencies in Otago by providing those agencies with response-specific tasks, response-critical information requirements, pre-identified requests for assistance and response priorities.

It is acknowledged that although some actions described may not be required on the day, they should be undertaken anyway to account for the likelihood of a total or partial communications outage. This creates a 'no regrets' response environment in the initial stages of the response.

This plan does not provide detailed action planning for each agency. New Zealand agencies that have tasks, roles or responsibilities under this plan are expected to have their own detailed response plans and capabilities.

Agency business continuity management and the activation of agency Business Continuity Plans is outside of the scope of the Otago CATPLAN (AF). It is noted, however, that agencies will require business continuity and leadership continuity plans in order to achieve their obligations under the CDEM Act.

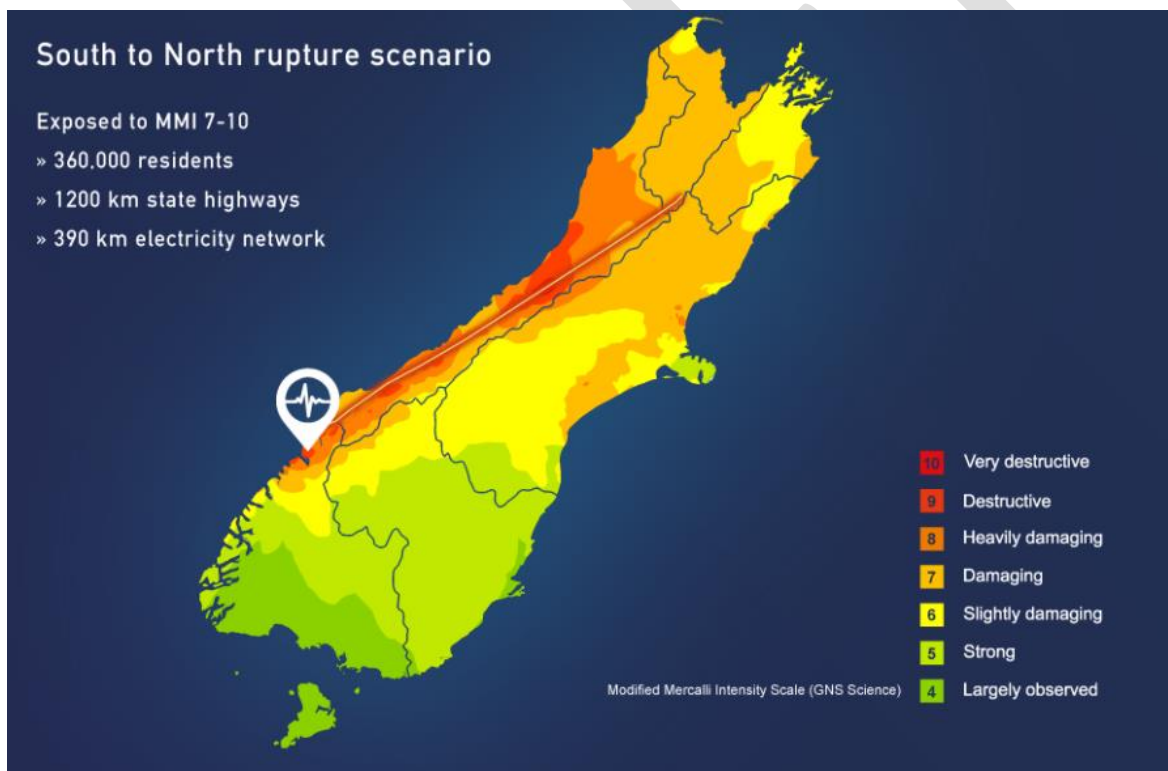
Section 2 Anticipated Scenario and Operating Environment

2.1 Hazard and Secondary Hazards.

The scenario on which this plan is based is the Maximum Credible Event described at Sect 2.2 of AF8 SAFER Framework (References N and O).

The most likely scenario, with the most severe impact across the South Island, is a south-to-north Alpine Fault rupture. There is likely to be around 9 metres of horizontal displacement and around 2 metres of vertical displacement along part of the fault line, with the greatest damage in areas closest to the Southern Alps.

Aftershocks will continue for years and some will be significant earthquakes in their own right. In the seven days following the initial Magnitude 8+ earthquake, there is likely to be two Magnitude 7, twenty Magnitude 6 and more than two hundred Magnitude 5 aftershocks. Reference N refers.



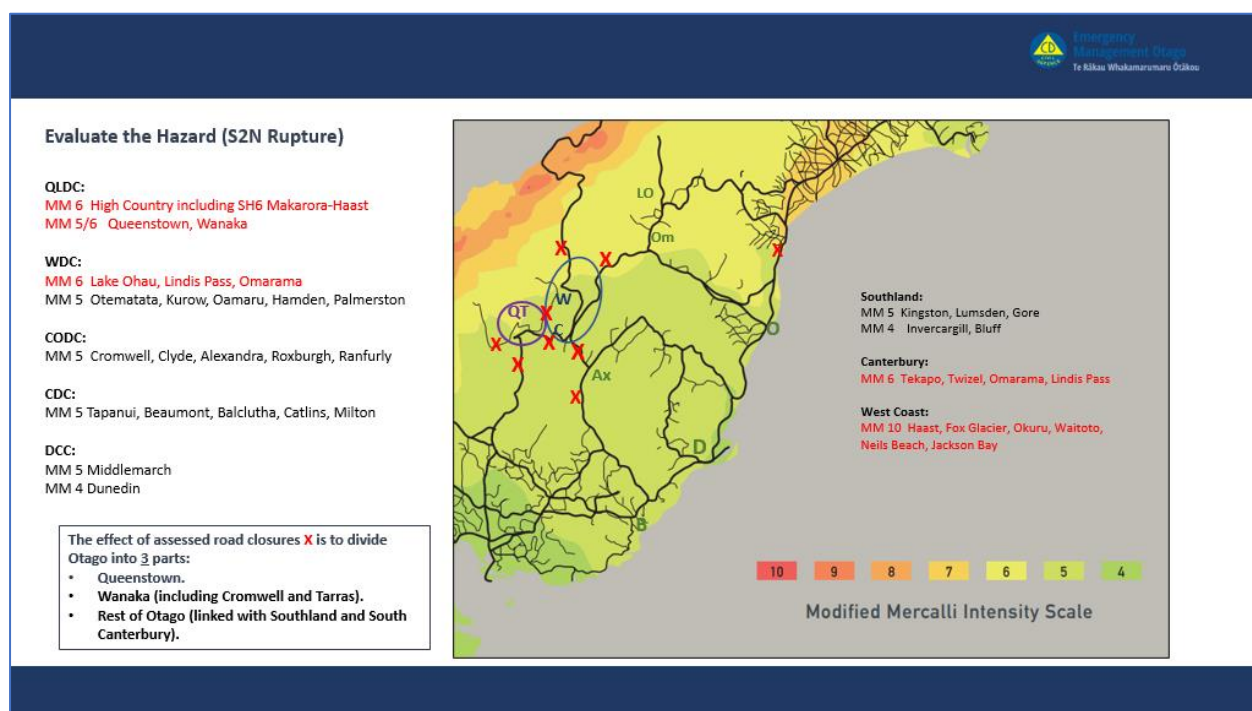
Offshore, a tsunami could be caused by the earthquake or aftershocks (most likely on the West Coast), or there could be submarine landslides leading to a tsunami. Tsunamis are also a possibility on lakes due to landslides causing large amounts of debris to fall into the lake, or other faults being activated by an Alpine Fault earthquake. Lake seiching and delta collapse is a possibility.

The main earthquake and aftershocks will cause snow/ice avalanches, rock avalanches, landslides and rockfalls. Trees will be uprooted and landslide dams are likely to be created. This could subsequently lead to dam failure and flooding damage. Liquefaction is also likely in susceptible areas.

2.2 Anticipated Impacts

Catastrophic infrastructure failures including roads, and bridges will most likely sever all road and rail connections between Canterbury, the West Coast and other Alpine townships. Widespread power outages will contribute to a degraded communication environment.

There will be significant loss of life throughout the South Island and multiple injuries. Medical and Emergency Services at all levels are likely to be overwhelmed and unable to cope with hundreds of fatalities and thousands of injuries. Communities will be isolated and it will take some time for outside help to arrive in worst affected areas. The most severe impact will be on population bases on the West Coast and other Alpine townships, including residents, tourists and visitors.



In Otago, although power and telecommunications are likely to be impacted across the region, most of the response issues will be concentrated in Queenstown Lakes district and the alpine area of Waitaki district. Shaking effect will diminish towards the East and South Coasts to the extent that the response can be managed effectively at local level in Dunedin and Clutha. Central Otago and Inland Waitaki districts may require regional assistance.

Major road closures are anticipated in multiple places along the major inland arterial State Highways SH6 and SH8. With expected repair times measures in weeks and months, the immediate effect is the creation of three discreet operational areas: Queenstown, Wanaka/Cromwell and Rest of Otago.

Queenstown and Wanaka/Cromwell ‘pockets’

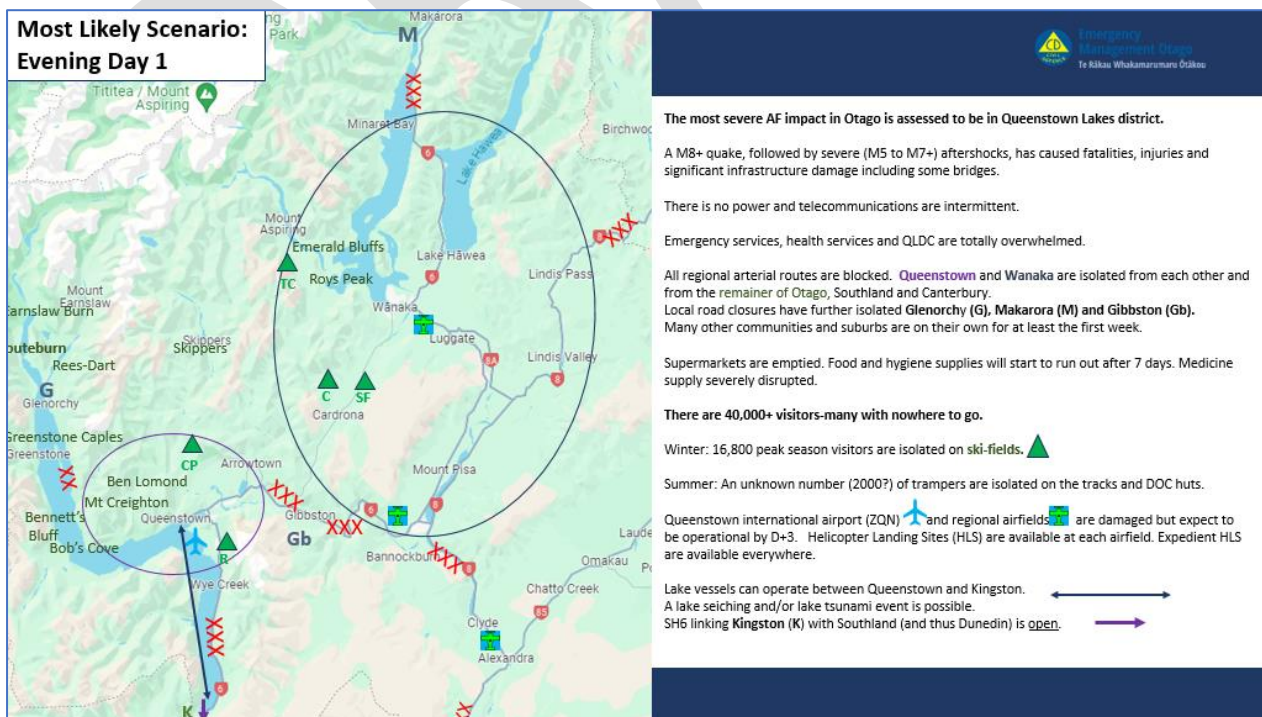
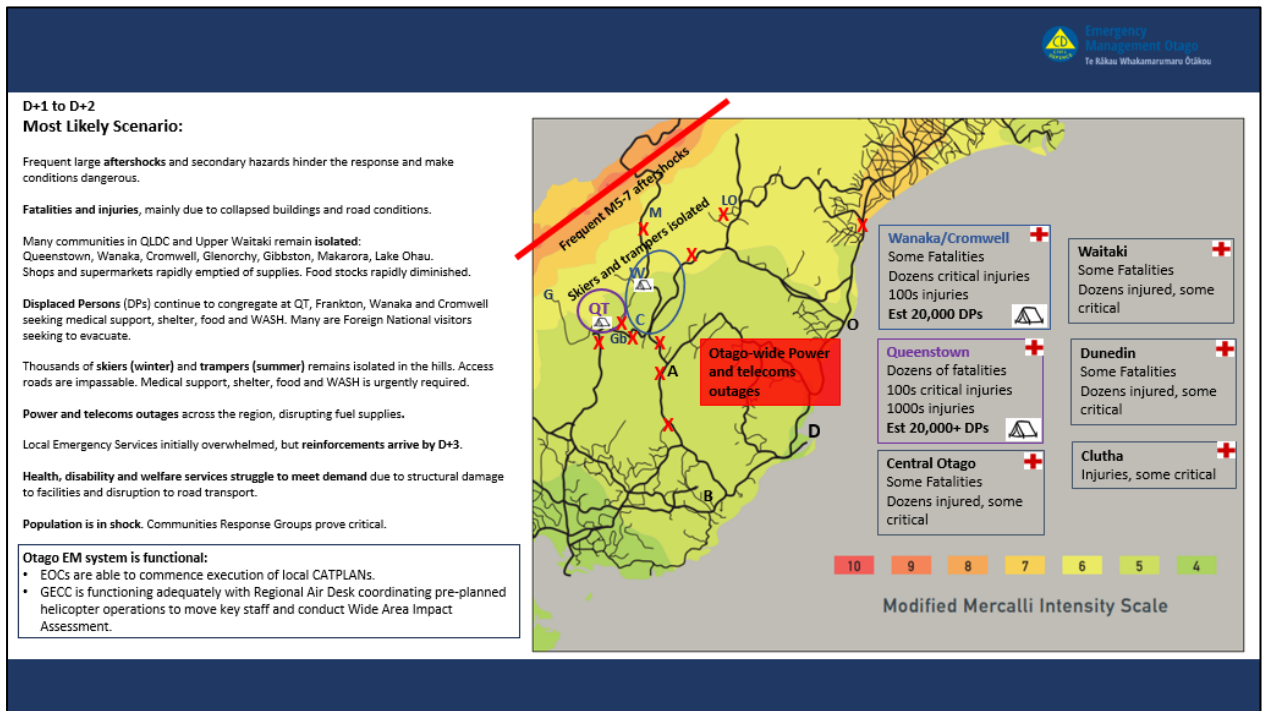
Two operational response ‘pockets’ and several smaller isolated communities across QLDC with depleted food and fuel supplies which are exhausted after 7-10 days. Residents are able to shelter in place in communities for a week or so depending on their resilience measures. Some 40,000+ transient visitors and holiday makers require urgent shelter, food, hygiene and medical supplies. Roads are closed, with no prospect of opening for ‘at least’ two weeks. In a winter event, some 16,800 skiers may be isolated in the commercial ski- fields. A summer event may see up to 2,000 trampers isolated on the tracks and huts. Critical infrastructure is damaged: telecommunications are unreliable and power may be out for weeks. Emergency services and other government services are overwhelmed. The response is hampered by constant large aftershocks which create much fear and uncertainty in the community.

Coastal Otago

Coastal districts are largely stable and have the capacity to help themselves and inland communities if necessary.

Regional infrastructure (ports, airports, coastal roads) is largely intact, but still impacted by telecom and power outages.

Most Likely Scenario for Otago

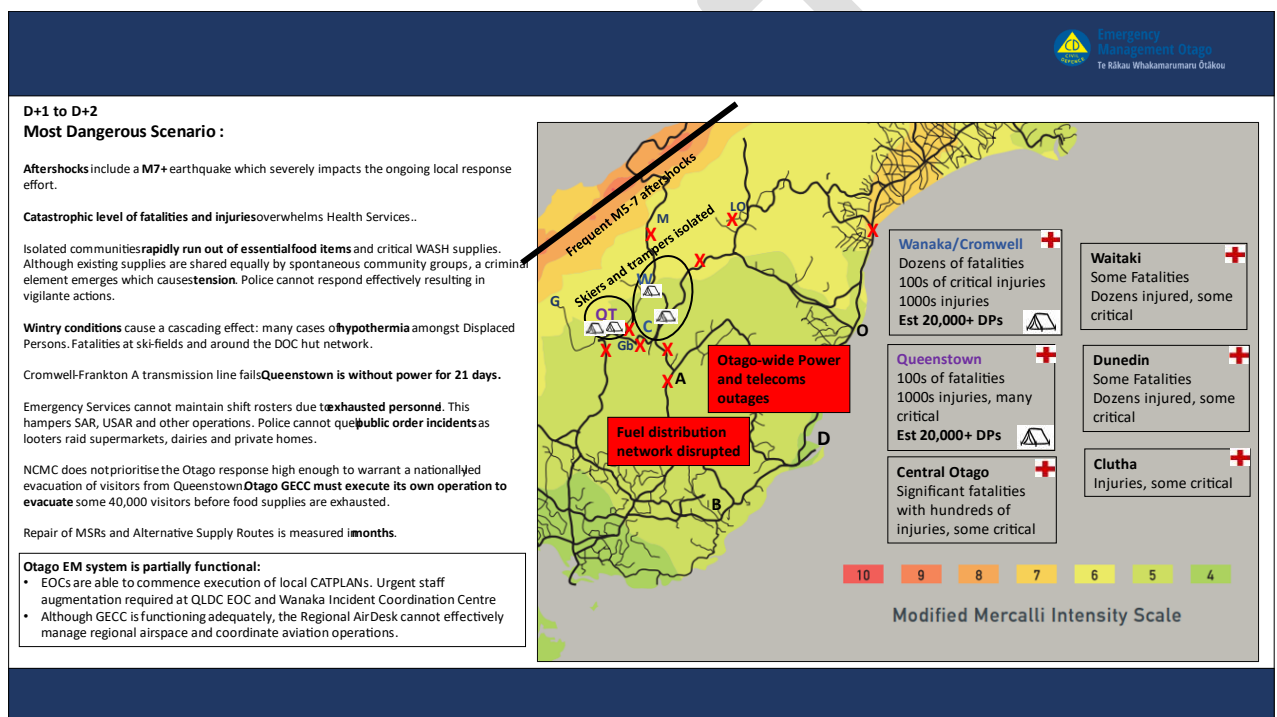


Most Dangerous Scenario for Otago

These conditions refer largely to the greater impact of a North to South Alpine Fault rupture across Coastal Otago. In addition to the potential for more casualties, regional telecommunications and power supplies are likely to be further degraded—a situation which may severely hamper Command, Control, Coordination and Communication (C4) arrangements during the immediate response.

This scenario also acknowledges the potential for a cascading effect such as a concurrent winter storm or significant flood event.

Contingency plans will be developed to address this scenario.



2.3 Planning Assumptions

This CATPLAN is designed to address the Most Likely scenario on an '80/80' basis. 80/80 represents an 80% pre-planned solution to the anticipated conditions-with about 80% certainty of what those conditions will be based on AF8 programme science and a thorough EM Otago Hazard and Environment Analysis (HEA) using the guidelines at References N and S.

Despite the available science and intelligence assessments, much uncertainty remains. The following assumptions* have been made to allow planning to progress:

- Response timings will vary across Otago. In general, individuals will respond immediately, along with on-duty Emergency Services first responders. Communities will support each other with available resources. This *informal* response is likely to be exhausted after three days. An effective *formal* regional response may not be possible for 12-24 hours.
- The National Crisis Management Centre (NCMC) or Alternate NCMC will be functional, with a State of National Emergency (SONE) declared within 24 hours of the event.
- Local emergencies may already be declared by district officials. The Otago Group Controller will also consider declaring, prior to any SONE.
- Decision-making will be carried out at the lowest-possible level. Local CDEM Controllers will continue to lead local responses. Otago Group Controller will coordinate the nationally enabled Otago response. Coordination Centres will *not act in a way which is inconsistent* with the priorities established by the next level Controller.
- Otago Group Emergency Coordination Centre (GECC) will be able to communicate with local Emergency Operations Centres (EOC) using Otago *Alternative Communications* arrangements. The external link with the NCMC and neighbouring CDEM Groups is wholly dependent on Business as Usual telecommunications or satellite back up—and cannot be guaranteed. A NZDF communications back up is desirable.
- Cross-district boundary issues such as air operations, evacuations, logistic support and PIM will be coordinated at GECC or higher.
- Nationally directed Impact Assessment Stage 1 (Wide Area Assessment) will be activated immediately: international remote sensing satellites and pre-planned air reconnaissance provided by NZDF, GNS Science, and regional contractors will provide coverage of the Named Area of Interest agreed in the EM Otago AF8 Collection Plan 01. Otago CATPLAN Support Plan 2 refers.

* Assumptions

Information that requires verification. As an interim measure, assumptions may be used to allow planning to continue. (DGL 19/15 Response Planning in CDEM).

An assertion about some characteristics of the future that underlies the current operations or plans of an organisation. An assumption is important if its negation would lead to significant changes in those operations and plans (Better evaluation.org).

- Otago GECC Regional Air Desk (RAD) will be authorised to coordinate all air movement in Otago—less *Life Safety* which remains a Rescue Coordination Centre (RCCNZ) responsibility. Districts will bid for aircraft, fuel and airspace via Aviation Coordination Cells established in each District EOC.
- Medical evacuations will be managed by St John and the Ambulance National Crisis Coordination Centre (NCCC) and coordinated with Otago GECC through the Health Liaison Officer.
- Evacuating Foreign Nationals by air from Queenstown will be a National Objective. Otago GECC will support NCMC. PLAN WAKATIPU VITTLES refers.
- Evacuating approved people from Queenstown via Lake Wakatipu will be managed as a regional Otago operation. NZDF support will be available. PLAN WAKATIPU DYNAMO refers.
- Evacuating approved vehicles and people from Queenstown via SH6 will be managed as a regional Otago operation. NZDF support remains desirable. PLAN WAKATIPU CONVOY refers.
- Evacuating approved vehicles and people from Wanaka via SH8 will be managed as a QLDC District operation.

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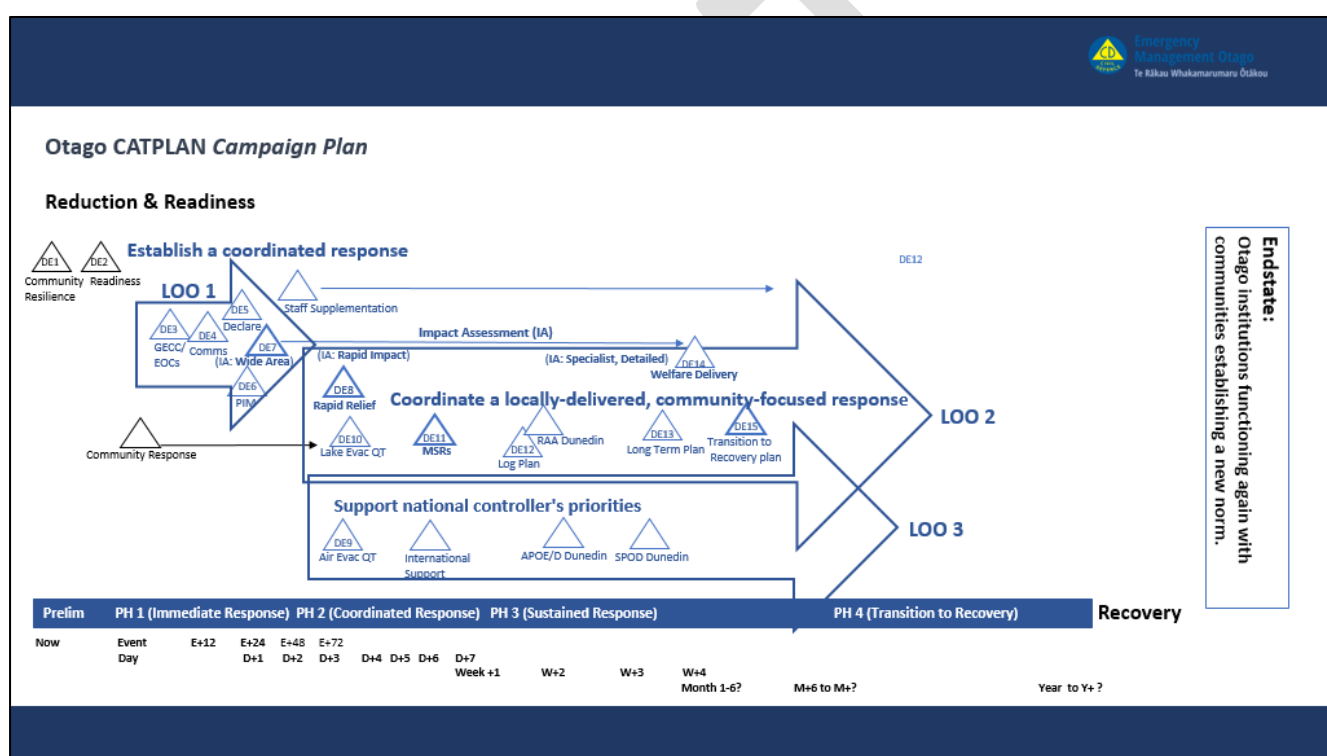
Section 3: Emergency Management Otago Alpine Fault Plan

3.1 Operational Design

A holistic approach to Campaign Planning creates a model which features three Lines of Operation (LOO), all aimed at contributing to a desired *endstate* through a series of necessary *Decisive Events* (DE).

This tool is used to envisage a strategic view of the entirety of the event.

During Response, it will prove useful for Controllers and Governance entities to periodically review progress and direction.



The ability of Otago Emergency Management Coordination Centres to mount an effective response in a complex hazard and degraded communications environment will largely hinge on the amount of preparation and the efficacy of the initial response.


A catastrophic Alpine Fault earthquake will occur with a degree of certainty. The likely impacts on community and critical infrastructure have been assessed and can be articulated with some confidence as a result of the foundational science contained in AF8 SAFER Framework and the EM Otago intelligence-based Hazard and Environment Analysis.

It follows that there exists an opportunity to mitigate the *consequences* by reducing both community and systems vulnerabilities to the inevitable.

The Concept of Operations (CONOPs) outlines *how* this will be achieved. This brings the Decisive Events identified during the deliberate planning process into a manageable operational framework defined chronologically by phase and tasked (in D4H) to appropriate GECC functions.

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3.2 Concept of Operations

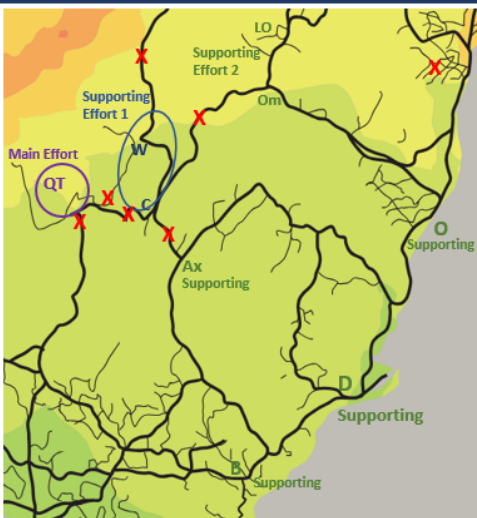


Otago CATPLAN CONOPS

Mission:
EM Otago GECC is to coordinate a nationally-enabled, locally-delivered and community-focused response to a catastrophic event in Otago in order to provide MASS RELIEF, prevent an escalation of the emergency and set the conditions for a transition to a long-duration recovery.

Intent:

- To deliver innovative risk reduction and readiness strategies whilst creating a framework for action in a catastrophic response environment.
- Initial tasks are pre-planned, with Controller's expectations already established, to allow for initiative and to prevent inertia during the critical first 2-3 days.
- Actionable intelligence will be generated early to allow for a coordinated response, which will become sustained after the first week or so.
- The movement of key response staff and the targeted MASS RELIEF distribution of essential goods and services will be delivered by air and water.
- The large number of visitors isolated in Queenstown (and Wanaka/Cromwell) will be reduced by deliberate evacuation operations.
- A key imperative is the re-opening of critical roading links to Queenstown and Wanaka to allow for commercial Fast Moving Consumer Goods (FMCG) distribution networks to be re-established.
- The sustained phase will last for months and allow for transition to recovery planning. Throughout the response, Otago will be prepared to support national priorities and requests from neighbouring regions.
- Transition to recovery will occur on a conditions basis.
- The anticipated recovery period will be measured in years under a bespoke national framework.



Endstate:
Otago institutions functioning again with communities establishing a new norm.

Scheme of Manoeuvre:

4 x Response Phases with a prelim and a sequel:

Prelim (Now)	Reduction & Readiness
Phase 1 (E to E+48) Response	Immediate
Phase 2 (D+3 to D+7)	Coordinated Response
Phase 3 (W+2 to M+3?)	Sustained Response
Phase 4 (Conditional)	Transition to Recovery
Sequel (Years) Period	Recovery

Mission

EM Otago Group ECC is to coordinate a nationally enabled, locally delivered and community focused response to a catastrophic event in Otago in order to provide Rapid Relief, prevent an escalation of the emergency and set the conditions for a transition to a long-duration recovery.

Controller's Intent

- To deliver innovative risk reduction and readiness strategies whilst creating a framework for action in a catastrophic response environment.
- Initial tasks are pre-planned, with Controller's expectations already established, to allow for initiative and to prevent inertia during the critical first 2-3 days.
- Actionable intelligence will be generated early to allow for a coordinated response, which will become sustained after the first week or so.
- The movement of key response staff and the targeted *MASS RELIEF* distribution of essential goods and services will be delivered by air and water.
- The large number of visitors isolated in Queenstown (and Wanaka/Cromwell) will be reduced by deliberate evacuation operations.
- A key imperative is the re-opening of critical roading links to Queenstown and Wanaka to allow for commercial Fast Moving Consumer Goods (FMCG) distribution networks to be re-established.

- The *sustained* phase will last for months and allow for transition to recovery planning. Throughout the response, Otago will be prepared to support national priorities and requests from neighbouring regions.
- Transition to recovery will occur on a *conditions* basis.
- The anticipated recovery period will be measured in years under a bespoke national framework.

Endstate

Otago institutions functioning again with communities establishing a new norm.

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3.3 Scheme of Manoeuvre

A four-phase response operation with a preliminary operation and an enduring sequel:

Preliminary Operation: Reduction & Readiness	(Now)	Valuable preparation time.
Phase 1: Immediate Response	(E to E+48)	'First 48 Hours'.
Phase 2: Coordinated Response	(D+3 to D+7)	'First week'.
Phase 3: Sustained Response	(W+2 to M+3/Conditional)	'First few months'.
Phase 4: Transition to Recovery	(Conditional)	'After the first few months'.
Sequel: Recovery Period	(Conditional)	'Measured in years'.

Timings Nomenclature

Now	Pre-event time available.
E	Event: M8+ Alpine Fault Earthquake.
E+1	Event plus 1 hour.
D	Event Day.
D+1	Event Day plus 1 day i.e. the second day.
W	Week.
W+1	Event plus 1 Week i.e. 'First Week'.
M+1	Event plus 1 month i.e. 'First Month'.

3.4 Key Actions by Otago Group Emergency Coordination Centre (GECC)

Prelim Operation: Reduction and Readiness (Now to Alpine Fault Event Day)

A major part of the operational design is to use the time available to develop community resilience, enhance the readiness of the components of the formal response and advocate for institutional risk-reduction measures.

Emergency Management Otago will work collaboratively with Otago CDEM Group partners and stakeholders to:

Understand the Risk

- Identify and understand Otago's hazards, exposure and vulnerabilities.

Reduce the Risk

- Use emerging national operational and financial structures (*System Reform*) to fund pre-event risk reduction measures.
- ORC and District Councils consider Alpine Fault risks in Long Term Plans, and fund identified risk reduction measures.
- NZTA build-in Alpine Fault risk reduction measures at two priority routes: SH6 Devil's Staircase and SH8 Lindis Pass.
- Other Critical Infrastructure entities factor Alpine Fault in operational plans. e.g. Transpower, Queenstown Airport.
- Encourage FMCG industries to increase key foodstuffs and fuel stock holding capacity in Queenstown and Wanaka.

Build Resilience

- District EMAs build community resilience (14+ days) IAW EM Otago Community Resilience Strategy and ongoing public education initiatives. Decisive Event 1.
- EM Otago deliver ongoing Business Continuity initiatives focused on QLDC hospitality sector (7+ days) and regional lifelines.
- Encourage partners and stakeholders to build in Alpine Fault scenarios to their Business Continuity Plans.
- Encourage innovation and resilience measures: community-funded solar/wind schemes or grants and interest-free loans for domestic solar installation.

Increase Readiness

- Develop District CATPLANS for Alpine Fault. Decisive Event 2.

- Socialise, train, test, exercise and review plans to optimise readiness. Conduct Tabletop and field exercises in 2025.
- Raise two additional NZ Response Teams: Otago (Inland) NZ R-T and Otago (Coastal) NZ R-T.
- Cache expedient shelter materials in most at-risk locations in shipping container *Emergency Management Pods* (EMPods).
- Create prominent 'Civil Defence rallying posts' to raise awareness of where help can be received for residents and visitors alike.
- Permanently site a sixth NZ Emergency Management Assistance Team (NZ EMAT) Deployable Coordination Centre (DCC) container at (Queenstown Airport).

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Phase 1: Immediate Response (E to E+48) 'First 48 Hours'

The immediate reaction to an Alpine Fault earthquake will be an informal mobilisation of community members and on-duty first responders. This informal response will be spontaneous and effective for only the first few days.

The formal response which follows must be swift and well-rehearsed, with many elements automated and triggered by notable indicators of the event: prolonged (2-4 minutes) shaking with a corresponding loss of power and telecommunications.

<p>Ph1: Immediate Response 'First 48 hours' (E to E+48)</p> <ul style="list-style-type: none"> • Activate EM Otago Response Structure (GECC + 5 x EOC). (Best endeavour: E+1). • Declare a State of Emergency. (As appropriate, NLT E+6). • Execute PIM Plan. (By E+8) • Conduct Stage 1 Impact Assessment: 'Wide Area Assessment'. (Main Effort). (From E+8) • Move key staff/teams by air and available roads. (From E+8): <ul style="list-style-type: none"> - Estb MASS RELIEF Air Loading Point at Taieri Airfield by E+24. - Estb MASS RELIEF Air Assembly Area at Alexandra Aerodrome by E+48. - Estb Log Base Kingston by E+48. - Estb Evacuee Handling Centre (Air) at ZQN by E+48. • Open MSR DUNEDIN and MSR BALCLUTHA. (By E+48) 		<p>Emergency Management Otago Te Rākau Whakamarama Ōtago</p> <p>Wide Area Assessment</p> <p>Pre-designated Reconnaissance and Surveillance targets (R&S) known as Named Areas of Interest (NAI) as per Collection Plan 01.</p> <p>Imagery from Satellite, RNZAF fixed wing and Otago Helicopter companies, collated by GECC Intel commencing E+12.</p> <p>Corroborated by EOC reports from First Responders including community.</p> <p>Staff Supplementation to:</p> <ul style="list-style-type: none"> • QLDC EOC and WICC. • QL Hospital EOC. • Civil Defence Centres. • Evacuee Handling Centres. • Log Base Kingston. • Rapid Relief Air Assembly Area Alexandra. <p>Log Base Kingston Estb by NZ Red Cross to prepare for MASS RELIEF and Evacuations ops.</p> <p>MSR DUNEDIN SH B7 then SHB5 (TBC) Will require survey and minor repair</p> <p>MSR BALCLUTHA SH1 May require survey (bridges and culverts)</p>
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Chronologically, the sequence of Phase 1 is:

Activate Emergency Management Response Structure. Decisive Event 3.
(‘Best endeavour’. Ideally within 1 hour but No Later Than E+6).

- EM and/or ORC staff physically open GECC in accordance with Business Continuity Plan (BCP). Controller/RM/Senior Person convenes an initial Incident Management Team meeting to derive a *start state*. Emergency Services (ES) Liaison Officers (LNOs) present by E+1.
- Communications check with: District EOCs; NEMA/NCMC; Southland ECC; Canterbury ECC; Emergency Services (ES) and other partners. Decisive Event 4.
- Establish Regional Air Desk (RAD) with communications link to: GECC (Operations); NCMC (RNZAF); NZRCC; NHCC; NCCC; HeliOtago; other Otago commercial aviation operators and 6 x district Aviation Coordination Cells (ACC).
- RAD coordinates airborne SAR with RCCNZ and ACCs.

- GECC Intel gains Situational Awareness (SA) to drive intelligence-led planning.

Declare a Local State of Emergency as appropriate. Decisive Event 5.
(As appropriate, No Later Than E+6).

- Group Controller will declare a Local State of Emergency which will supersede any district declarations.
- State of National Emergency (SONE) expected within 24 hours. Otago will not act inconsistently with National Controller's priorities. Otago expects to actively participate in meeting some National Controller's priorities.

Execute Public Information Management Plan. Decisive Event 6.
(By E+8)

Support Plan 3: PIM refers.

- Initial focus on public key messaging around emergency shelter and evacuations.

Conduct Stage 1 Impact Assessment: event-triggered **Wide Area Assessment** (Main Effort).
Decisive Event 7.
(From E+8 to E+72).

- Initial information on the impact of the emergency on communities, infrastructure and roading. Gathered rapidly from ground, air or water. Underway within 8 hours. First single-source intelligence to GECC Intelligence by E+12.
- Satellite and Air component (RNZAF and civilian EM Otago air contractors) is automated, triggered by event on pre-planned targets confirmed in the standing EM Otago AF8 Collection Plan 01. Coordinated by RAD.
- Concurrent best effort collection of initial ground information by EOCs through Emergency Services, Community Response Groups (CRG) etc. EOC to share pre-agreed details with GECC by E+12.
- Support Plan 02 Impact Assessment refers.

Staff Supplementation: move key staff and teams.
(From E+8)

- EOCs communicate any staff shortages to GECC. GECC will task and move augmentees from CODC and Coastal Otago as necessary.
- GECC Logistics (Personnel) locates Otago Group Controller and any required elected official(s).
- GECC Regional Air Desk coordinates the air movement from Taieri Airfield of other response and Emergency Services staff. Priority for movement: CDEM staff, Specialist/Technical personnel (including GNZ Science), Emergency Services, VIPs, other).
- GECC Logistics (Facilities) MASS RELIEF Air Loading Point (LP) at Heli Otago Taieri Airfield, by E+24.

- GECC Logistics (Facilities) establish MASS RELIEF Air Assembly Area (RR AAA) at Alexandra Aerodrome by E+48.
- GECC Logistics (Facilities) and Dunedin-based NZ Red Cross team establish Logistics Base at Kingston by E+48.

NZTA opens Main Supply Routes DUNEDIN and BALCLUTHA.

(By E+48)

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Phase 2: Coordinated Response (D+3 to D+7) 'First Week'

Emergency Management Otago Te Rikau Whakamaramaro Ōtago		
<p>Ph 2: Coordinated Response 'First Week' (D+3 to D+7)</p> <p>(Continue to move key staff/teams).</p> <p>District EOCs conduct Impact Assessment Stage 2: Rapid Impact Assessment. (D+3 to D+7).</p> <p>Deliver MASS RELIEF. (Main Effort). (D+3 to D+21).</p> <p>Clear MSR SOUTHLAND and MSR CANTERBURY. (D+3 to D+14).</p> <p>Ratify Support Plans (Log, Lifelines, Health, Welfare Delivery). (D+3 to D+7).</p> <p>Appoint Recovery Team. (D+3).</p> <p>BPT Support NCMC Air Evacuation of QT (OP WAKATIPU VITTLLES). (D+3 to D+7).</p> <p>BPT Conduct Lake Evacuation of QT (OP WAKATIPU DYNAMO). (Main Effort on activation). (D+4 to D+8).</p> <p>BPT support national priorities. (From D+3)</p>		<p>MASS RELIEF: Following EOC Rapid Impact Assessment, we will deliver goods to locations where the type and amount of need is confirmed.</p> <p>Assessed priority is:</p> <ul style="list-style-type: none"> • Expedient shelter (Tents, Tarpaulins, Tools plus space blankets. "T3+.") • Food and water. • WASH supplies. <p>Delivered by:</p> <ul style="list-style-type: none"> • Helo from Loading Point Taieri Airfield • Landing Craft from Kingston.
		<p>MSR Clearance: NZTA clear critical supply routes to allow re-establishment of FMCG distribution network.</p>
		<p>OP WAKATIPU VITTLLES:</p> <ul style="list-style-type: none"> • NEMA-led air evacuation of 30,000 visitors To a place of safety (AKL). • Conducted by EMAT using their Deployable Coordination Centre (DCC) parked permanently at designated Evacuee Handling Centre (EHC) at ZQN.
		<p>OP WAKATIPU DYNAMO:</p> <ul style="list-style-type: none"> • Otago GECC -led lake evacuation of 10,000 visitors to a place of safety (Kingston). • Subsequent onward road movement to Invercargill Airport (IVC), Dunedin Airport (DUD) and Dunedin via Balclutha. • NZDF support is requested to conduct this complex operation.

The proactive generation of timely and accurate intelligence to allow for mission calibration and planning based on *actual events* marks the transition to Phase 2. The anticipated sequence of Phase 2 is:

Ongoing staff and team air and road movement throughout the Area of Operations.

District EOC execution of Impact Assessment Stage 2. (D+3 to D+7)

- Stage 2: **Rapid Impact Assessment.** Information about initial impact of emergency, typically involving street by-street assessments, but also gathered from air and/or water as necessary.
- Includes Rapid Building Assessments.
- District-led activity which will be used to inform the nature of goods and services delivered by the Otago GECC-led regional MASS RELIEF operation.
- Support Plan 2: Impact Assessment refers.

Deliver MASS RELIEF (Main Effort). Decisive Event 8. (D+3 to D+21)

- Execute MASS RELIEF Plan, cued by intel generated by Rapid Impact Assessments. Support Plan 4: Rapid Relief refers.
- GECC coordinates initial delivery by air of expedient shelter material to pre-planned Staging Areas in Queenstown and Wanaka. By D+3.

- GECC coordinates subsequent delivery, across Lake Wakatipu by landing craft, of required goods to Queenstown and Frankton.

Clear Main Supply Route (MSR) SOUTHLAND and MSR CANTERBURY.

(D+3 to No Earlier Than D+14)

- NZTA commence priority route clearance of SH6 and SH8 to restore Fast Moving Consumer Goods (FMCG) distribution network.

Ratify Support Plans.

(D+3 to D+7)

- Confirm Critical Resources, Regional Assembly Area (RAA) and logistics nodes for regional supply chain in accordance with Support Plan 5: Logistics.
- Confirm impact and *way forward* for Critical Infrastructure in accordance with Support Plan 6: Critical Infrastructure.
- Confirm Health objectives and delivery in accordance with Support Plan 7: Health.
- Confirm Welfare Delivery concept in accordance with Support Plan 8: Welfare Delivery.

Appoint Recovery Team.

(D+3)

Be prepared to support NCMC's Air Evacuation of Queenstown (OPERATION WAKATIPU VITTLES).

Decisive Event 9.

(D+3 to D+7)

- Coordinate with NCMC and QLDC. Support Plan 9a: PLAN WAKATIPU VITTLES refers.

Be prepared to execute EM Otago lake evacuation of Queenstown (OPERATION WAKATIPU DYNAMO). (Main Effort on activation). Decisive Event 10.

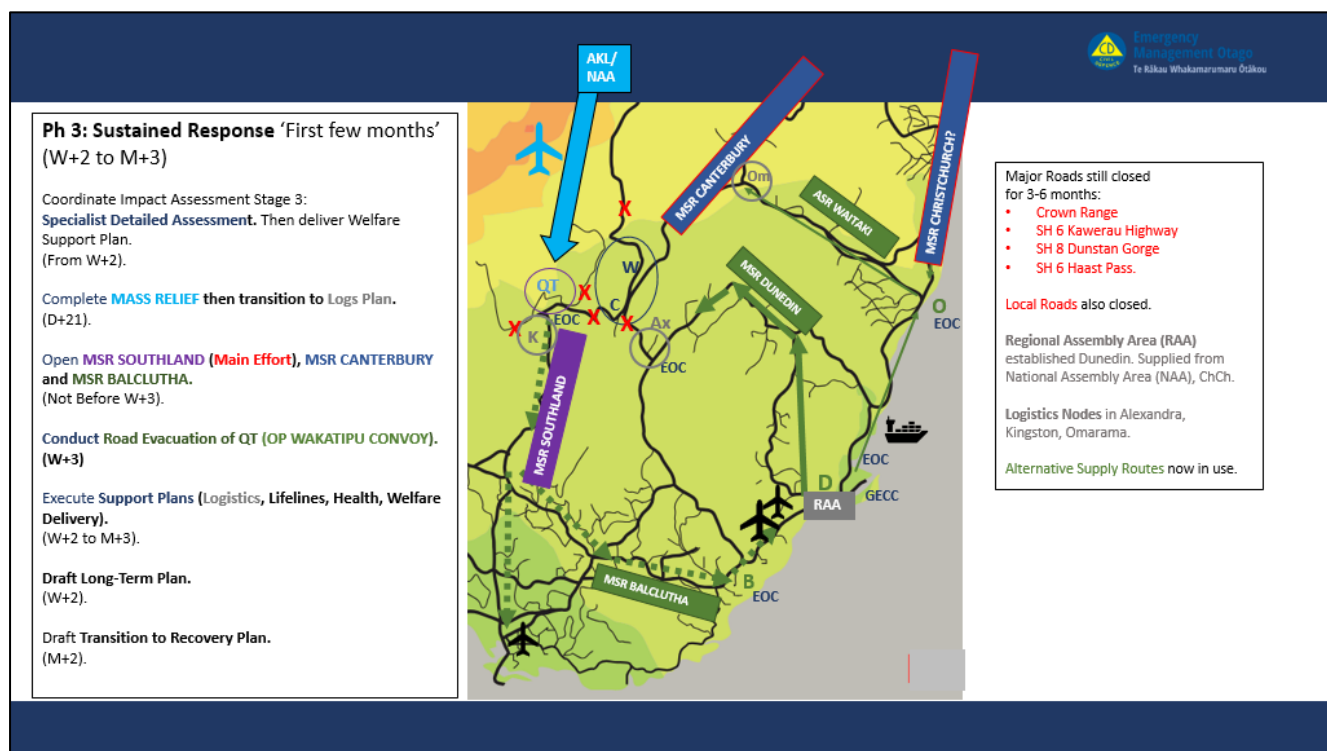
(D+4 to D+8)

- Coordinate with QLDC EOC and Southland ECC. Support Plan 9b: PLAN WAKATIPU DYNAMO refers.

BPT support national priorities.

- Anticipated NCMC objectives include the air evacuation of Queenstown, International Support and the establishment of a distribution network from the National Assembly Area in Christchurch.

Phase 3: Sustained Response (W+2 to M+3) 'First few months'



After the first week or so, it is anticipated that the tempo of the response will settle down into a *Sustained* phase which is likely to continue for several months. The anticipated sequence of Phase 3 is:

Stage 3: Specialist Detailed Assessment.

(As soon as practicable around Week 2 and ongoing through Response to Recovery).

- District-led activity coordinated with the GECC Group Welfare Manager and Lifelines Utilities Coordinator.
- Consists of Specialist Operations, Welfare Registration and Needs Assessment, and Lifeline Utility Assessment.
- Used as a basis for Support Plan 8: Welfare Delivery and Support Plan 6: Critical Infrastructure.
- Support Plan 2: Impact Assessment refers.

Transition MASS RELIEF to Logistics Plan.

(Around D+21)

- MASS RELIEF deliveries by lake to Queenstown and air to Wanaka will be phased out when road distribution can be re-established via SH6 and SH8 'not before' D+14. A further week is allowed to deliver final MASS RELIEF effects into any remaining isolated pockets.

Open **MSR SOUTHLAND** (Main Effort), **MSR CANTERBURY** (Supporting Effort) and **MSR BALCLUTHA** (Pri 3). Decisive Event 11.

(Target is D+15).

- NZTA opens Main Supply Routes. Roads may be opened on managed basis which sees such control measures as restricted opening times, one-way flows and escorted convoys.

Be prepared to Conduct Road Evacuation of Queenstown (OPERATION WAKATIPU CONVOY).
(W+3).

- Coordinate with QLDC and EM Southland. Support Plan 9c: PLAN WAKATIPU CONVOY refers.

Execute Support Plans.

(W+2 to M+3)

- Support Plan 5: Logistics. Decisive Event 12. Regional Assembly Area (RAA) opens in Dunedin. Requires supply by road/rail/coastal shipping/air from National Assembly Area (NAA) Christchurch and beyond. Requires the maintenance of SH1 Christchurch-Timaru-Dunedin as a national priority route. Enduring Logistics Nodes open in Omarama, Alexandra and Kingston. Support Plan 5: Logistics refers.
- Support Plan 6: Critical Infrastructure.
- Support Plan 7: Health.
- Support Plan 8: Welfare Delivery. Decisive Event 14.

Draft Long-Term Plan. Decisive Event 13.
(Commencing W+2).

- Scope and develop plan for response activities beyond the immediate and subsequent operational periods. This will address the anticipated development of the situation and how it will be managed, with resource implications.

Draft Transition to Recovery Plan. Decisive Event 15.
(Commencing W+2).

- Develop plan for moving from response to recovery. Determine how coordination and accountability formally transitions to recovery and how the response phase will be wrapped up.
- The Transition Plan will be based on the Recovery Manager's intent, objectives and outcomes for the recovery phase and include input from the Incident Management Team and the Controller.
- Both the Controller and Recovery Manager will sign off the Transition Plan.

Phase 4: Transition to Recovery (Conditions-based) 'After first few months'

Ph 4: Transition to Recovery
Sometime after 'first few months'

Execute Transition to Recovery Plan.

Anticipated Conditions:

- No longer a risk to life or property.
- Immediate community needs have been met during response.
- SONE no longer required. Some districts may no longer require Local Emergency status.
- Response workplans have been delivered across the social, Built Economic and Natural environments.
- No concurrent natural hazard events occurring.

Major Roads still closed
SH8 Haast Pass.
Others?

Regional Assembly Area established Dunedin. Supplied from National Assembly Area, ChCh

Logistics Nodes in Alexandra, Kingston, Oamarua.

Potential for increased use of coastal shipping and rail for heavy Construction materials to QT.

This phase signals a shift in intent, objectives and priorities. It marks the transition of coordination and accountability from response to recovery leadership and wraps up the response phase.

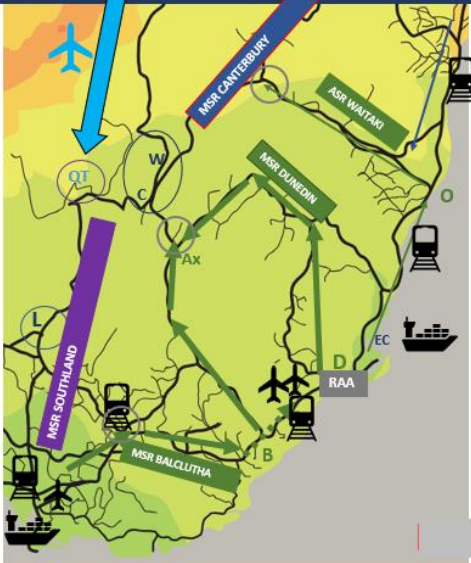
It is anticipated that this phase will occur when certain agreed conditions have been met. The anticipated considerations are:

- No longer a risk to life or property.
- Immediate community needs have been met during response.
- SONE no longer required. Some districts may no longer require Local Emergency status.
- Response workplans have been delivered across the social, Built Economic and Natural environments.
- No concurrent natural hazard events occurring.

Both the Controller and Recovery Manager have leadership responsibilities. The actions required to transition from response to recovery are:

Action Required	Lead	Support
Complete a Response to Recovery Transition Report	Controller	Recovery Manager
Ensure that agencies, organisations and groups with a role in recovery are committed to their continuing role	Recovery Manager	Controller
Prepare a Recovery Action Plan	Recovery Manager	Controller
Prepare for and conduct a Transition Briefing	Controller	Recovery Manager
Work with PIM and Strategic Communications to prepare and hold media briefings and communications, and ensure messages are consistent and accurate across all agencies.	Controller	Recovery Manager

Sequel Operation: Recovery (Conditions-based)



The map displays the Otago region with several recovery zones highlighted in green: MSR SOUTHLAND, MSR BALLCLITHA, MSR DUNEDIN, MSR CANTERBURY, and ASR WAITAKI. A blue arrow points to the Otago region, and a purple arrow points to the Southland region. Various infrastructure icons are shown, including an airplane, a train, a bus, and a ship. The map is overlaid with a large, semi-transparent 'DRAFT' watermark.

Sequel: Recovery

Timeline measured in 'years'

10-20 Billion NZD event.

Execute Recovery Plan under bespoke Alpine Fault National Recovery Framework.

What will the new Otago look like?

This sequel occurs under the authority of the appointed Otago Recovery Manager.

Emergency Management Otago
Te Kaitiaki Whakamarama Ōtago

Recovery is the coordinated efforts and processes used to bring about the immediate, medium-term, and long-term holistic regeneration and enhancement of a community following an emergency.

The Otago Recovery framework will be based on the needs of affected people and animals and will be led by an appointed Recovery Manager.

Recovery in Otago will be consistent with national guidelines. It is anticipated that a national recovery framework will be created for an event of this magnitude.

Section 4: Support Plans

- 4.1 Command, Control, Coordination and Communication (C4)
- 4.2 Impact Assessment
- 4.3 Public Information Management (PIM)
- 4.4 MASS RELIEF
- 4.5 Logistics
- 4.6 Lifelines
- 4.7 Health
- 4.8 Welfare Delivery
- 4.9 Evacuation Contingency Plans:
 - a. PLAN WAKATIPU VITTLES (NCMC air evacuation of Queenstown).
 - b. PLAN WAKATIPU DYNAMO (EM Otago lake evacuation of Queenstown).
 - c. PLAN WAKATIPU CONVOY (EM Otago road evacuation of Queenstown).

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4.1 Support Plan 1: Command, Control, Coordination and Communications (C4)

This Support Plan defines the elements of an effective C4 framework, reviews statutory requirements and describes how organisations come together to collaboratively plan for, then conduct, a seamless multi-agency response to a catastrophic Alpine Fault event.

Content

- **C4 Definition and Key Concepts:**
 - Command.
 - Control.
 - Coordination.
 - Communications.
- **Agency Roles and Responsibilities:**
 - Otago CDEM Group.
 - Emergency Services.
 - NZDF.
 - Critical Infrastructure (Lifelines Utilities).
 - Clusters.
 - Volunteers.
- **Otago CATPLAN (Alpine Fault) approach to multi-agency planning and response.**
- **Otago Communications:**
 - Network Diagram.
 - PACE Plan.

C4 Definition and Key Concepts

CIMS (Reference D) outlines how **Command** is the authority within a team, unit or organisation and includes the internal ownership, administrative responsibility and detailed supervision of personnel, tasks and resources. Command cannot be exercised across teams, units or organisations unless specifically agreed.

Control is the authority to set objectives and direct tasks across teams, units and organisations within their capability and capacity. This may include control over another team, unit or organisation's resources but does not include interference with that team, unit or organisation's command authority or how its tasks are conducted.

Coordination brings together response elements and resources to ensure a unified and effective response. Command and Control assist with coordination by defining authority between and within organisations.

Communications describes the systems by which information is transmitted and shared.

Agency Roles and Responsibilities

The CDEM Act 2002 (Reference A) and National CDEM Plan 2015 (Reference B) establish specific roles and responsibilities. The acceptance of these roles and responsibilities by both public and private sector organisations is a key element in CDEM planning.

Section 59 of the Act requires every government department, CDEM Group, local authority, emergency service, lifeline utility, and any other agency required by the Act to take all necessary steps to undertake CDEM or perform its functions under the Act.

The Role of Otago CDEM Group

Otago CDEM Group consists of a joint standing committee of one regional and five local authorities established under section 12 of the CDEM Act.

It is supported by each member of the group, the Coordinating Executive Group appointed under section 20 of the Act, and partner agencies that have CDEM duties, roles and responsibilities within Otago.

The objective of Otago CDEM Group is to provide leadership in the delivery of coordinated and collaborative arrangements for CDEM among local authorities, partner agencies, clusters and communities within its group area.

The functions of Otago CDEM Group, and each member:

- Identify the hazards and risks in Otago that may result in an emergency that requires national-level support and coordination.
- Undertake, where practicable, any actions to reduce hazards and risks in its group area that may require national-level support and co-ordination in an emergency.
- Establish the means within its group area, in line with national guidelines and in collaboration with its supporting agencies, to provide timely warning of hazards, and public information about them.
- Develop, maintain, and regularly review its capability for reduction, readiness, response, and recovery within its group area, and take part in relevant exercises under the National CDEM Exercise Programme.
- Appoint, develop, maintain, and delegate functions to key operational positions, including Local Controllers and CDEM Group Controllers, Recovery Managers, Public Information Managers, Welfare Managers, Lifeline Utility Co-ordinators, and operations, intelligence, planning, and logistics staff.

Reduction and Readiness

Reduction and readiness are a key focus of CDEM Groups. Reduction and readiness-related activities include:

- Identifying potential hazards and risks (likelihood and consequences) in each region.
- Identifying the vulnerability characteristics of communities.
- Considering risks and addressing reduction.
- Assessing what response resources are required.
- Maintaining and improving consequence-based functional planning.
- Identifying available resources at CDEM Group level or from neighbouring groups.
- Identifying roles and responsibilities for prescribed functions.
- Identifying gaps in capacity or capability that need addressing by the CDEM Group or partner agencies.

- Ensuring that the sharing of the multi-agency capacity and capability in a region are known, understood, and pre-negotiated.
- Planning by all agencies on how the multi-agency resources are to be deployed and coordinated in the event of an emergency.

Response and Recovery

Response principles are specific to each CDEM Group. This plan sets out Otago Lead Controller's intent to respond to a catastrophic Alpine Fault earthquake, with all agencies having pre-planned and agreed coordination arrangements that enable each agency to fulfil its function in an integrated and complementary manner.

The Role of Emergency Services

Emergency Services comprise the New Zealand Police, New Zealand Fire and Emergency Service, health and disability services (including ambulance services), that act together to plan for and respond to any emergency.

The principles underlying the role of emergency services are, inter alia, to:

- Ensure that planning encompasses the 4 Rs and enables an effective response to all emergencies.
- At the CDEM Group level, have a senior officer assigned to the Co-ordinating Executive Group of each CDEM Group.
- Use the CIMS framework to guide the co-ordination of each emergency service's operations.
- Ensure that the responsibility of each service for its primary functions is in no way transferred or modified by the declaration of a state of emergency (staff continue to work under their service's command structures and established procedures).
- Liaise with and act within the coordination and direction of the appropriate Local Controllers or Group Controllers, when the consequences of an emergency require the response to be co-ordinated through plans and arrangements under the Act.
- Request a declaration of a state of emergency for an affected area via the Local Controller or Group Controller when an officer in charge of an emergency service considers that an emergency has occurred and emergency powers under the Act will or might be required to co-ordinate, direct, or control a response to that emergency.
- Participate in readiness planning at CDEM Group level.

New Zealand Police

The New Zealand Police is responsible for the maintenance of law and order during an emergency. Police may exercise special powers during a state of emergency and will liaise with other agencies to ensure the most effective use of Police resources.

Reduction and Readiness

- The New Zealand Police maintain business continuity plans to ensure that critical New Zealand Police functions can continue during an emergency.
- Plans identify key risks, prioritise business, plan for the continuance of critical business, and provide for the redeployment of staff in support of other districts.

- New Zealand Police emergency and command planning forms the basis for New Zealand Police operations, including action in a state of emergency, and refers to and integrates with CDEM plans at CDEM Group and local levels.
- The New Zealand Police participate in multi-agency emergency management planning and exercises contributing to a coordinated response using the CIMS.
- New Zealand Police emergency management plans also provide for:
 - early control of the scene of an emergency.
 - coordinating essential services.
 - preserving life.
 - protecting property.
 - the establishment of a New Zealand Police operations headquarters.
 - the callout of sufficient personnel to meet New Zealand Police requirements.
 - basic procedures for dealing with an emergency, including alerting and liaising with other emergency services.
 - liaison at the appropriate level of the response with other elements.
- The New Zealand Police regularly test and exercise response arrangements and participate in the National CDEM Exercise Programme.

Response

The role of the New Zealand Police during the response to and recovery from an emergency is to:

- Maintain the functions of the New Zealand Police as outlined in section 9 of the Policing Act 2008 and the Act.
- Assist with the dissemination of warning messages.
- Assist the movement of rescue, medical, fire, and other essential services.
- Coordinate movement control over land, including communications and traffic control.
- Conduct Category I search and rescue operations.
- Support Category II search and rescue operations.
- Carry out Disaster Victims Identification (DVI).
- Control access to and within an affected area so as to assist rescue, medical, fire, and other essential services.
- Conduct any initial evacuations to ensure protection of life.
- Coordinate inquiries to assist family, whānau, and next of kin to make contact with each other.
- Trace missing persons and notify their next of kin.
- Assist coroners as required by the Coroners Act 2006, in close liaison with the Ministry of Justice and health services.
- Support Controllers at the CDEM Group, and local levels and, when requested, appoint New Zealand Police liaison officers to the Group ECC and local EOCs.

Following consultation with NZ Police Southern District Commander, the key actions of NZ Police during the immediate and coordinated response phases include:

- Provision of Liaison Officer at GECC and local EOCs. From E+1.
- Reinforcement of Queenstown Police and establishment of C2. From D+2.
- Conduct Category I search and rescue operations in coordination with local EOCs and GECC RAD.
- Support Category II search and rescue operations in coordination with RCC and Group ECC RAD.
- Carry out DVI.

- Be Prepared To (BPT) control access to designated supermarkets and other designated stores to protect Critical Resources. From E+1.
- BPT coordinate movement control during OP WAKATIPU CONVOY-road evacuation of Queenstown. Not before W+2.
- BPT coordinate movement control during road evacuation of Wanaka. Not before W+2.

Fire and Emergency New Zealand (FENZ)

During emergencies, Fire and Emergency New Zealand (Fire and Emergency) is responsible for the safety of people and property threatened or affected by fire, hazardous substances emergencies, and transport accidents. Fire and Emergency also leads the Urban Search and Rescue function for New Zealand and can assist in rescues related to a variety of incidents.

The objective of the fire services under this plan is to provide services to minimise the consequences of an emergency for people, property, and the environment.

Reduction and Readiness

- FENZ maintains business continuity plans to ensure that its functions can continue during an emergency.
- Those plans identify key risks, prioritise business, plan for the continuance of critical business, and provide for the redeployment of staff.
- FENZ emergency and command planning forms the basis for FENZ operations, including action in a state of emergency, and refers to and integrates with CDEM plans at CDEM Group and local levels.
- FENZ participates in multi-agency emergency planning and exercises contributing to a coordinated response using the CIMS.

Response

- Firefighting to control, contain, and extinguish fires.
- Contain releases and spillages of hazardous substances.
- Urban search and rescue.
- Limiting damage, including the salvage of essential material from endangered locations.
- Redistributing water, in consultation with the relevant territorial authorities, for firefighting.

Following consultation with FENZ Commander Te Kei Region, key actions of FENZ during the immediate and coordinated response phases include:

- Insert
- FENZ
- comments

Health and Disability Services

The Ministry of Health and all other health sector agencies undertake the planning necessary to provide health and disability services in the event of any emergency.

The objective of the health and disability service providers during an emergency is to provide services to minimise the consequences of the emergency for the health of individuals and the community.

Health and disability services in New Zealand are delivered by a network of organisations and people, including:

- The Minister of Health, who has overall responsibility for New Zealand's health and disability system.
- The Ministry of Health, which acts as principal adviser to the Minister of Health and the Government on health and disability policy and leads and supports the sector to achieve better health for New Zealanders.
- Health NZ (Te Whatu Ora) which plans, manages, provides, and purchases services for the population, including primary care, public health services, aged care, and services provided by other non-government health providers.
- Primary health organisations, which provide health care in the community, usually from general practitioners or practice nurses.
- Public health services, which provide environmental health, communicable disease control, and health promotion programmes.
- Ambulance services, which provide pre-hospital care and transport for patients in the community.

Reduction and Readiness

The Director-General of Health, on behalf of the Minister of Health, has overall responsibility for health and disability services in all phases of emergency management.

The Ministry of Health is responsible for:

- Policy development.
- National planning for a health-related emergency.
- Developing, maintaining, and exercising the National Health Emergency Plan and its supporting documents.

Health NZ is responsible for:

- Leading and co-ordinating local reduction and readiness planning across health and disability service providers.
- Developing, maintaining, and exercising health emergency plans for significant incidents and emergencies.
- Ensuring that all their plans adequately provide that public, primary, secondary, tertiary, mental, and disability health services require health and disability service providers to have plans and resources in place to ensure that they can respond to an emergency in an integrated and effective manner.
- Ensuring that health and disability services are ready to function to the fullest possible extent during and after an emergency by ensuring the continuity of care for existing patients, the management of increased demand for services (including the provision of surge capacity), and that assistance is provided to enable the recovery of services (including business continuity).
- The preparation of plans that are integrated across the sector and that are aligned with the plans of the other emergency services and the regional CDEM Group plan and other response agencies.

Land and air ambulance providers are responsible for:

- Ensuring the continuity of care for existing patients, the management of increased demand for services (including the provision of surge capacity), and that assistance is provided to enable the recovery of services (including business continuity).
- Preparing incident and emergency management plans that are integrated across the sector and that are aligned with the plans of relevant DHBs, the plans of other emergency services, and CDEM Group plans.
- Integrating their own planning and response with public health planning and response.
- Supporting Health NZ regional groups and CDEM Groups as required.
- Contributing to emergency management planning led by the Ministry of Health.

Response

The Ministry of Health has operational roles, including:

- Monitoring any developing emergencies.
- Activating the National Health Emergency Plan and National Health Co-ordination Centre as appropriate.
- Coordinating and managing the health and disability service providers' response to emergencies that have significant regional or national consequences.

Health NZ is responsible for:

- Coordinating the local health sector response to emergencies.
- Ensuring appropriate co-ordination of all health and disability service providers and close liaison with CDEM Groups and local authorities.
- Continuing their services and managing any increased demand.

Land and air ambulance providers are responsible for:

- Continuing their services and managing any increased demand.
- Coordinating via Health NZ EOCs, the Ambulance National Crisis Coordination Centre, the National Health Coordination Centre, and other ambulance providers.
- Providing a Liaison Officer to Otago Group ECC.

The Health Sector Concept of Operations during the Otago CDEM response to an Alpine Fault event is outlined in Support Plan 7: Health.

New Zealand Defence Force

During an emergency, the NZDF is a support agency. Given the nature of the NZDF operations, forces can be deployed at short notice to assist with the response. The general legal basis for provision of NZDF support to provide aid to the civil power is provided for in section 9 of the Defence Act 1990.

Reduction and Readiness

The NZDF undertakes to participate in planning and training sessions with CDEM Groups.

Response

During an emergency, the NZDF will provide liaison officers to the ECC, and, if necessary, local EOCs. The liaison officers will advise on potential support operations and provide updates on the progress of any agreed tasks.

Liaison officers are not authorised to accept tasks. Requests for NZDF support beyond local levels of commitment must be made by CDEM Groups through the National Controller.

Commanders of NZDF camps, bases, and other facilities may support responses to local emergencies with their own resources (up to 25 personnel in a *Local Emergency Response Team* (LERT)) consistent with CDEM Group and NZDF arrangements. If the NZDF provides such local support via the CDEM Group ECC, the NCMC must be notified.

Otago Group ECC will request the following NZDF support to support the following aspects of the Otago Alpine Fault response which are beyond local and regional CDEM capability and capacity:

- From E+8. Wide Area Assessment of collection targets laid out in Otago CATPLAN (Alpine Fault) Collection Plan 01. It is envisaged that NZDF-sourced Imagery Intelligence (IMINT) may be available via satellite and military fixed wing air Intelligence, Surveillance and Reconnaissance (ISR).
- From D+2. LERT to deploy to Queenstown to:
 - Support QLDC EOC Rapid Impact Assessment.
 - BPT Support NCMC/Otago GECC establish Evacuee Handling Centre (Air) at Queenstown Airport.
- From D+2. NZDF BPT to provide Communication Detachments (with high-speed data) at GECC and QLDC EOC. This is a contingency for the Most Dangerous Alpine Fault scenario for Otago: a North to South rupture that significantly disrupts power and telecommunications in Dunedin and Queenstown.
- From D+2. NZDF BPT conduct OP WAKATIPU DYNAMO-Lake Evacuation of Queenstown.
- From W+2. NZDF BPT conduct OP WAKATIPU CONVOY-Road Evacuation of Queenstown.

Volunteers

Chapter 4.2 of the Guide to the National CDEM Plan (Reference C) asserts that volunteers are an important resource...that can be managed and coordinated at a CDEM Group level.

Accordingly, arrangements are underway to incorporate the services of the following group into elements of this CATPLAN:

- NZ Red Cross (Dunedin). Provide shifts of 8 x volunteers to assist with the operations of Logs Base KINGSTON.
- NZ Red Cross (Dunedin and Queenstown). Provide staff to support QLDC EOC Rapid Impact Assessments.
- Rapid Relief Team (Dunedin). Deploy a field catering unit to support Logs Base Kingston.

- Task Force Kiwi. Provide staff to QLDC Rapid Impact Assessment.
- Consideration will be given to raising two additional NZ Response Teams (NZ-RT): Otago (Inland) NZ-RT and Otago (Coastal) NZ-RT.
- At the local level, Community Response Group volunteers will provide information and support services at Community Emergency Hubs under district EOC arrangements.

Lifelines utilities (Critical Infrastructure)

Support Plan 6: Critical Infrastructure refers.

Clusters

A cluster is a group of agencies, either within or across sectors, that interact to achieve common outcomes, including the performance of a function or related functions. The only established operational cluster in Otago is the Otago Welfare Coordination Group (WCG). Support Plan 8: Welfare Delivery refers.

Otago CATPLAN (Alpine Fault) approach to multi-agency planning and response.

The standing EM Otago approach is laid out in the Emergency Management Otago Group Plan (2018-2028) at Reference P.

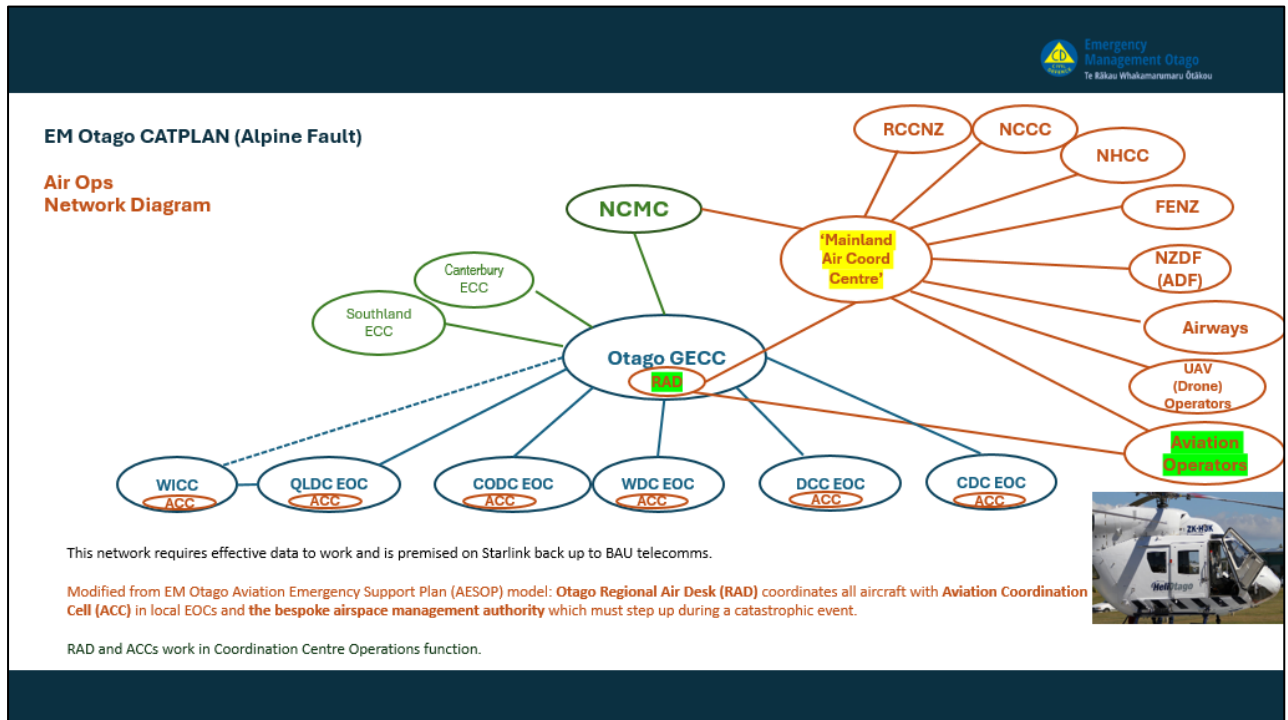
As part of a commitment to manage risk, respond effectively and empower community resilience, a primary objective is to **collaboratively** develop plans for emergencies.

This requires the development and maintenance of sound inter-agency relations and a willingness to exchange ideas and concepts and participate in future training events to test and hone this (draft) plan.

Accordingly, all partners and agencies are invited to provide feedback and commit to a Tabletop Exercise in early 2025.

Otago CDEM Communications

Network Diagram



PACE Plan

Support Plan 1: Command, Control, Communications and Coordination (C4)

Communications – PACE Plan

Primary
 Data: ORC Wi-fi to support D4H. ArcGIS, BAU email and MS Teams also available.
 Voice: Mobile phone using SPARK.

Alternative
 Data: Starlink to support D4H. ArcGIS, BAU email and MS Teams also available.
 Voice: EM Otago Digital Mobile Radio (VHF).

Contingency
 Data: Iridium hubs and hand-held satphone (text only).
 Voice: Iridium hubs and hand-held satphone.

Emergency
 Data: NZDF Comms Dets to provide satellite-based data to support D4H may be avail if Otago is prioritised by NCMC.
 Voice: Emergency Services VHF, DOC VHF, Amateur Radio VHF and HF, Despatch (air or ground).

Primary

The Primary Communication medium used in the Otago GECC is wi-fi internet to operate **D4H**. This is a cloud-based information management tool designed to seamlessly process information during an emergency response. Relevant parties* will be invited into the specific EM Otago CATPLAN (Alpine Fault) *channel*, created by duty EM Otago staff on GECC activation. A 4G network or better is ideally required for D4H using BAU telecommunications, especially as D4H is enhanced by supporting ArcGIS platforms which require significant bandwidth. Otago Regional Council IT services maintain BAU wi-fi at the GECC, with in-built redundancy.

Primary voice means is provided by mobile phones using SPARK. Key GECC numbers are:

EM Otago Duty Officer	0800 420 002.
RM	027 605 0586.
Group Controller	027 605 6040.
Welfare	027 346 0690.
Intelligence	027 605 4125.
Planning	027 60 54231.
Operations	027 605 0517
Lifelines Coordinator	027 605 6124.
Logistics	027 60 56238.
PIM	027 605 2113.

NEMA Monitoring, Alerting and Reporting Centre (MAR) is available 24/7 on 021 539 845 (General) and 021 516 389 (Agency). Email is: MAR@NEMA.govt.nz

EM Southland is contactable via 0800 732 732.

EM Canterbury is contactable on 03 366 2359.

Alternative

Routine email and *Microsoft Teams* can be used using the alternative data link provided by *Starlink*. Two mobile Starlink stations are held at GECC for this purpose.

Alternative voice is provided through the EM Otago regional Digital Mobile Radio (DMR) Very High Frequency (VHF) repeater radio network supplied by CRS Communications. The network is expected to remain functional following an Alpine Fault earthquake. Two VHF simplex channels are also available for local chat within Dunedin City: ESX25 and ESX 50.

Contingency

A Contingency data and voice option is provided by two Iridium hubs and an iridium hand-held *satphone*. Data is limited to text and connectivity is often low.

GECC numbers are:

- ECC: +61 414 673 384 and +61 414 672 738.
- Group Controller: +61 480 081 839.

* NEMA MAR, NCMC Intel, EM Southland and EM Canterbury designated points of contact, Emergency Services Liaison officers, Government Agencies, partners and stakeholders.

Emergency

Emergency communications are best provided via Emergency Services radio.

NZDF Communication Detachments may be available on request—subject to national priorities. Satellite-based data to support D4H may be available.

DOC operates a VHF network:

- DOC 1 Rakeahua & Dunstan.
- DOC 3 Blue Mountains & Caples Track.
- DOC 4 Hinahina & Mt Roy.
- DOC 7 South Rough Ridge.
- DOC 8 Remarkables (Queenstown DOC office).

An Otago-wide Amateur Radio network exists and may be operationalised for CDEM purposes. A High Frequency (HF) Amateur Radio Emergency Communications (AREC) network may be established. AREC VHF repeaters are located at:

- AREC 665 Otago Peninsula.
- AREC 667 Portable.
- AREC 690 Mt Cargill (Dunedin).
- AREC 700 Obelisk Range (Central Otago).
- AREC 685 Remarkables (Queenstown).
- AREC 675 Kuriwao (Clutha).
- AREC 6775 Mt St Bathans (Central Otago).
- AREC 670 Station Peak (Waitaki).

Detailed written instructions can also be delivered by ground and/or air dispatchers.

4.2 Support Plan 2: Impact Assessment

References:

- C. Emergency Management Otago Aviation Emergency Support Plan (AESOP)
- H. NEMA DGL 22/20 Impact Assessments
- I. National Impact Assessments Data Set and Dictionary Technical Standard TS 05/20

Pre-emergency multi-agency planning of reconnaissance and assessment activities, including the associated information sharing protocols, is a key component of the Otago CATPLAN (AF8). Effective coordination in the Reduction and Readiness phase will ensure that actionable intelligence will be available in the Otago Group ECC within hours of an Alpine Fault event.

The objectives of impact assessment are to support initial understanding and the Hazard and Environmental Analysis (HEA) inputs to response planning by:

- gathering information (via an established process, agreed prior to an emergency, for collection, collation, analysis and reporting) on impacts to assist in response and recovery decision-making and activities;
- planning and setting areas required for priority of effort and focus of assessment;
- rapidly determining the impact of the emergency and identifying areas for more specialist detailed assessment; and
- providing information, for shared situational awareness about the impact of the emergency, to responding agencies, emergency services, local and national government, and, where appropriate, media and the public.

Noting that doctrinal changes are expected from NEMA during 2024, the Otago methodology adopts a three-stage approach to impact assessment contained at Impact Assessment Ref A. Each phase will build on the information collected, collated and analysed from the previous stages.

- **Stage 1: Wide Area Impact Assessment.** Event to D+3. This is a rapid survey of the Area of Operations to identify impacted areas by aerial, ground and water (lake) reconnaissance. This generates initial information on the impact of the emergency on communities and critical infrastructure.
- **Stage 2: Rapid Impact Assessment.** D+2 to D+20). This involves a more detailed street-by-street assessment of the impacted areas. Ground focus but could involve air assets.
- c. **Stage 3: Specialist Detailed Assessment.** This involves the specialist operations undertaken by a range of agencies, which are likely to continue into recovery.

Stage 1: Wide Area Impact Assessment

Sources and Agencies (SANDA) pre-tasked to conduct this initial assessment are outlined in the EM Otago CATPLAN (AF8) Collection Plan 01 Matrix and Supporting Graphics at Enclosures 1 and 2. These include NZDF, Emergency Services, science/research agencies, contracted air operators, community/volunteers, media and Lifeline Utilities.

National Imagery Intelligence (IMINT) and NZDF fixed wing aircraft Reconnaissance and Surveillance sorties will be triggered by the event and will cover pre-planned *Named Areas of Interest* (NAI) within the first few hours. NAIs are based on those communities, Critical Infrastructure and ski fields identified in the Otago Hazard and Environmental Analysis (HEA) at CATPLAN (AF 8) Ref H. A network of Otago air operators is also pre-tasked to provide aerial reconnaissance of specific NAIs. Impact Assessment Ref C is to be updated to reflect current arrangements. Initial IMINT and Reconnaissance Reports will be available to Otago GECC Intelligence, in agreed formats, within 12 hours of the AF8 event.

All Air and Regional+ SANDA will be coordinated at GECC. Ground/lake collection at the local level from Emergency Services, Community Response Groups remains district-led, with intelligence generated provided to GECC by EOCs on occurrence.

Stage 2: Rapid Impact Assessment

Intelligence generated in the wide area impact assessment will focus Stage 2 activity. Prioritised communities will undergo a more detailed street-by-street assessment conducted by suitably trained teams from FENZ USAR, local authority, Red Cross and Regional Response Teams as available.

Rapid Building Assessment falls under this category. Led by the affected local authority and supported by the Ministry of Business, Innovation and Employment (MBIE), this sees an evaluation of individual buildings and their immediate surrounds by suitably qualified assessors. Initial inspections are external and should take about 15-20 minutes to encourage large area coverage. Secondary assessments involve internal inspections and can take 2-4 hours per building.

Specialist Operations. This category sees a specialist assessment of social, economic, built and natural environments to determine the requirement for response/recovery activities and services. EM Otago has elevated this category from DGL 22/20 Phase 3 to ensure that Critical Infrastructure is prioritised and surveyed as soon as practicable.

Rapid Impact Assessment activities at district level will be coordinated by EOCs. GECC will continue to coordinate those assessments conducted initially by air assets. A prioritised list of NAIs covering Critical Infrastructure is in Enclosures 1 and 2.

Stage 3: Specialist Detailed Assessment

Welfare Registration and Needs Assessment is the collection of information from people to identify who has been directly affected by the emergency and may require welfare services. Undertaken by a variety of methods outlined in Support Plan 8: Welfare Delivery, the desired outcome is the delivery of integrated welfare services that meets the needs of affected people. The collation of welfare needs occurs at EOCs, with suitable coordination with GECC. Given the magnitude of AF8, it is anticipated that individual needs may not be able to be triaged until at least 14+ days after the event.

Lifeline Utility Assessment will continue through this stage, according to specific incident management, emergency management and/or business continuity plans. The focus is on attaining predetermined service levels. EOCs to coordinate with GECC Lifelines Utilities Coordinator (LUC).

Building Assessments: Detailed Damage Evaluation (DDE) is anticipated to be undertaken well into the Deliberate Response phase. This is an in-depth engineering assessment focussed on determining the extent and nature of structural damage. Such assessments are likely to continue into the AF8 Recovery phase. Coordinated by EOCs.

Enclosures:

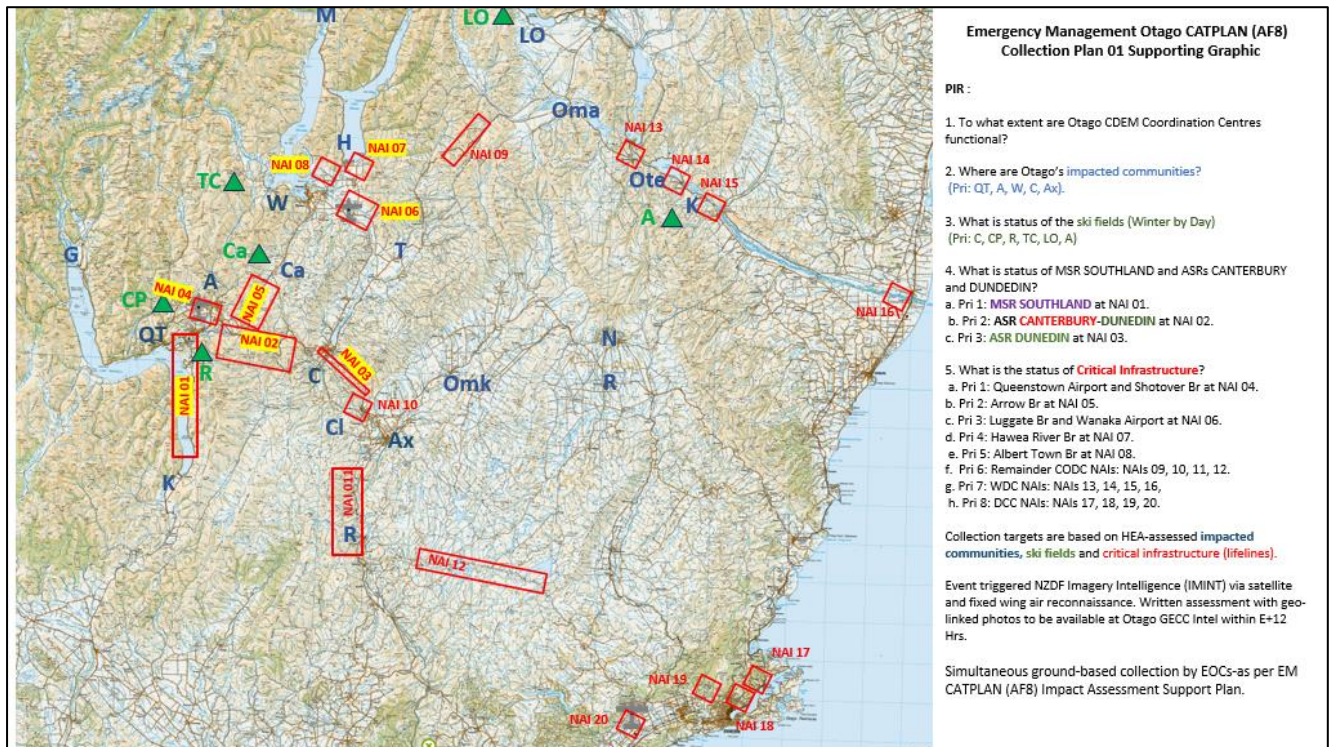
1. EM Otago CATPLAN (AF8) Collection Plan 01 Matrix (issued separately).
2. EM Otago CATPLAN (AF8) Collection Plan 01 Supporting Graphic.
3. Air Reconnaissance Report Template (issued separately).
4. Otago AF8 Impact Assessment Checklist.

Enclosure 1. EM Otago CATPLAN (AF8) Collection Plan 01 Matrix.

1. EM Otago CATPLAN (AF8) Collection Plan 01 Matrix – example only.

Ser	Information Requirement	Indicator	NAU/Town	Required by	Assigned to	Status	Report Type	Intended use	Remarks
1	To what extent are Otago CDEM Coordination Centres functional?	See Remarks		First 12 hrs best endeavour			Verbal at IMT Mtg	Inform GECC Controller and RM.	EOCs require Controller, RM, core ES liaison officers, Functional Managers plus at least 10% staff.
1.a.	GECC				GECC Log Manager	Tasked		BPT execute Air Comms Plan.	Operating D4M on reliable data with Voice back up (satellite and VHF)
1.b.	ODCC EOC				GECC Log Manager	Tasked			Life support systems in place and adequate staffing to support 24/7 operations for a minimum of a week.
1.c.	WIOC				GECC Log Manager	Tasked			
1.d.	COCC EOC				GECC Log Manager	Tasked			
1.e.	WIOC EOC				GECC Log Manager	Tasked			
1.f.	ODCC EOC				GECC Log Manager	Tasked			
1.g.	CDC EOC				GECC Log Manager	Tasked			
1.h.	Otago Regional Air Desk (RAD)				GECC Log Manager	Tasked			
1.i.	OT Aviation Coord centre (ACC)				GECC Log Manager	Tasked			
1.j.	Wanaka ACC				GECC Log Manager	Tasked			
1.k.	Albion ACC				GECC Log Manager	Tasked			
1.l.	Oboro ACC				GECC Log Manager	Tasked			
1.m.	Dunedin ACC				GECC Log Manager	Tasked			
1.n.	Balukaha ACC				GECC Log Manager	Tasked			
1.o.	NZMC				GECC Log Manager	Tasked		BPT display NZDF Comms Desk.	
1.p.	Southland EOC				GECC Log Manager	Tasked			
1.q.	Canterbury EOC				GECC Log Manager	Tasked			
2	Where are Impacted Communities?								See Collection Plan 01 Supporting Graphic and Impact Assessment Support Plan.
2.a.	Damaged buildings, displaced people, injuries/fatalities.		PH: Queenstown, Arrowtown, Wanaka, Cromwell, Alexandra, Rosedale (Effort: Glenorchy, Cardrona, Hawke, Makarewa, Clyde, Rugeley, Omika, Naseby, Tarras, Omarama, Lake Ohau.	NLT E+12 Hrs	NZDF (via NZMC) for Imagery Intelligence (IMINT) and Air Recon.	Tasked	Written assessment with photos to GECC intel by E+12.	Collated and assessed by intel to Gain rapid SA.	Impact Assessment Stage 1: Wide Area Impact Assessment. Broad information on the affected population, including housing stock.
2.b.	Damaged buildings, displaced people, injuries/fatalities.		As per CATPLAN Air Recon bookings for contracted Otago Air Operators.	NLT E+12 Hrs	Contracted Otago Air Operators (TBC).	Tasked	Oral report to GECC intel from site. Written assessment with photos to GECC intel.	Collated and assessed by intel to Gain rapid SA.	
2.c.	Damaged buildings, displaced people, injuries/fatalities, Calls for Assistance.		Otago Region	NLT E+12 Hrs	GECC INOCL.	Tasked	Verbal brief to Intel, with DAH Event Report.	Collated and assessed by intel to Gain rapid SA.	
2.d.	Damaged buildings, displaced people, injuries/fatalities, Calls for Assistance.		By district.	NLT E+12 Hrs	EOCs.	Tasked	SITREP	Collated and assessed by GECC intel to gain rapid SA and Rapid Relief regional planning.	Collected by local authority, ES, CRGs, etc. and collated by EOC intel.
3	What is the status of the ski fields? (if winter and daytime AF8 event).	Damaged infra, large groups of people with injuries. Blocked access roads.	Cardrona, Coronet Peak, Remarkables, Treble Cone, Lake Ohau, Awakino.	NLT E+6 Hrs	NZDF, EOCs	Tasked	NZDF: Written assessment with photos to GECC intel by E+12. EOCs report verbally on occurrence.	Consider urgent rescue mission/Rapid Relief.	EOCs to lead.
4	What is the status of MSR SOUTHLAND and ASB, CANTERBURY and DUNEDIN?								See Collection Plan 01 Supporting Graphic and Impact Assessment Support Plan.
4.a.	Landslip, fissures, bridge damage		MSR at NAI 01.	NLT E+12 Hrs	NZDF (via NZMC) for Imagery	Tasked	Written assessment with photos to GECC intel by E+12.	Collated and assessed by intel to determine status/positions.	NZDF to advise MSR by Day 2 and ASB by Day 4.
5.a.	Obvious damage to airports, bridges, power transmission lines, sub stations, cell phone towers, key buildings etc.		PH NAls 04, 05, 06, 07, 08. Residual effort: ODCC NAls 09, 10, 11, 12, WIOC NAls 13, 14, 15, 16, ODCC NAls 17, 18, 19, 20.	PH NAls NLT E+12 Hrs Residual targets none 48 hrs	NZDF (via NZMC) for IMINT and Air Recon.	Tasked	Written assessment with photos to EOC intel by E+12.	Collated and assessed by GECC intel to gain rapid SA and Rapid Relief regional planning.	Impact Assessment Stage 1: Wide Area Impact Assessment. Obvious impact to critical lifelines utility infrastructure and key buildings.
5.b.	Obvious damage to airports, bridges, power transmission lines, sub stations, cell phone towers, key buildings etc.		TBC	NLT E+12 Hrs	Contracted Otago Air Operators.	Tasked	Oral report to GECC intel from site. Written assessment with photos to GECC intel by E+12.	Collated and assessed by intel to Gain rapid SA.	Impact Assessment Stage 1: Wide Area Impact Assessment. Obvious impact to critical lifelines utility infrastructure and key buildings.
5.c.	Obvious damage to airports, bridges, power transmission lines, sub stations, cell phone towers, key buildings etc.		By District.	NLT E+12 Hrs	EOCs.	Tasked	PH NAls: verbal update on occurrence followed by Event Report. Remaining NAls: SITREP.	Collated and assessed by GECC intel to gain rapid SA and Rapid Relief regional planning.	Collected by local authority, ES, CRGs, etc. and collated by EOC intel.

Enclosure 2. EM Otago CATPLAN (AF8) Collection Plan 01 Supporting Graphic



Enclosure 3. Air Reconnaissance Report Template (issued separately).

DRAFT

Enclosure 4. Otago AF8 Impact Assessment Checklist.

Ref: DGL 22/20

Reduction and Readiness: Plan for Impact Assessment

	Otago GECC	QLDC EOC	CODC EOC	WDC EOC	DCC EOC	CDC EOC
Baseline HEA	Nov 23	Feb 24	Feb 24	Mar 24	Feb 24	Mar 24
Prioritise IRs and NAIs	Nov 23	Nov 24	Nov 24	Nov 24	Nov 24	Nov 24
Develop Collection Plan	Nov 23	Nov 24	Nov 24	Nov 24	Nov 24	Nov 24
Task SANDA	Feb 24	Dec 24	Dec 24	Dec 24	Dec 24	Dec 24
Agree reporting formats	Sep 24					
Agree contracts	Oct 24					

Response

Stage 1: Wide Area Assessment D+1 and D+2

	Otago GECC	QLDC EOC	CODC EOC	WDC EOC	DCC EOC	CDC EOC
IMINT						
NZDF Air Recon						
Otago Air Operators						
Emergency Services						
CRGs						
Media						
TLA						
Other						

Stage 2: Rapid Impact Assessment Commencing D+2

	Otago GECC	QLDC EOC	CODC EOC	WDC EOC	DCC EOC	CDC EOC
IMINT						
NZDF Air Recon						
Otago Air Operators						
FENZ USAR/Red Cross/RRT						
RBA						
Specialists						

Stage 3: Specialist Detailed Assessment Best endeavour NLS D+7

	Otago GECC	QLDC EOC	CODC EOC	WDC EOC	DCC EOC	CDC EOC
Welfare Needs Assessment						
Lifeline utility Assessment						
Building Assessment: DDE						
Other						

4.3 Support Plan 3: PIM

The aim of public information is to provide accurate, relevant, timely and consistent life, health, safety messages to the public that save and sustain life, minimise suffering and support the information needs of the population.

The National Public Information Management (PIM) function will collaborate across workstreams to ensure accurate and timely information is provided to the public on the government’s response to a catastrophic event. Coordination of public information in the NCMC will:

- Inform the public what the Government is doing in response and preserve public trust and confidence in the response.
- Support PIM in the impacted regions.
- Enable consistent, accurate, timely, messaging.
- Maintain situational awareness information including active media and communications channels, key risks, key messages and support requirements for the PIM response in the impacted area.

Risk Reduction and Readiness

In Otago, BAU sees an effort to establish the relationships and systems required to really understand the exact AF8-related risks and take action to reduce their impact.

During the Immediate Response, the PIM team will activate at GECC and focus on:

Phase 1: Immediate Response (E to E+48)

Action	Responsible	Remarks
Issue Public life safety messages are using available communication channels.	GECC PIM	Use Key message bank.
Disseminate Evacuation information through all available channels.	GECC PIM	
Disseminate response-specific public information locally (where possible).	GECC PIM/Local PIM	
Link up with EOC PIMs/NCMC PIM.	GECC PIM/NCMC PIM	
Connect with key partners’ PIM.	GECC PIM	
Convert EM Otago website to Response page.	GECC PIM	
Establish contact & provide strategic management of media.	GECC PIM	
Engage with Strat Comms.	GECC PIM	
Appoint spokesperson/s.	GECC PIM	

Phase 2: Coordinated Response (D+2 to D+7)

Action	Responsible	Remarks
Consider alternative means of communicating to the public if no traditional channel available: - Pre-Printed generic material in situ. - Printing companies with genset capability. - Community meetings.	GECC PIM	
Ensure the impacted communities and general public understand the MASS RELIEF operations underway through public information (all available channels.)	GECC PIM	
Continue Life safety public information.	GECC PIM	
Ensure the public are aware of the limitations in communications through interim lifelines management messages.	GECC PIM	
Share All of Government Welfare Support Factsheet indicating where people can get help	GECC PIM	

Phase 3: Sustained Response (W+1 to M+3)

Action	Responsible	Remarks
Ongoing support via deployed PIM to the affected local districts to ensure continued comprehensive and coordinated messaging to impacted areas.	GECC PIM	
Communication is nuanced and varied as areas of Otago move out of different states of disruption at different times.	GECC PIM	

Phase 4: Transition to Recovery (Conditions Based)

Action	Responsible	Remarks
Share messaging on recovery actions in impacted areas.	GECC PIM	
Deliver collaborative and proactive messaging to ensure public confidence and engagement in recovery.	GECC PIM	
Support the Otago Recovery Manager and Recovery Communications Manager.	GECC PIM/Local PIM	

Recovery

Action	Responsible	Remarks
Support the national and regional recovery Communications lead wherever possible.		
Maintain connectivity between local CDEM and Otago Recovery office.		
Ensure there is a feedback process for community engagement in recovery.		

4.4 Support Plan 4: MASS RELIEF

Reference F: National Catastrophic Planning Handbook (Draft) 2024 V0.3

Overview

Mass Relief is defined as the immediate provision of food, water, sanitation services, medical supplies and medication, and shelter to preserve life and relieve the suffering of people and animals impacted by a significant event.

Considerations

Welfare services are currently based on individual service delivery with need assessed on an individual basis. For a catastrophic event, this model will not support the scale of service and resource delivery that will be required. Welfare services will need to be delivered en masse via a push model on a 'no regrets' basis.

The areas most vulnerable to the earthquake impacts can be predicted, with a degree of confidence. It follows that risk reduction and enhanced readiness can be addressed *before* such an event. Accordingly, Otago MASS RELIEF planning allows for the pre-siting of six container-based Emergency Management pods (EMPods) which contain a suitable quantity of shelter materiel (Tents, Tarpaulins and Tools plus space blankets (T3+)). Subject to suitable funding arrangements and an agreed acquisition plan, the EMPods will be located in the following locations:

- Glenorchy
- Gibbston
- Makarora
- Queenstown
- Frankton
- Wanaka

In Response, early intelligence reports based on Wide Area Assessment and subsequent Rapid Impact Assessment will indicate those areas *actually* impacted. This requires flexibility in relief provision planning at both local and regional levels.

Current planning is based on the following considerations:

- Significant portions of the population will lose the ability to sustain themselves as well as lose access to necessities required for a dignified existence.
- The healthcare system will be significantly impacted and operating at a reduced capacity. Significant numbers of people will lose access to critical medications and require specialised access to these medications.
- If basic relief supplies are not provided at scale and in short order, impacted communities and animals will undergo large scale suffering and lives may be lost unnecessarily.
- The care and protection of disproportionately impacted populations is a primary consideration.
- A community-led response will activate immediately post-impact and individuals will support each other with the resources they have available. The MASS RELIEF response must ensure that

this is supported where possible.

- District-level capacity to supply the scale of resources required for a larger scale MASS RELIEF effort does not exist. Districts will focus on safeguarding and distributing existing supplies on an equitable basis.
- Damage to critical infrastructure will render the movement of large quantities of relief extremely difficult. Road access to Queenstown and Wanaka is likely to be cut for 'at least' two weeks. Queenstown may be without power for up to 21 days. Intra-regional communications are likely to be degraded.
- Rotary Wing aircraft will be available for tasking based on standing arrangements with local civilian aviation companies across Otago—as per the Otago Emergency Aviation Support Plan (AESOP). Airspace management, aircrew availability and air logistics issues will be reviewed and operationalised by end 2024.
- Military aircraft (RNZAF and allies) will be integrated into this MASS RELIEF plan should assets become available following national prioritisation. All aircraft will be coordinated through the Otago GECC Regional Air Desk (RAD). Priority is nationally tasked fixed wing aircraft into ZQN (Queenstown). Supporting effort is fixed wing aircraft into WKA (Wanaka). It is assessed that both airports will be operational by D+3.
- There will be a significant delay in the arrival of international resources to support the national MASS RELIEF response. EM Otago will work with NEMA to refine arrangements for the coordination of International Organisations and NGOs which might assist the Otago Sustained Response.
- Based on a detailed Otago Hazard and Environmental Analysis (HEA) we can assess that the focus for Otago's MASS RELIEF effort will be Queenstown and Wanaka/Cromwell. The primary requirement will be for expedient shelter, especially in a winter event when the large number of predicted aftershocks may result in a reluctance to shelter in place in partially damaged buildings. Additional MASS RELIEF deliverables (food, water, urgent medical supplies) will be necessary.
- Local Civil Defence Centres and/or Welfare Centres should be sited in the vicinity of Primary Health facilities. Health NZ will manage access to, and the supply of, medical supplies at these sites.
- QLDC is requested to identify at least three priority Staging Areas for MASS RELIEF. Each Staging Area must have a suitable Helicopter Landing Site (HLS), with space available for goods handling. Suitable staff should also be tasked to handle and distribute supplies according to local plans.
- Whilst the national Mass Relief model allows for a 'No Regrets' approach, there is no agreed funding mechanism to support this philosophy. To mitigate the financial risk, Otago's MASS RELIEF plan provides for an early confirmation of both location and type of relief required so that needs can be met in a targeted fashion. The exact funding mechanism for EMPods, T3+ supplies, MASS RELIEF supplies and MASS RELIEF transport is subject to ongoing 'system reform' discussions at the national level.

Otago CATPLAN (AF) MASS RELIEF Concept of Operations (CONOPS)

Ground

Emergency Management Otago
Te Kāhau Whakamaramara Ōtago

MASS RELIEF (D+3 to D+21)
The immediate provision of food, water, sanitation services, medical supplies and medication, and shelter to preserve life and relieve the suffering of people and animals.

Following EOC Rapid Needs Assessments by D+2, GECC will coordinate the delivery of goods and services by air and landing craft.

Main Effort (ME) is Queenstown. Supporting Effort 1 is Wanaka/Cromwell. Supporting Effort 2 is Upper Waitaki.

Assessed priority is **expedient shelter**: Tents, Tarpaulins, Tools plus space blankets. "T3+".

First tranche T3+ goods *could* be stored in **EMPod containers** at 3 x pre-designated **Civil Defence Centre** sites: Queenstown, Frankton and Wanaka and 3 x **vulnerable communities**: Glenorchy, Makarora and Gibbston Valley. By E+3.

Second tranche T3+ goods will be collected in Dunedin by GECC Logs and delivered by air from the **MASS RELIEF Air Loading Point (MR ALP)** at HeliOtago, Taieri Airport directly to where needed. By D+3.

Third tranche (food and fuel) will be collected at Dunedin GECC Logs (Supply) and delivered by road to **KINGSTON** by D+2 for shipment to Queenstown by **Landing Craft Utah II** by D+3.

Subsequent deliveries will be managed by GECC Logs, cued by EOC Rapid Impact Assessments:

- MASS RELIEF Air Assembly Area (MR AAA)** estb at Alexandra Aerodrome on D+2 by NZ-RT Otago (Inland). Stocked by air from MR ALP and and road via MSR DUNEDIN commencing D+3.
- Logs Base KINGSTON** estb to coord lake delivery to **QUEENSTOWN** and **FRANKTON** by **RORO Landing Craft**. Estb by NZ Red Cross Dunedin by D+2. Stocked by road from **DUNEDIN** Distribution Centre via **MSRs BALCLUTHA** and **SOUTHLAND** commencing D+2.

Emergency Management Otago
Te Kāhau Whakamaramara Ōtago

RR AAA Alexandra

Helicopters Otago
Taieri Airfield, Mosgiel

RR LP

FMCG from DCs ChCh

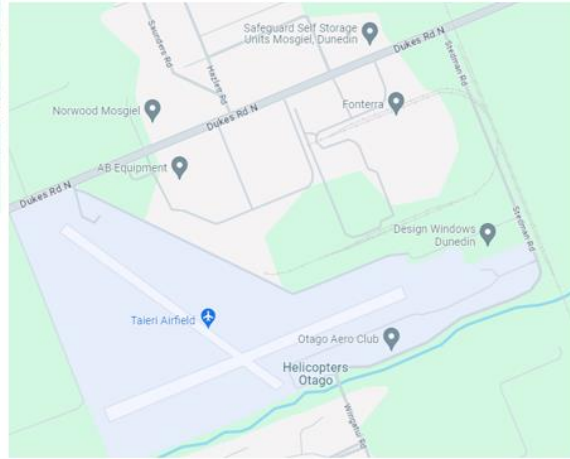
Foodstuffs South Island Distribution Centre (FSSI DC)
Midland St, Dunedin

To RAA Alexandra

To Log Base KINGSTON



Helicopter Otago (HeliOtago) at Taieri Airfield, Mosgiel



**Otago CATPLAN (AF)
MASS RELIEF Air Assembly Area (MR AAA)
Alexandra Aerodrome**

Opens D+2

Staffed by Otago Response Team (Inland) and CODC staff + local Logistics contractors

Role:

Ph 1-3 (E+2 to W+2) Receive MASS RELIEF supplies by air from Dunedin and distr by air to QLDC Staging Areas.





Situation

Inland Otago

Isolated communities across QLDC and Upper Waitaki with depleted food and fuel supplies which are exhausted after 7-10 days. Residents can shelter in place in communities for a week or so. Some 40,000+ transient visitors and holiday makers require urgent shelter, food, hygiene and medical supplies. Roads are closed, with no prospect of opening for 'at least' two weeks. Critical infrastructure is damaged: telecommunications are unreliable and power may be out for days and weeks. Emergency services and other government services are overwhelmed. The response is hampered by constant large aftershocks which create much fear and uncertainty in the community.

Coastal Otago

Coastal districts are largely stable and have the capacity to help themselves and inland communities if necessary.

Regional infrastructure (ports, airports, coastal roads) is largely intact, but still impacted by telecom and power outages.

Mission

GECC is to coordinate the delivery of MASS RELIEF to impacted communities in Otago by D+3, in order to preserve life and relieve the suffering of people and animals.

Intent

To use air (rotary wing) and water (landing craft) to bypass critical road closures to deliver goods and services to the areas of greatest need. To sustain this operation until such time Main Supply Routes are opened to allow for the re-instatement of pre-event commercial Fast Moving Consumer Goods (FMCG) distribution networks.

Endstate

Immediate community needs met and delivery mechanisms handed over to Welfare and Logistics Managers at GECC/local EOCs. Designated communities have safe access to food, water, sanitation services, medical supplies, medication and shelter to allow for a transition to new norms.

Execution

Prelim Phase (Reduction and Readiness)

Action	Responsible	Remarks
Conduct Population Based Needs Assessment (PBNA) as part of District HEA.	District EMAs.	To GECC Planner and Welfare Manager by Dec 24.
Conduct stocktakes of available MASS RELIEF resources in Otago, Southland and Canterbury.	EM Otago Planner. Via NEMA.	By Dec 24.
Conduct stocktakes of available MASS RELIEF resources with international partners.	NEMA.	By Dec 24.
Advise on potential prepositioning of resources.	EM Otago Planner. All District EMAs.	By Dec 24.
Pre-position Emergency Shelter T3+ supplies at QLDC CDCs 01, 02 and 03.	QLDC EMAs	By Dec 25.
Determine PIM public messaging.	EM Otago Planner.	By Dec 24.

	Group Stakeholder Engagement Advisor.	
Engage regional Welfare stakeholders.	EM Otago Planner Group Welfare Manager.	By Dec 24.

Phase 1: Immediate Response (E to E+48)

Action	Responsible	Remarks
Ratify/amend Support Plan 4: MASS RELIEF	GECC Planning	NLT E+24
Convene MASS RELIEF Planning Group	GECC Planning	NLT E+24
Coordinate with NCMC to synchronise <i>National</i> Mass Relief delivery in Otago. Option 1: Fixed wing direct into ZQN. Option 2: Fixed wing direct into WKA.	GECC Planning	NLT E+24
Review stocktakes of avail resources.	GECC Logs	NLT E+24
Confirm avail HeliOtago aviation assets.	GECC Ops	NLT E+24
Activate Welfare Coordination Group.	GECC Welfare	NLT E+24
Gain T3+ Shelter resources from Dunedin.	GECC Logs	NLT E+48
Move initial stocks from Foodstuffs South Island Distribution Centre DUNEDIN to MASS RELIEF Air Loading Point TAIERI AIRFIELD, Air Assembly Area ALEXANDRA and Logs Base KINGSTON.	GECC Logs	NLT E+48
Pre-position Landing Craft Utah II at KINGSTON.	Cecil Peake Station	NLT E+48
Confirm PIM messaging.	PIM	NLT E+48
Conduct Rapid Impact Assessments.	EOCs.	NLT D+48
Determine needs based on Impact Assessments Stage 1: Wide Area Assessment and Stage 2: Rapid Impact Assessment.	GECC Intel GECC Planning	NLT E+48
Confirm Priority Staging Areas at QLDC locations.	QLDC EOC	NLT E+48
Identify Secondary Staging Areas.	All Otago EOCs.	NLT E+48
Confirm Otago MASS RELIEF arrangements with NCMC. Bid for additional assistance from national and international agencies.	GECC Planning/Controller.	NLT E+48

Phase 2: Coordinated Response (D+3 to D+7)

Action	Responsible	Remarks
Deliver MASS RELIEF into Priority Staging Areas.	GECC Ops	D+3 to D+5
Determine subsequent MASS RELIEF delivery (food, water, urgent medical supplies)	GECC Ops/Logs	D+5
Execute MASS RELIEF into Secondary Staging Areas.	GECC Ops	D+5 to D+7
Update PBNA.	GECC Intel/Welfare	D+7
Integrate MASS RELIEF with Welfare Recovery Plan.	GECC Planning/Welfare	D+7
Integrate MASS RELIEF with Logs Plan.	GECC Planning/Logs	D+7
Coordinate National/International Rapid Relief.	GECC Planning	D+7

Phase 3: Sustained Response (D+7 to First Month)

Action	Responsible	Remarks
Continue Otago MASS RELIEF as necessary.	GECC Ops	To D+21
Coordinate delivery of National/International Rapid Relief.	GECC Ops	To D+21
Handover MASS RELIEF Welfare elements to Welfare Coordination Group.	GECC Ops/Welfare	D+21
Handover MASS RELIEF Logistics elements to Logs Manager.	GECC Ops/Logs	D+21

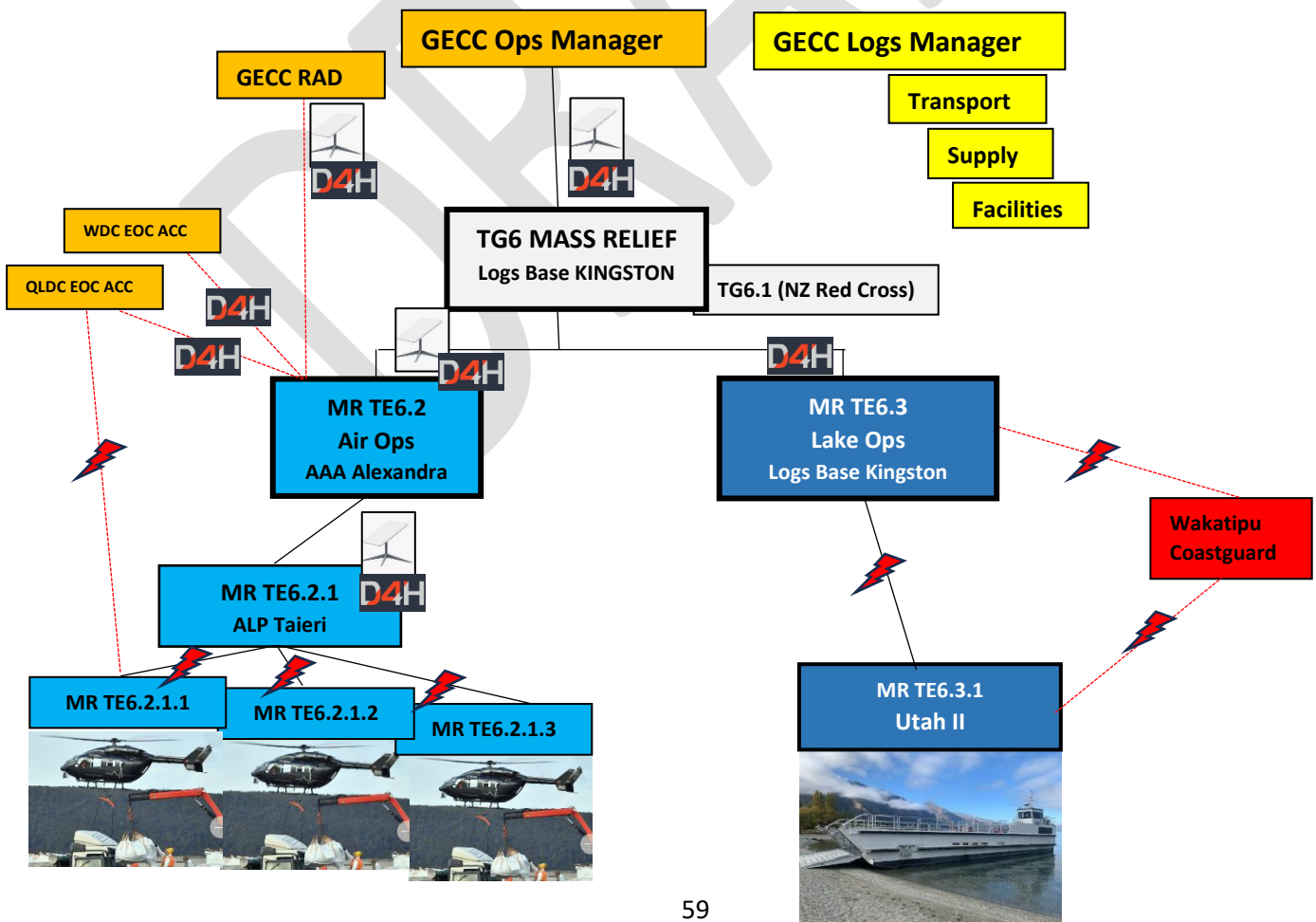
Admin and Log

- HQ MASS RELIEF Task Group 6 to deploy self-contained for 7 days to Logs Base KINGSTON by E+48.
- GECC Logs (Supply) and Logs (Transport) to coordinate acquisition and distribution of supplies.
- GECC Logs (Facilities) responsible for Life Support arrangements.

Command and Signals

- MASS RELIEF Commander reports to GECC Ops Manager. Shift duration: 1 week.
- Starlink set up at Logs Base KINGSTON. MASS RELIEF team use D4H. Satellite Voice back up.
- VHF Frequencies: Primary for Task Element (TE) 6.3: Marine CH 16. Frequencies for TE 6.2 Air ops TBC.

MASS RELIEF C4



Otago CATPLAN (AF) Assessment of Needs (D+3)

(Tables to be completed by Dec 24).

	T3+	Essential Food items	Potable Water	Sanitation/ Hygiene	Medical Supplies/ Medicines	Fuel/ Oils/ Lubricants
Queenstown (pop)						
Wanaka/ Cromwell						
Glenorchy						
Makarora						
Gibbston						
Lake Ohau						

Available Bulk Supplies as at Dec 24

	T3+	Essential Food items	Potable Water	Sanitation/ Hygiene	Medical Supplies/ Medicines	Fuel/ Oils/ Lubricants
Dunedin						
Balclutha						
Oamaru						
Alexandra						
(Southland)						
(Canterbury)						

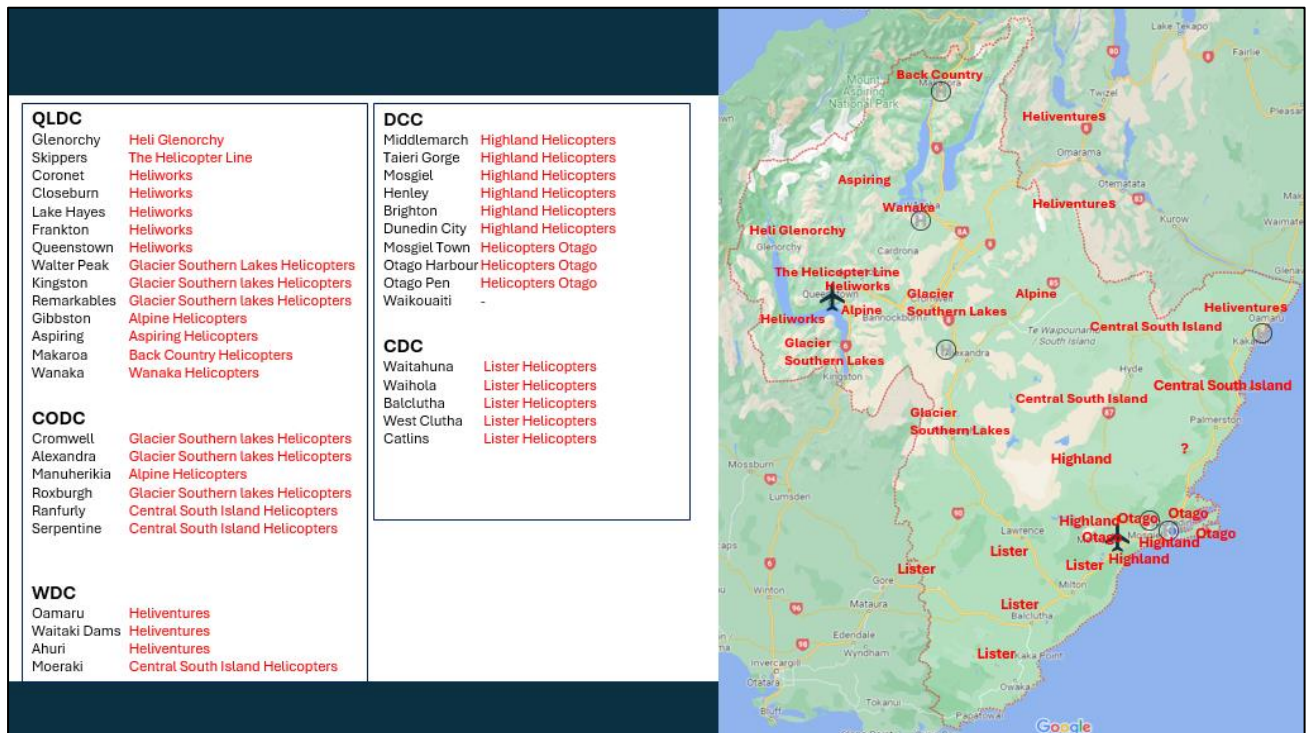
Otago CATPLAN (AF) MASS RELIEF Aviation Considerations

<p>OTAGO Air (Fixed Wing)</p> <p>Queenstown International Airport (ZQN)* Wanaka Airport (WKA)* Dingleburn Station Airstrip Hawea Downs</p> <p>Alexandra Aerodrome (ALR) Cromwell Racecourse Aerodrome Cromwell/Louburn Airport Roxburgh Aerodrome Glenshe Airstrip</p> <p>Oamaru Airport (OAM) Omarama Glider Airport (Canterbury)</p> <p>Balclutha Aerodrome</p> <p>Dunedin International Airport (DUD)* Taieri Airport</p> <p><small>*Otago Aviation Emergency Support Plan (AESOP) under revision. District Aviation Coordination Centres to be re-classified as Aviation Coordination Cells (ACC) under EOC Operations.</small></p>	<p>Otago AESOP C2*</p> <p>Wakatipu Aviation Coord Centre (ACC) Wanaka ACC</p> <p>Central Otago ACC</p> <p>Waitaki ACC</p> <p>Clutha ACC</p> <p>Otago CDEM Regional Air Desk (RAD) Dunedin City ACC</p>	
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<p>Otago Air (Rotary Wing)</p> <p>Dedicated Helicopter Landing Sites (HLS):</p> <p>Wanaka Lakes Health Centre Heliport Makaroa Heliport</p> <p>Dunstan Hospital Heliport</p> <p>Oamaru Hospital Heliport</p> <p>Dunedin City Heliport Dunedin Hospital Helipad</p> <p>Mainly MEDEVAC HLS. Rotary operates from airports for C2, fuel and Life Support. Expedient HLS are available all over the region.</p> <p>https://ourairports.com/big-map.html?airport=NZ-0022</p>	
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Available Rotary Wing Aircraft

Ongoing audit to be completed by Dec 24.



4.5 Support Plan 5: Logistics

References:

F. NEMA CATPLAN Handbook V0.3

L. DGL 17/15 Logistics in CDEM

N. AF 8 SAFER Framework

Logistics encapsulates the supply chain systems, from supply, procurement, transport to warehousing and distribution, which enable the movement of goods and people within and into New Zealand.

A catastrophic Alpine Fault event will render standard commercial logistics arrangements within the impacted area inoperable due to breaks in the lifeline utilities system. This will require alternative arrangements to be made for sea, air and land movements. Two specific problems exist in Otago:

- The BAU supply chain model is 'just in time' resulting in limited stockholdings within regions.
- Duplicate routes to Inland Otago do not exist. Once the roading network is impacted by an Alpine Fault earthquake (and aftershocks), alternative forms of transport must be utilised until such times as Main Supply Routes can be opened.
- The problem is most acute in Queenstown where the combination of limited stocks (7-10 Days of Supply) and closed roads will lead to acute shortages of essential food and non-food items.

District plans which address the operational requirement to safeguard extant supplies and Otago CATPLAN (AF) MASS RELIEF operations aim to address this issue during the critical first three weeks.

This support plan describes the regional logistics requirements which will enable regional CDEM response activities during the Sustained Response phase which will last for the first few months.

The intent is to meet the needs of the response until the private sector and government agencies standard operations can, once again, sustain the daily requirements of the impacted population.

Assumptions

The requirement for movement of response personnel, equipment and supplies into impacted regions and people who need to leave will exceed the transportation options available, requiring government coordination and prioritisation. This will be undertaken at the Otago GECC with careful coordination with NCMC and local EOCs to ensure national enablers are optimised to meet community needs.

Commercial supply chain companies are the most effective logisticians with the skills and assets to provide efficient logistics solutions.

Government assistance will be focussed on bridging the gaps in the supply chain caused by the catastrophic event which the commercial sector cannot navigate themselves.

At least one National Assembly Area—probably in Christchurch—will be operable allowing an emergency supply chain to establish.

The maintenance of the extant Main Supply Route SH1 from Christchurch to Dunedin will be a national response objective. The delivery of requisite supplies from Christchurch to Dunedin by road will be a national responsibility.

Similarly, the distribution of good by air, sea and rail to Dunedin will be a national responsibility.

Logistics arrangements to support the immediate needs of the response is critical. However, care must be taken to ensure sufficient logistics assets and personnel are enabled to continue to supply the needs of the non-impacted areas of Otago.

Key Logistics Concepts for Otago

Secondary hazards may impact the seaport viability due to potential sedimentation impacting harbour depth. Arrangements will be made for maritime surveys to clear harbour approaches to Port Chalmers and Dunedin.

Surveys of other regional key logistics nodes such as Dunedin Airport (DUD) and Queenstown Airport (ZQN) are pre-arranged.

A survey of the East Coast rail line (Christchurch-Oamaru-Dunedin-Balclutha-Gore-Invercargill-Bluff) is similarly required. It will be coordinated with KiwRail via Otago GECC (Lifelines and Logistics).

All sub-national strategic transport assets will be designated as Critical Resources and managed centrally at the GECC to ensure an optimal operational effect. This includes all regional aviation assets and all fuel supplies.

An Otago Regional Assembly Area (RAA) will be established in Dunedin by D+2. Based on the existing Foodstuffs South Island Distribution Centre (DC) at Midland Street, the intent is to create the conditions where BAU distribution practices are followed by commercial sector experts.

This will be achieved initially during MASS RELIEF operations when CDEM establishes the means by which commercial transport operators can continue to supply goods to wholesalers and supermarkets. This requires GECC to coordinate with all Logistics partners and NZTA to ensure a prioritised re-opening of the regional road network. Otago CATPLAN assessed Priority Routes are:

- SH1 Oamaru-Dunedin-Balclutha-(Gore).
- SH6 Kingston-Frankton via Devils Staircase.
- SH8 Oamaru-Tarras via Lindis and SH8A Tarras-Wanaka.
- SH87 Outram-Middlemarch-Kyeburn and SH85 Kyeburn-Alexandra.
- SH86 Allanton-Dunedin Airport.
- SH88 Port Chalmers-Dunedin.

Located in Southland, but critical to MASS RELIEF, sustained logistics operations and road evacuation of Queenstown (OP WAKATIPU CONVOY) is SH94 Gore-Lumsden and SH6 Lumsden-Kingston.

Logistics-related Actions by Phase

Prelim Phase (Reduction and Readiness) (Now to Alpine Fault Event Day)

Action	Responsible	Remarks
Agencies and CDEM Groups identify essential supplies and equipment	EM Otago Planner and District EMAs.	By Dec 24
Confirm current logistics operators (airports, seaports, distribution centres, transportation companies) pre-event status.	EM Otago Planner.	By Dec 24
Socialise CATPLAN (AF) with logistics operators.	EM Otago Planner.	By Dec 24
Request information on transport operators' capacity and capability to assist official response.	EM Otago Planner.	By Dec 24
Confirm key logistics nodes capability and capacity.	EM Otago Planner.	By Dec 24

Phase 1 (Immediate Response) (E to E+48)

Action	Responsible	Remarks
Establish GECC Logs	GECC RM and Logs Manager.	NLT E+6
Move key staff/teams by road.	GECC Logs	From E+8
Establish liaison at Dunedin Distribution Centre (DC).	GECC Logs	NLT E+24
Assess ports/airfields/key routes	Agencies BCP owners.	NLT E+48
Collect T3+ Shelter materiel and deliver to MASS RELIEF Air Loading Point (MR ALP) at Taieri Airfield.	GECC Logs	NLT E+48
Collect designated food and fuel items and deliver to Logs Base KINGSTON and MASS RELIEF Air Assembly Area (MR AAA) Alexandra Aerodrome.	GECC Logs	Commencing NLT E+48
Establish MR ALP Taieri Airfield	Comd OP MASS RELIEF	By E+24
Move key staff/teams by air	GECC Logs	From E+24
Establish Logs Base KINGSTON	NZ Red Cross Dunedin	By E+48
Establish MASS RELIEF Air Assembly Area Alexandra Aerodrome	EM Otago Readiness & Response Advisor	By E+48
Commence clearance of MSR SOUTHLAND and MSR CANTERBURY	NZTA	By E+48

Phase 2 (Coordinated Response) (D+3 to D+7)

Action	Responsible	Remarks
Deliver MASS RELIEF	GECC Ops	D+3 to D+21
Continue to move key staff/teams by road and air	GECC Logs	From D+3
Clear MSR SOUTHLAND and MSR CANTERBURY	NZTA	By D+14
Ratify/Develop CATPLAN (AF) Logs Plan	GECC Planning and Logs	By D+7
Support NCMC OP WAKATIPU VITTLES (Air evac of QT)	GECC Logs	D+3 to D+7
Support GECC OP WAKATIPU DYNAMO (Lake evac of QT)	GECC Logs	D+4 to D+8
Be Prepared To support national priorities	GECC Logs	Throughout

Phase 3 (Sustained Response) (W+2 to M+3)

Action	Responsible	Remarks
Transition MASS RELIEF to enduring Logs Plan (when MSR SOUTHLAND and MSR CANTERBURY are open)	GECC Planning, Ops and Logs	Target: D+15.
Otago Regional Assembly Areas (RAA) open: Road: Midland St/Edgar Centre Dunedin. Air: DUD Airport, Momona. Sea: Port Chalmers and Port Dunedin. Rail: Dunedin/Mosgiel.	GECC Logs	D+8
Coordinate prioritised movement of freight and personnel.	GECC Logs	From D+8
Develop Logs Plan with emphasis on Long Term and Transition to Recovery measures: <ul style="list-style-type: none"> • Develop FMCG network. • Develop Logs Nodes in Omarama, Alexandra and Kingston. • Consider shipment and rail movement of construction materials through Bluff and Gore. 	GECC Planning	By M+1.

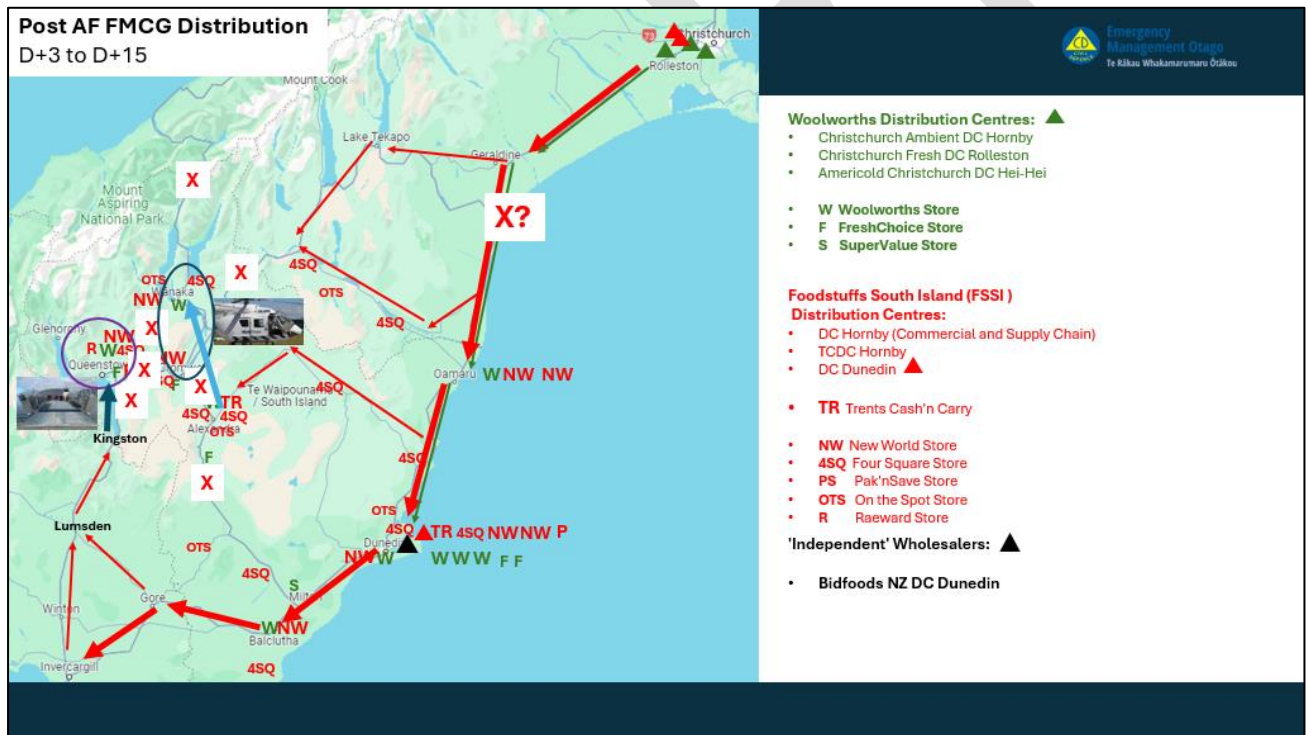
Phase 4 (Transition to Recovery) (After first few months)

Action	Responsible	Remarks
Execute Logs components of Transition to Recovery Plan.	GECC Logs	As required.

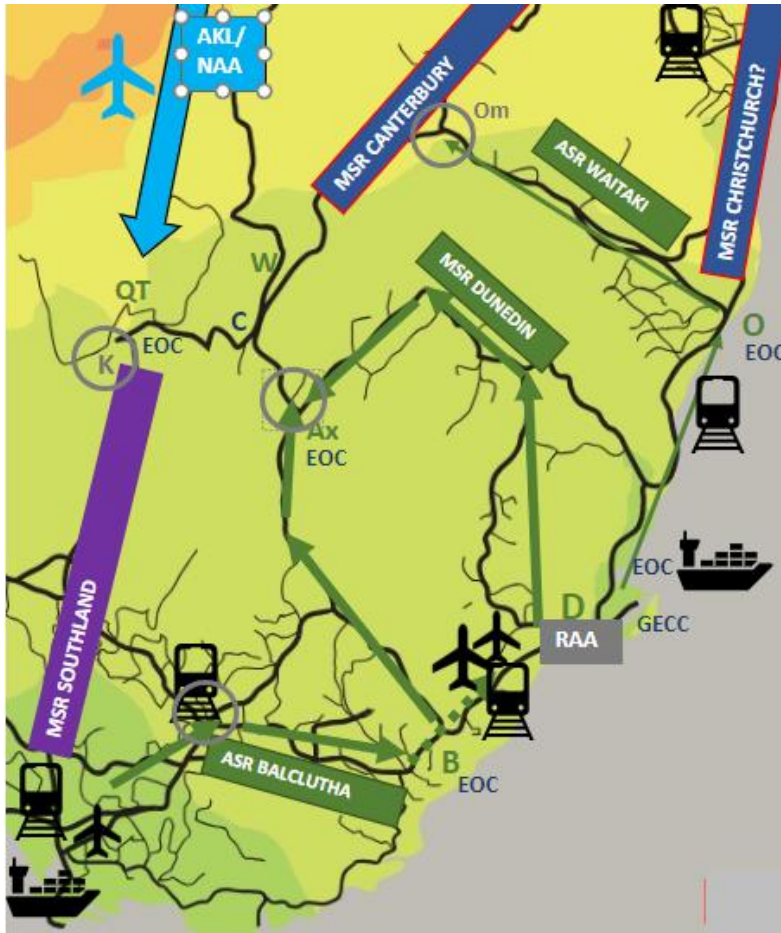
Sequel (Recovery) (Ongoing for years)

Action	Responsible	Remarks
Execute Logs components of Recovery Plan.	Assigned agencies.	As required.

Otago FMCG Distribution (D+3 to D+15)



Otago CATPLAN (AF) Response: Logistics Footprint by M+1



4.6 Support Plan 6: Lifelines (Critical Infrastructure)

References:

- Otago Lifelines Programme: Vulnerability and Interdependency Study
- AF8 Regional Hazards Workshop June 2021
- Otago Lifeline Utility Coordinator Protocols 2023
- Lifeline Utilities and CDEM DGL 16/14

Lifelines are defined as:

“Lifeline utilities are entities that provide essential infrastructure services to the community. For example, water, wastewater, transport, energy and telecommunications. These services support communities, enable business, and underpin the provision of public services.”

What Lifelines should do:

Lifeline utilities must be able to continue functioning to the fullest possible extent during and after an emergency. Even though this may be at a reduced level.

Lifeline utilities must be resilient to emergencies. Their emergency planning should integrate with wider CDEM planning. This is only possible through cooperative planning.

The CDEM Act 2002 does not impose new business requirements. It does not change responsibility for risk, asset and emergency management. The emphasis is on ensuring lifeline utilities provide continuity of operation, particularly where their service supports essential CDEM activity.

What should individual lifeline utilities do?

- Plan for and be able to put in place procedures to ensure continuity of services.
- Understand the full range of hazards that could impact their operations.
- Consider external risks, including dependence on other sectors and outsourcing arrangements.
- Confirm and exercise risk assessment and continuity plan internally and externally.
- Forecast likely demand for services, including CDEM activities in response.
- Agree disconnection and restoration priorities with CDEM Groups.
- Understand the consequences of emergencies.
- Understand roles and responsibilities within emergency management.
- Establish planning and operational relationships with CDEM Groups.
- Take part in regional lifeline utility activities such as Lifelines Groups.
- Take part in cross-sector regional activity.

Lifeline utilities should help the National Emergency Management Agency and CDEM Groups:

- Review the consequences of national or regional hazards.
- Clarify responsibilities, roles.
- Clarify activity coordination.

Electricity

To be completed later.

Fuel

The main storage for fuel is at the port in Dunedin, if power becomes compromised, the terminal requires a 300kVa generator to operate. Currently, the operator does not have this sized generator on site.

All lifelines require fuel for plant and vehicles for service personnel. If electricity is affected, diesel supply will be critical to operating backup generators and thus becomes more important. Even those sites with on-site diesel storage typically only hold a few days' supply. Refuelling of generators deployed to other critical facilities is likely to become a significant logistic issue.

In the Otago region, no fuelling stations (BP, Z, Caltex) have onsite generators to pump their fuel, and only a few can plug in a generator. Fuel would have to be lifted from the underground storage tanks by either pump trucks or hand pumps.

Telecommunications & Broadcasting

The Telecommunication Forum (TEF) coordinates the telecommunications sector during emergencies and will request additional resources from Local Civil Defence and/or NEMA if required.

Roading & Transport

Priority roads have been identified for reopening following a large seismic event with staged levels of access and all reasonable resources will be focused on those locations. Most utilities are dependent on passable roads to repair/replace/replenish their operations, as well as moving tourists and day-trippers out of areas such as Queenstown.

Queenstown Airport has commissioned a geotechnical assessment of its runway and facilities, though these will require assessment before operations can commence. The airport has a large generation and 30k L diesel tank for backup power and multiple *Starlink* nodes.

Dunedin Airport is not posed to be significantly affected by a large seismic event but will require runway and building assessments to commence operations.

The KiwiRail network is primarily located on the eastern coast of the South Island, this may be affected in the Canterbury region affecting services to Otago.

Port Otago will be a key location following a large seismic event, structural assessments will be required and a possible survey of the channel bed for safe passage of large vessels.

3 Waters

Back-up generators are not in place for some districts and will be reliant on access generators and fuel supply. Road/rail or air access will be required for the movement of critical/strategic spares.

Telecommunications will be critical if Chorus can provide/ is needed for SCADA systems etc. There will be a need for waste management requirements regarding debris clearance. No alternative discharge without ORC consenting to this.

Waste Management

A large seismic event is likely to create significant amounts of debris and may require specific sites to be established for the management of waste streams. The operation of waste facilities may also be impacted by the loss of connecting roads, electricity, and other services. Debris management is critical to the recovery of impacted communities. Often the debris created by emergencies requires specific processes and management to ensure the risk to people and environment is minimised. A region-wide debris/waste management plan is in development by multiple councils and will be fed into the CATPLAN when complete. The plan will identify processes for different waste streams and ensure effective management of assets in response and recovery.

FMCG

FMCG are heavily reliant on the roading network for stocking their markets (Distribution centres, Supermarkets, superettes etc). FMCG providers need to plan and engage with national and local roading authorities to define which roads will be prioritised and reinstated following a large seismic event and plan their alternate routes for these. Alternate means will be required to get FMCG's into isolated areas until routes are reinstated.

Many supermarkets do not have backup power and telecommunications, though planning and investment is occurring in this space.

As seen in COVID times, panic buying was experienced, and it is fair to say that this will again happen following a large seismic event. Even with extensive preparedness messages from emergency management and councils to have approximately 3-7 days of supplies (food & water), due to the large tourist and transient numbers, particularly in Central Otago and Queenstown Lakes Districts, there will be a large proportion of the community that does not have adequate stores for multiple days.

Finance

The financial sector is coordinated by the Reserve Bank of New Zealand (RBNZ) in an emergency. RBNZ is required through the Reserve Bank of New Zealand Act 2021 to maintain the financial system within New Zealand and enable the availability of cash. In an emergency, the RBNZ will coordinate with the financial providers to ensure that the financial systems within New Zealand can operate as soon as possible.

Given the security requirements for the provision of cash into society, many of the arrangements for emergencies are of a high degree of sensitivity and unable to be made public. However, in the main the RBNZ will work with the banking and financial sector to:

- Secure assets and cash reserves.
- Provide alternate cash points for public.
- Provide alternate communications to enable cashless transactions.
- Provide access to smaller denominations of currency for retailers (e.g. change)
- Provide for the transit of cash.
- Provide advice to the banking sector.

Many pre-existing contracts exist between the RBNZ and providers to enable the above to occur quickly in BAU and in an emergency.

Otago Region Sector Interdependencies (2024):

Where scores were not provided at the regional level (greyed fill), these have been updated with the relevant score from the 'Critical Customers' section of the National Lifelines Vulnerability Assessment (p. 21). Please note that the scoring is in reverse order to the national study – see key at bottom of the page. Where an (R) is added, this was used to highlight a service that is important to that lifeline during recovery activities (+3 days onward).

Utility Dependency	→	Potable water services	Stormwater services	Wastewater services	Electricity Generation	Electricity Transmission (Grid)	Electricity Distribution (Local)	Telecommunications	Roading Networks: State Highways	Roading Network: Local Authority	Rail network	Airports	Ports	FMCG / Finance	Waste Management	Fuel	Commentary / Additional Notes	
Service being provided	↓																	
Potable water services						1	1	1	1	1	2	2	2			1	Back-up generators are in place, though not in all districts or pump stations, and is reliant on access to fuel supply. Road/rail/air access required for movement of critical/strategic spares. Telecoms critical if Chorus can provide/needed for SCADA systems etc. Some waste management requirements regarding debris clearance. No alternative discharge without ORC consenting.	
Stormwater services						1	1	1	1	2	2	2		3	1			
Wastewater services	1					1	1	1	1	2	2	2		3	1			
Electricity Generation	1	3	2	*	1	1	1	1	1	3	2	1 (R)	2		1	Black start can be achieved using water through turbines (i.e., generation is required to create generation). Will not work in drought conditions if water reserves are low. 'Islands' method.		
Electricity Transmission (Grid)	3	3	2	1	*	1	1	1	1	3	2	1 (R)	2		1			
Electricity Distribution (Local)		3	2	2		1		1	1	3 (R)	1	1 (R)	2		1	Transmission requires inter-regional transmission to be functional to create stability/balance of supply/frequency. All distribution sites have restricted operational capability without telecoms. Road access is critical for pylons. Poles can be moved by rail but still require road movements.		
Telecommunications			3	2 (R)			2	*	2	2	2	2	3 (R)	1		1		Access to pits and manholes required (wastewater). Generators and batteries are in place but making it to 3 days is tight. (Relates to Chorus network). If the fibre link is lost, multiple systems are inoperable.
Roading Networks – State Highways		3	3	2			2	2	*	2	1	1	1	1	1	1		Potable water is required for the welfare of contractors – not something stored in bulk across region by operators. Some roles can be performed without electricity.
Roading Networks – Local Authority		3	2	2			2	2	2	*		3	3	1		1		Access to local roads assumes that the state highway network is intact. Waste Management need references ability to move debris.

Rail Network	3	3	3			3	3	3	3	*	3	2	3	3	3	Not in attendance at the workshop. The majority of scores were taken from a national study. Note: all transport modes are reliant in some manner on inter-regional counterparts to be functional.
Airports	3	3	3			3	3	3	3	3	*		2	3	1	
Ports		3	3			2	2	1	2	3		*	3		2	
FMCG / Finance & Cash	1	2	1			2	2	1	1	2	2	2	*	1	1	Most supermarkets can operate for 24-48 hours where backup generation is in place, however, fresh goods are reliant on suppliers being able to move inter-regionally.
Waste Management	3	3	3			3	3	1	1			3 (R)	3		1	Taken from the national vulnerability study, adjusted during the workshop.
Fuel	1	1	1			1	1	1	1			1	2		*	Many terminals have no access to 300kVa generators, Telecoms rely on power at the site, potable water needed for safety showers, and reticulated water for firefighting (although bulk store onsite).
Health	2	3	1				1	3	1	3	1	3	1	2	1	Heating supplied from steam: critical for keeping the hospital running, FMCG for movement of pharmaceuticals, waste management for bio/chem waste.
Fire and Emergency	1					2	1						1	3 (R)	1	Generator backup at many sites, limited potable water, airports needed for long-term resourcing, nationally coordinated deployments and gear/PPE
New Zealand Police	1					2	1	2	2		1		3 (R)		1	Limited potable water, and airport required for personnel movements/nationally coordinated deployments.

Scoring / Key:

Critical for service provision	1	Critical, but some backup capability in place	2	Not critical for the service to function	3	Not applicable to service	Reliant on inter-regional links or reliant on itself	*
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As part of the socialisation of this draft, lifelines will be engaged with the aim of detailing their likely response to this event by phase. Te results will feature in CATPLAN V1.0.

4.7 Support Plan 7: Health

The obligations of the Ministry of Health and all other health sector agencies to undertake the planning necessary to provide health and disability services in the event of a CDEM emergency is discussed in Support Plan 1 C4, under Health and Disability Services.

The intent of Southern District is to respond to an Alpine Fault event by establishing its own internal response structure which features the Southern Health Emergency Coordination Centre Emergency and a series of local Emergency Operations Centres located at local hospitals. Southern Health ECC will provide suitable liaison with both Otago and Southland CDEM ECCs.

The health Sector CONOPs is outlined in the attached slides. It recognises the scenario in which hospitals are overloaded, roads closures prevent widespread ambulance access, and many medical staff will not have access to their usual place of work. The intent is to provide initial medical services wherever people congregate around Primary Health Units in the community. This includes General Practices, Pharmacies, Neighbourhood Health Hubs etc. Such facilities will treat with the goal of having patients remain in situ rather than *medevac* to a next-level health facility.

The specific response by each Health Sector to each CATPLAN (AF) phase is outlined in the attached slides.

Te Whatu Ora
Health New Zealand

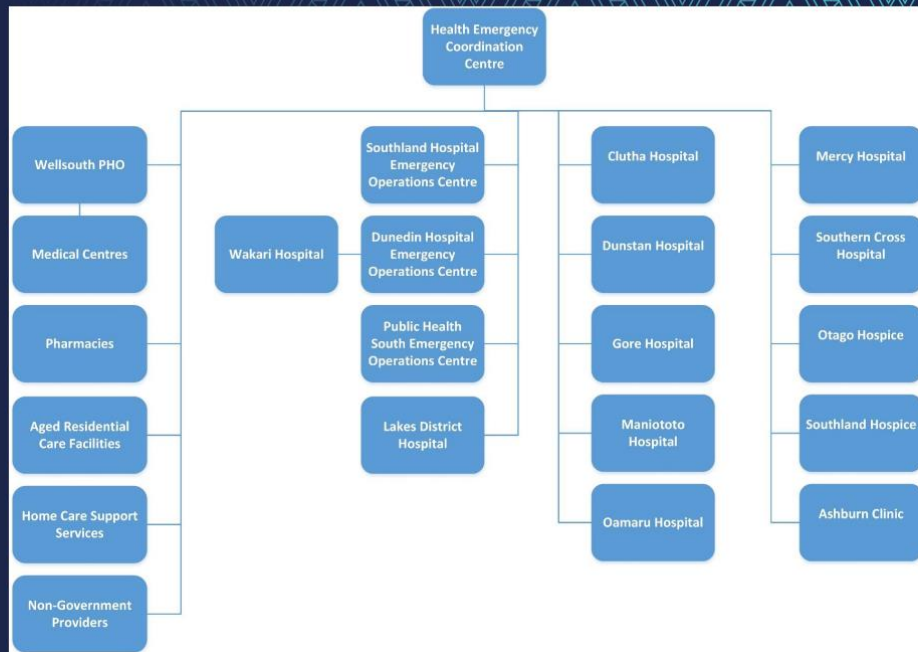
Southern District

Catastrophic Planning Brief

Our district

- Largest geographic health district in New Zealand
- Covers all of Otago and Southland
- 3 Te Whatu Ora Hospitals
- 4 Rural Hospitals
- 3 Private Hospitals
- 65 Aged Residential Care Facilities
- 90 GP practices lead predominantly by WellSouth
- 85 Pharmacies

Te Whatu Ora Southern CIMS Structure



4.8 Support Plan 8: Welfare Delivery

Welfare in the context of CDEM refers to emergency welfare services and is the function responsible for minimising and addressing the potential and actual consequences of an emergency on individuals, families, whānau and communities.

The provision of emergency welfare services by a range of stakeholders is undertaken across the 4Rs (risk reduction, readiness, response and recovery). Welfare services are delivered at the local level and coordinated and supported at the regional and national levels.

In Otago, the Group Welfare Manager chairs the Welfare Coordination Group (WCG). The WCG has defined roles in readiness and recovery as well as in an emergency.

In an emergency, the role of the WCG is to ensure that each member agency operates as a coordinated collective, to deliver effective welfare services. They do this by:

- Reporting on their progress in coordinating their specific sub-function.
- Receiving information from other agencies to ensure coordination.
- Receiving information on the wider response (via the Group Welfare Manager), to assist with setting targets and directing activities as the emergency progresses.

The Otago CDEM Group is the lead agency for the following welfare services:

- Registration.
- Needs assessment.
- Household goods and services.
- Shelter and accommodation (shelter and emergency accommodation).

For a catastrophic event this model will not support the scale of service and resource delivery that will be required.

During an Alpine Fault response, the Otago Group Welfare Manager will convene the WCG, to establish the welfare architecture suitable for a large, complex and enduring event. In this context, welfare is viewed part of the Impact Assessment continuum described at Support Plan 2.

Whilst the WCG structure will be established during the first couple of days, it is anticipated that the business of *individual* Welfare registration and Needs Assessment will not begin in earnest at district level until at least a week or so has elapsed.

It is intended that MASS RELIEF operations, cued by district-level Rapid Impact Assessments, will meet any immediate life support needs in the interim.

Convening the WCG early in the Alpine Fault response will allow the Otago Group Welfare Manager to draft a response-specific, and enduring, Welfare Delivery Plan by the end of the first week.

4.9 Support Plan 9: Evacuation Operations

- a. PLAN WAKATIPU VITTLES (Mass evacuation of Queenstown by air).
- b. PLAN WAKATIPU DYNAMO (Mass evacuation of Queenstown by lake).
- c. PLAN WAKATIPU CONVOY (Mass evacuation of Queenstown by road).

References:

DGL 18/15 Emergency Movement Control
DGL 07/08 Mass Evacuation Planning Guideline

DRAFT

Otago CATPLAN (AF) PLAN WAKATIPU VITTLLES

Ground:

Queenstown International airport (ZQN) at Frankton.

Situation:

20,000+ mainly Foreign National visitors isolated in QT for AF M8.2 earthquake. Many displaced from hotels and just wanting to go home. Some injured/traumatised. Many without belongings incl. cash and passports. Evac of FNs from QT designated as a national objective.

Mission:

NCMC is to evac 20,000 DPs from ZQN to designated Places of Safety by D+7 IOT reduce the scale of the food emergency in QT.

Intent:

Purpose: Reduce 'mouths to feed' for local EOC and Otago GECC.

Method: Use pre-sited EMAT DCC as an EHC. NCMC coords aircraft and pax lists with EHC. DPs coordinated with QLDC EHC and Welfare Centre.

Endstate: 20,000 visitors safely evacuated to Place of Safety, with ongoing travel coordinated with Consular staff.

Execution:

Prelim:

NEMA EMAT coord with EM Otago to estb permanent DCC container at ZQN.

Response Ph 1 (By D+2):

- EMAT deploy and estb EHC (Air).
- QLDC EOC cfm status of ZQN and opens Welfare Centres to register DPs.

Response Ph 2 (D+3 to D+7):

- Conduct Evac.

Response Ph 3 (D+7 to D+9):

- Conclude evac and close EHC and DCC.

Sequel:

AAR and planning to confirm further evac and Logs requirements under GECC CATPLAN (AF).



Coord Instr:

EMAT provide LNO to QLDC EOC.

EMAT to coord with GECC Ops via D4H.

Admin and Log:

EMAT to self-deploy self-contained for 7 days. Additional spt avail via Otago ECC (Logs).

Command & Sigs:

Chain of Command: NCMC, EMAT, Otago GECC, QLDC EOC.

Comms Plan: EMAT require Starlink and D4H in addition to handheld VHF and mobile voice.

Otago CATPLAN (AF) PLAN WAKATIPU DYNAMO

Ground:

20 NM from QUEENSTOWN Town Wharf to KINGSTON Wharf.
 140 km SH6 KINGSTON to INVERCARGILL Airport (IVC)
 191 km SH6, SH94 and SH1 from KINGSTON to BALCLUTHA Reception Centre.
 78 km SH1 BALCLUTHA to DUNEDIN Airport (DUD) (and DUNEDIN).

Situation:

20,000+ mainly Foreign National visitors isolated in QT foIAF M8.2 earthquake.
 Many displaced from hotels and just wanting to go home.
 Some injured/traumatised. Many without belongings incl. cash and passports.
 Urgent Evac of FNs from QT is required.
 NCMC designated Air Evac a national objective.
 Otago GECC will conduct Lake Evac - assigned to NZDF.

Mission:

GECC Ops (NZDF) is to BPT evac 5,000 DPs from QT to designated Places of Safety by D+7 IOT reduce the scale of the food emergency in QT.

Intent:

Purpose: Reduce 'mouths to feed' for local EOC and Otago GECC.

Method: Collect DPs at EHC (Lake). Use existing lake operators to ferry DPs from SPOE QT to SPOE KINGSTON for onward movement by road to arranged flights in IVC and DUD and/or to Reception Centre BALCLUTHA (for those requiring onward movement to Otago and other NZ destinations).

Endstate: 5,000 visitors safely evacuated to Place of Safety.

Execution:

Prelim:
 EM Otago socialise concept with NZDF. NZDF develops CONPLAN.

Response Ph 1 (By D+2):

- NZDF staff EHC (Lake) at QT Town Wharf SPOE.
- GECC Logs Base estb at KINGSTON SPOD.
- QLDC EOC coord handover of DPs at EHC (Lake).

Response Ph 2 (D+4 to D+7):

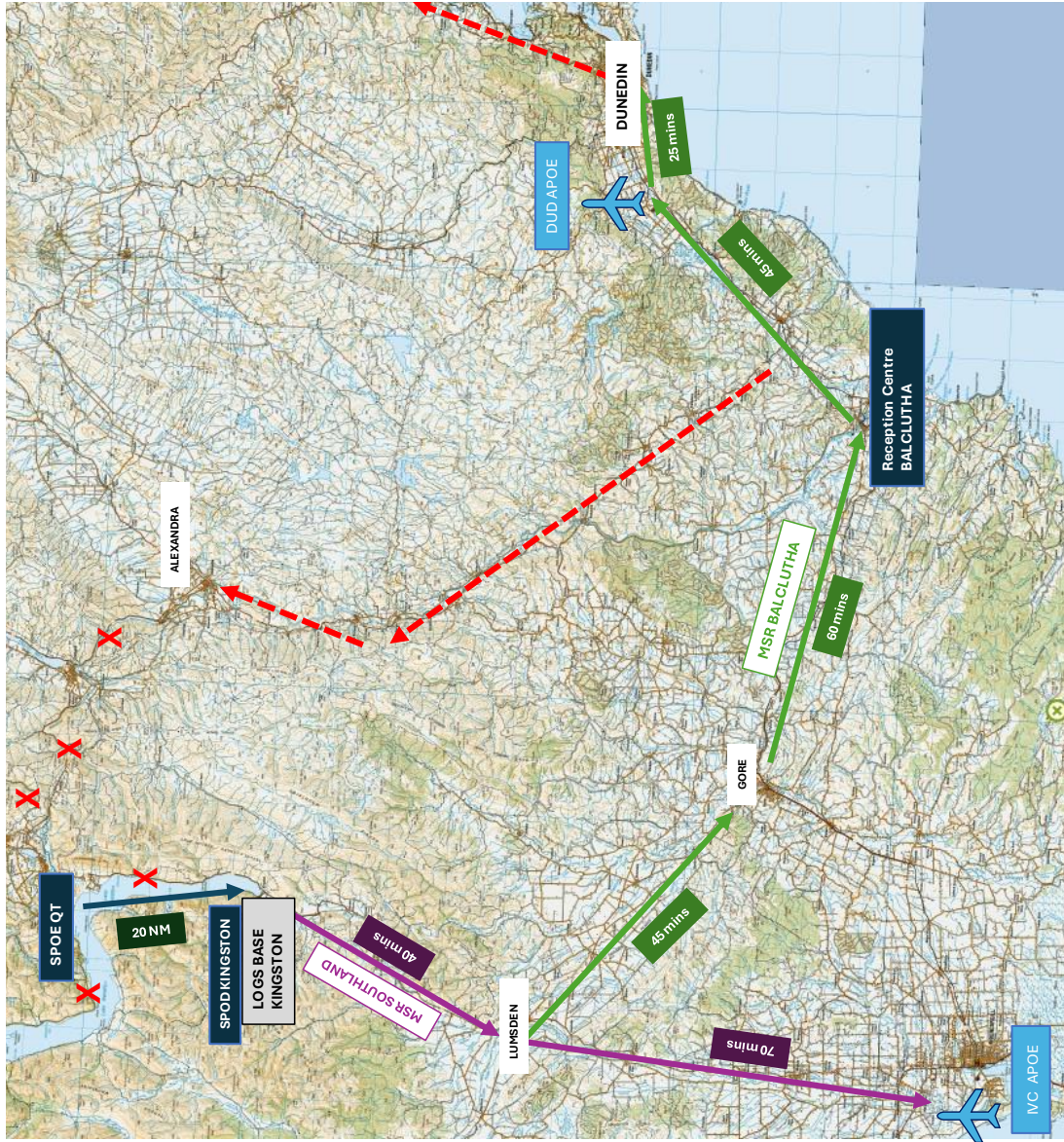
- NZDF Conduct Evac.

Response Ph 3 (D+8):

- Conclude evac and close EHC and Reception Centre.

Sequel:

AAR and planning to confirm further evac and Logs requirements under GECC CATPLAN (AF).



Otago CATPLAN (AF) PLAN WAKATIPU DYNAMO

Coord Instr:

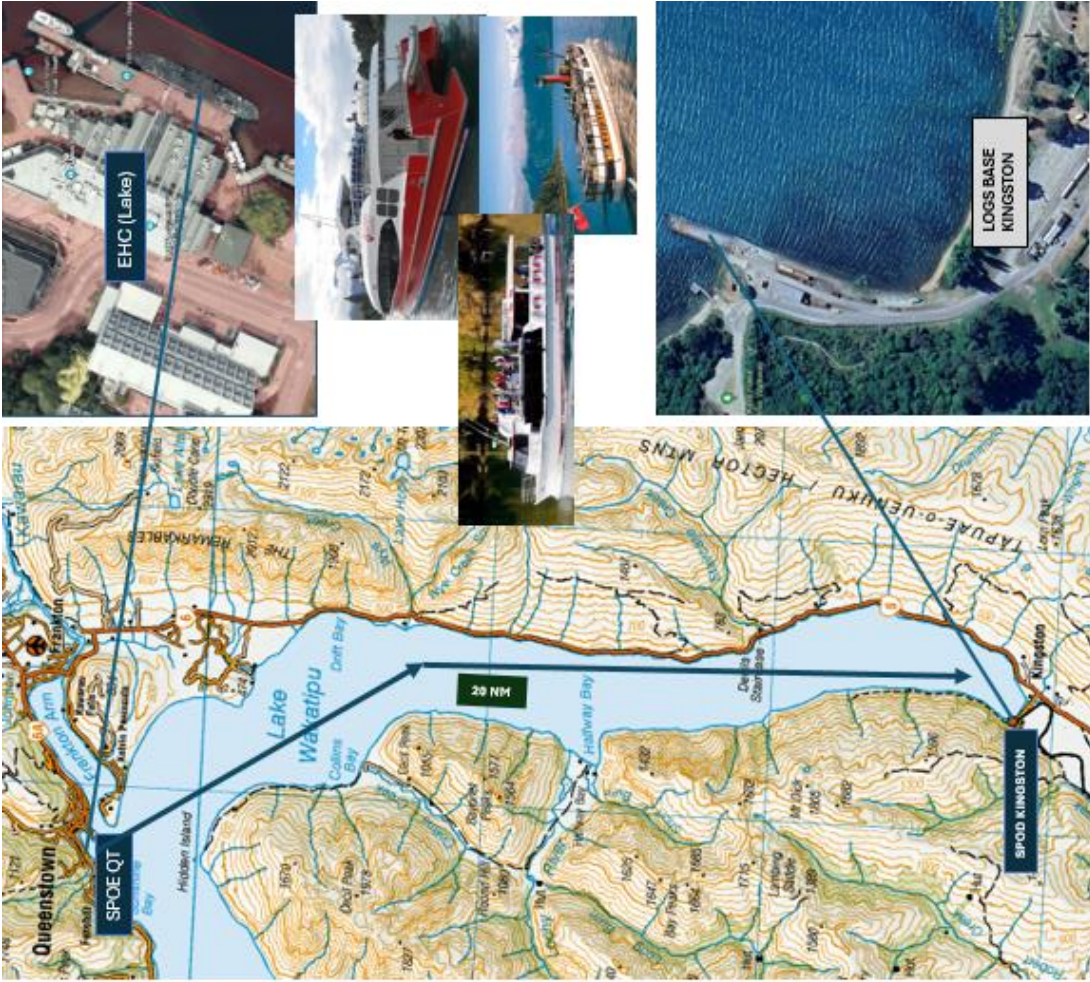
NZDF provide LNO to GECC.
 TG DYNAMO C2 co-loc at LOGS BASE KINGSTON with HQ MASS RELIEF
 Comd Task Group DYNAMO with 4 x Task Elements: EHC TE, Lake Ops TE, Road Convoy TE, Air Movement TE, Reception Centre TE.
 C2 and Lake Safety provided by Coastguards and RINZNR.

Admin and Log:

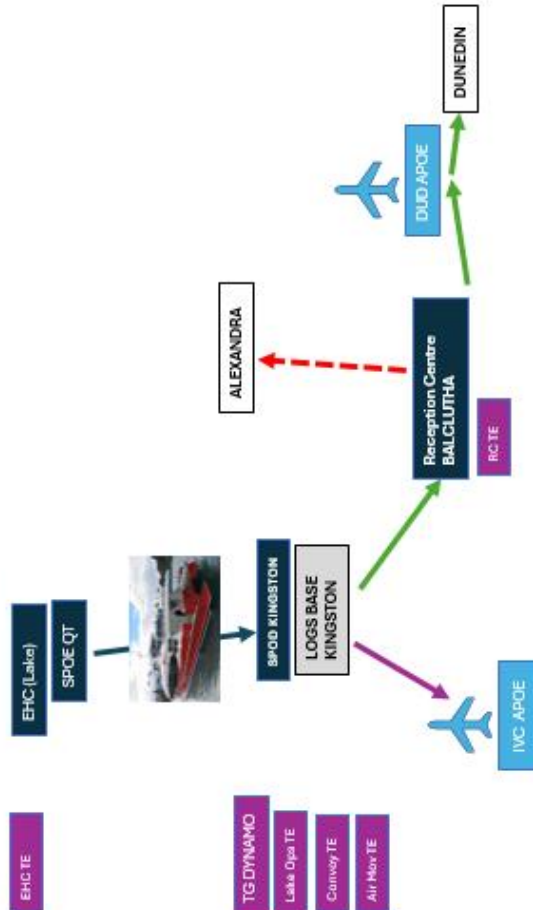
Deployed DP DYNAMO pers to be self-contained for duration.
 Field kitchen estb at LOGS BASE KINGSTON for DYNAMO staff and DPs in extremis.
 Emergency accom avail at LOGS BASE KINGSTON (100 beds at KINGSTON Top 10 Camping plus 200 sleeping spaces using
 Kingston Flyer carriages and Kingston Golf Club.)
 Additional spt avail through Otago ECC (Logsl).

Command & Sigs:

Chain of Command: Otago GECC, Comd NZDF TG DYNAMO, QLCD ECC.
 Comms Plan: HQ TG DYNAMO requires Starlink and DAH in addition to handheld VHF and mobile voice. VHF freqs TBC.



C2 Evacuation Chain



Otago CATPLAN (AF) PLAN WAKATIPU CONVOY

Ground:

40 km from FRANKTON to KINGSTON via Devil's Staircase,
191 km SH6, SH64 and SH1 from KINGSTON to BALCLUTHA Reception Centre,
78 km SH1/BALCLUTHA to DUNEDIN.

Situation:

20,000+ mainly Foreign National visitors isolated in QT for M8.2 earthquake.
First week saw intensive evacuation ops by air and lake to reduce this number significantly.
Many NZ residents have been stranded in QT and just want to self-drive to their homes/friends and family and other safe locations.
Otago GECC will conduct a road evacuation as soon as NZTA open SH6/ Devil's Staircase.

Mission:

GECC Ops is to BPT evac 2500 DPs from QT to designated Places of Safety, on order, IOT reduce the scale of the ongoing CDEM response.

Intent:

Purpose: Ease DP numbers-especially NZ residents who want to travel home by own vehicle.

Method: Muster DPs at EHC (Land). NZTA contractors manage convoy packets over expedient repairs to a Release Point in KINGSTON. Self-drive to preferred locations from there. Recovery Centre available in BALCLUTHA for those with complex needs.

Endstate: 2500 NZ residents safely evacuated to Places of Safety (home, locs/friends and family etc).

Execution:

Prelim:

Coord MSR SOUTHLAND repair timings with NZTA.
Open EHC (Land) and muster DPs by D-1.
Clutha District Council CDEM staff open Recovery Centre BALCLUTHA.

Response Ph 1 (No Move Before D+15):

- Conduct convoy operations of priority vehicles (commercial and private) to KINGSTON Release Point.

Response Ph 2 (Timings TBC):

- Conduct convoy operations of approved private vehicles to KINGSTON Release Point.

Response Ph 3 (Timings TBC):

- Conduct convoy operations of remaining vehicles (incl coaches etc.) to KINGSTON Release Point.

Sequel:

AAR and planning to confirm further evac and Logs requirements under GECC CATPLAN (AF).

Coord Instr:

Task Group CONVOY C2 loc at LOGS BASE KINGSTON.
Comd TG CONVOY with 4 x Task Elements: EHC TE, Convo TE,
Release Point TE, Recovery Centre TE.

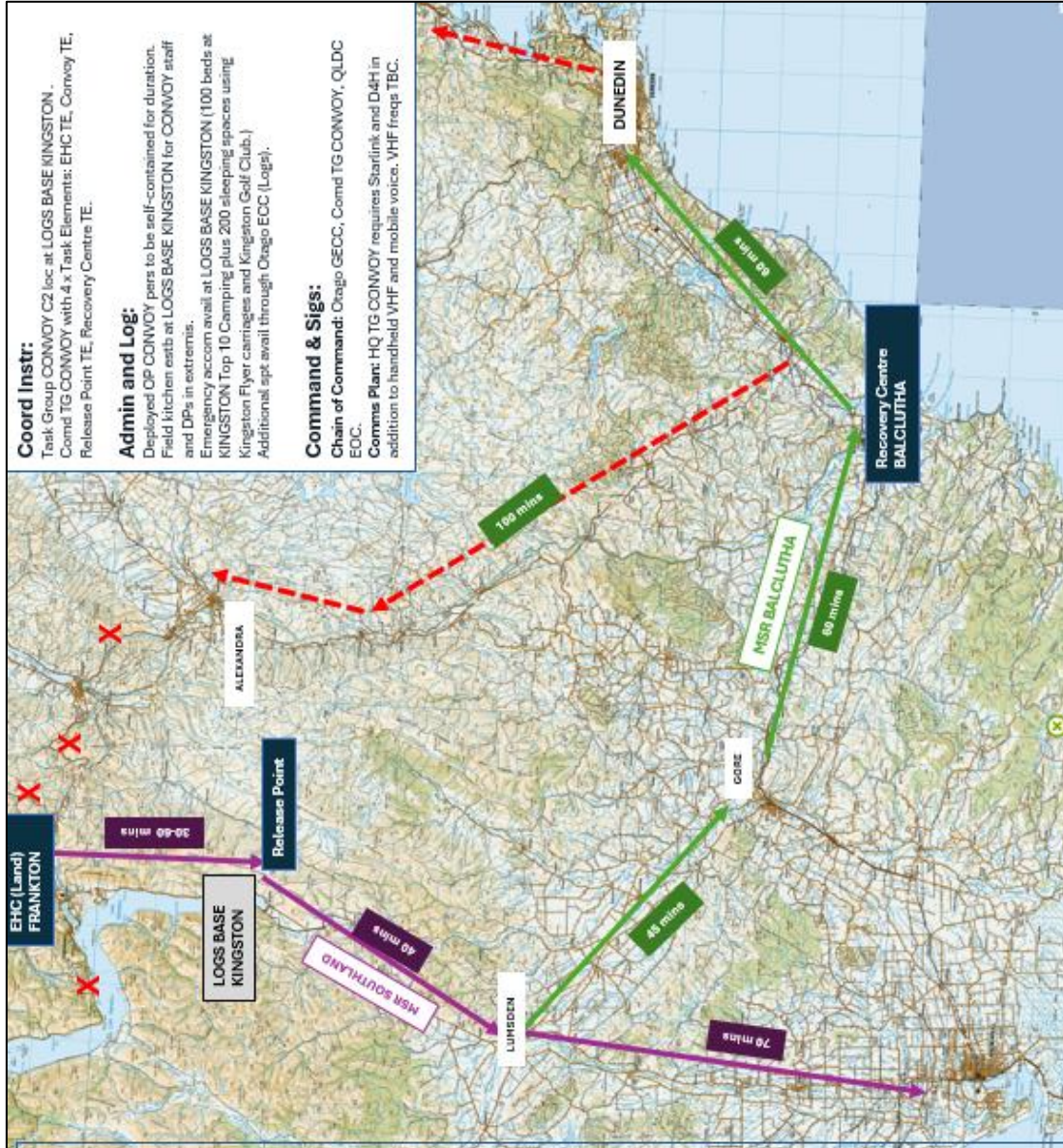
Admin and Log:

Deployed OP CONVOY pairs to be self-contained for duration.
Field kitchen estb at LOGS BASE KINGSTON for CONVOY staff and DPs in extremis.
Emergency accom avail at LOGS BASE KINGSTON (100 beds at KINGSTON Top 10 Camping plus 200 sleeping spaces using Kingston Flyer carriages and Kingston Golf Club.)
Additional apt avail through Otago ECC (Logg).

Command & Sigs:

Chain of Command: Otago GECC, Comd TG CONVOY, QLDC EOC.

Comms Plan: HQ TG CONVOY requires Starlink and D4H in addition to handheld VHF and mobile voice. VHF freqs TBC.



Section 5 Annexes:

- A. EM Otago CATPLAN Presentation Slides.
- B. Glossary.

DRAFT

CATPLAN (Alpine Fault) Presentation Slides

DRAFT

D+1 to D+2
Most Likely Scenario:

Frequent large aftershocks and secondary hazards hinder the response and make conditions dangerous.

Fatalities and injuries, mainly due to collapsed buildings and road conditions.

Many communities in QLDC and Upper Waitaki remain isolated: Queenstown, Wanaka, Cromwell, Glenorchy, Gibbston, Makarora, Lake Ohau. Shops and supermarkets rapidly emptied of supplies. Food stocks rapidly diminished.

Displaced Persons (DPs) continue to congregate at QT, Frankton, Wanaka and Cromwell seeking medical support, shelter, food and WASH. Many are Foreign National visitors seeking to evacuate.

Thousands of skiers (winter) and trampers (summer) remains isolated in the hills. Access roads are impassable. Medical support, shelter, food and WASH is urgently required.

Power and telecoms outages across the region, disrupting fuel supplies.

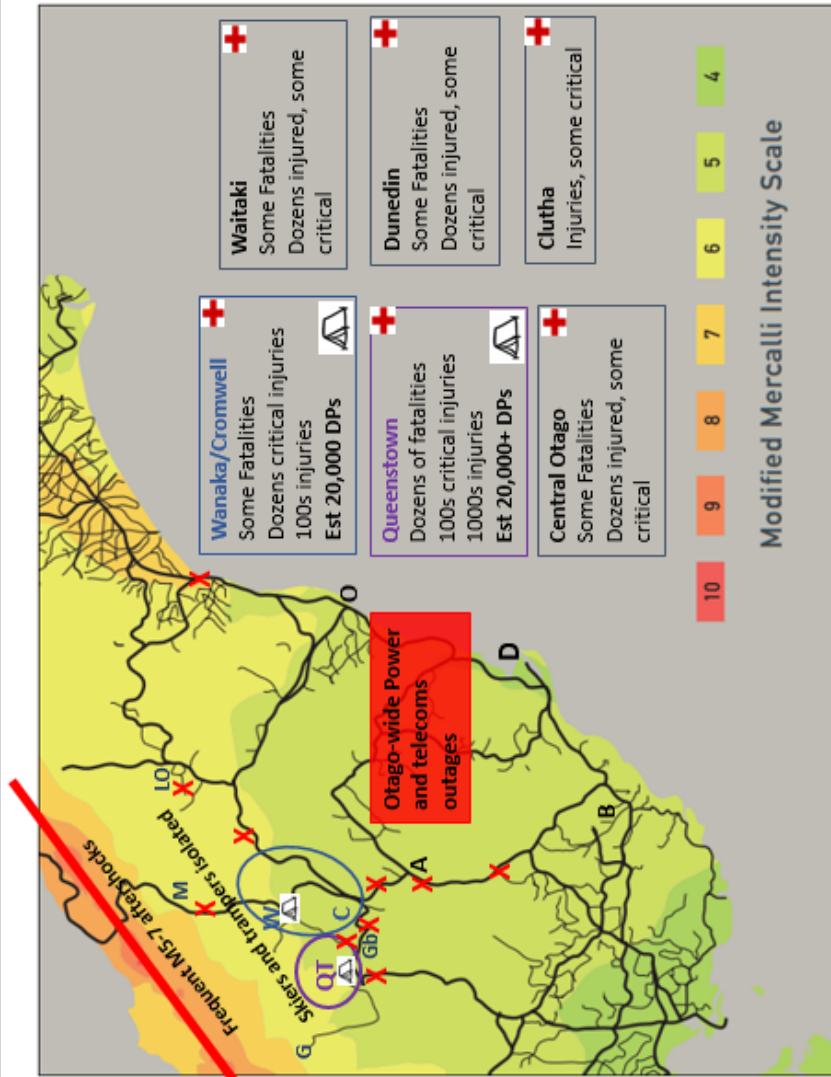
Local Emergency Services initially overwhelmed, but reinforcements arrive by D+3.

Health, disability and welfare services struggle to meet demand due to structural damage to facilities and disruption to road transport.

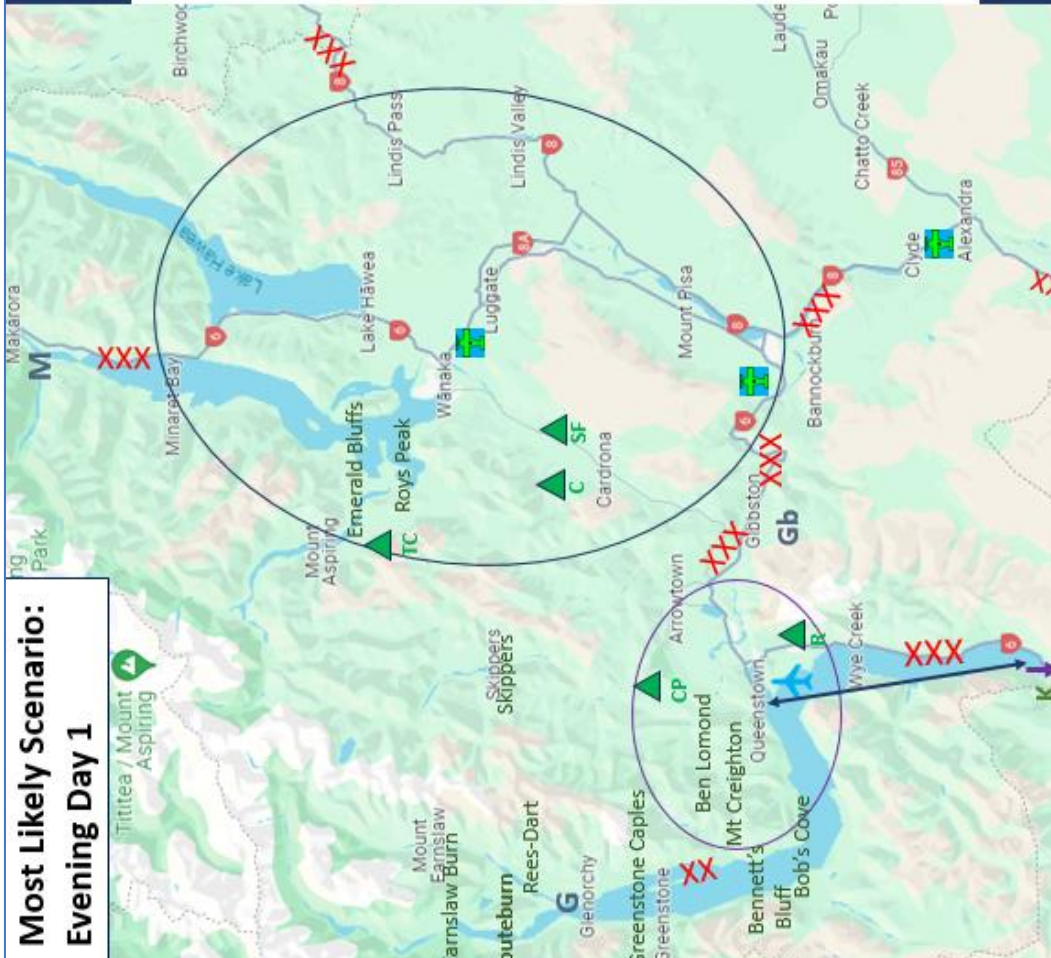
Population is in shock. Communities Response Groups prove critical.

Otago EM system is functional:

- EOCs are able to commence execution of local CATPLANS.
- GECC is functioning adequately with Regional Air Desk coordinating pre-planned helicopter operations to move key staff and conduct Wide Area Impact Assessment.



Most Likely Scenario: Evening Day 1



The most severe AF impact in Otago is assessed to be in Queenstown Lakes district.

A M8+ quake, followed by severe (M5 to M7+) aftershocks, has caused fatalities, injuries and significant infrastructure damage including some bridges.

There is no power and telecommunications are intermittent.

Emergency services, health services and QLDC are totally overwhelmed.

All regional arterial routes are blocked. Queenstown and Wanaka are isolated from each other and from the remainder of Otago, Southland and Canterbury.

Local road closures have further isolated Glenorchy (G), Makarora (M) and Gibbston (Gb). Many other communities and suburbs are on their own for at least the first week.

Supermarkets are emptied. Food and hygiene supplies will start to run out after 7 days. Medicine supply severely disrupted.

There are 40,000+ visitors-many with nowhere to go.

Winter: 16,800 peak season visitors are isolated on ski-fields.

Summer: An unknown number (20000?) of trampers are isolated on the tracks and DOC huts.

Queenstown international airport (ZQN) and regional airfields are damaged but expected to be operational by D+3. Helicopter Landing Sites (HLS) are available at each airfield. Expedient HLS are available everywhere.

Lake vessels can operate between Queenstown and Kingston.
A lake seismic and/or lake tsunami event is possible.

SH6 linking Kingston (K) with Southland (and thus Dunedin) is open.

D+1 to D+2

Most Dangerous Scenario:

Aftershocks include a M7+ earthquake which severely impacts the ongoing local response effort.

Catastrophic level of fatalities and injuries overwhelms Health Services..

Isolated communities rapidly run out of essential food items and critical WASH supplies. Although existing supplies are shared equally by spontaneous community groups, a criminal element emerges which causes tension. Police cannot respond effectively resulting in vigilante actions.

Wintry conditions cause a cascading effect: many cases of hypothermia amongst Displaced Persons. Fatalities at ski-fields and around the DOC hut network.

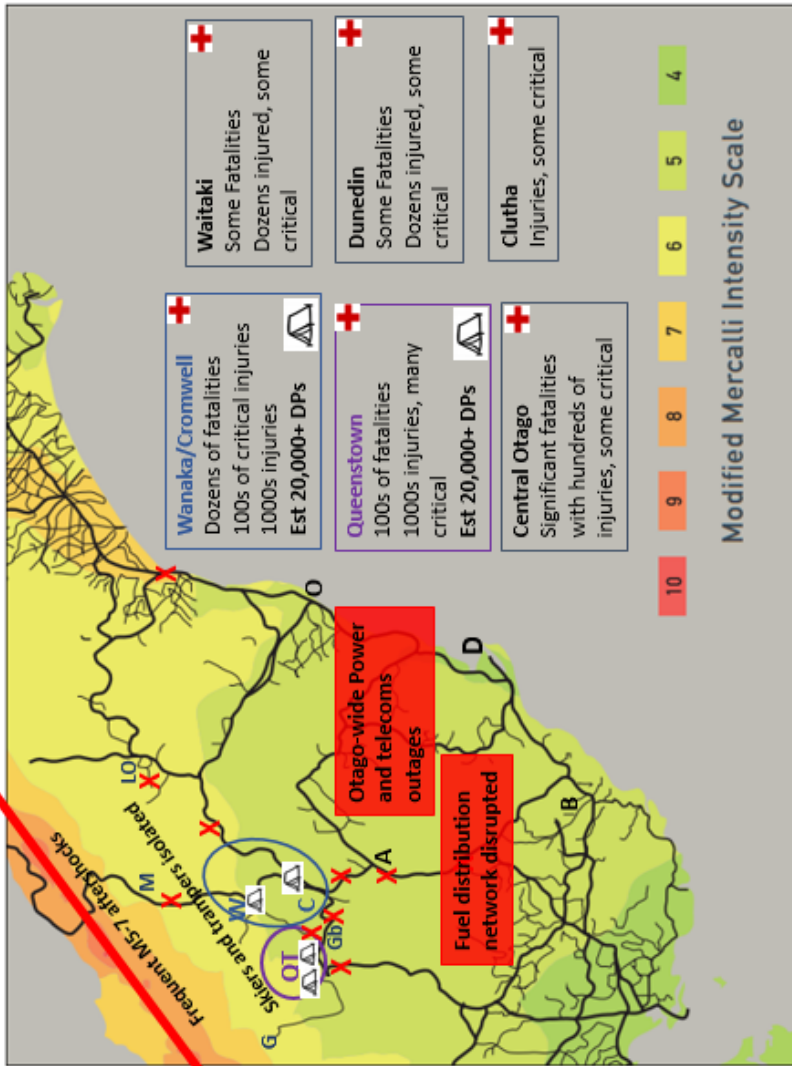
Cromwell-Frankton A transmission line fails. Queenstown is without power for 21 days. Emergency Services cannot maintain shift rosters due to exhausted personnel. This hampers SAR, USAR and other operations. Police cannot quell public order incidents as looters raid supermarkets, dairies and private homes.

NCMIC does not prioritise the Otago response high enough to warrant a nationally-led evacuation of visitors from Queenstown. Otago GECC must execute its own operation to evacuate some 40,000 visitors before food supplies are exhausted.

Repair of MSRs and Alternative Supply Routes is measured in months.

Otago EM system is partially functional:

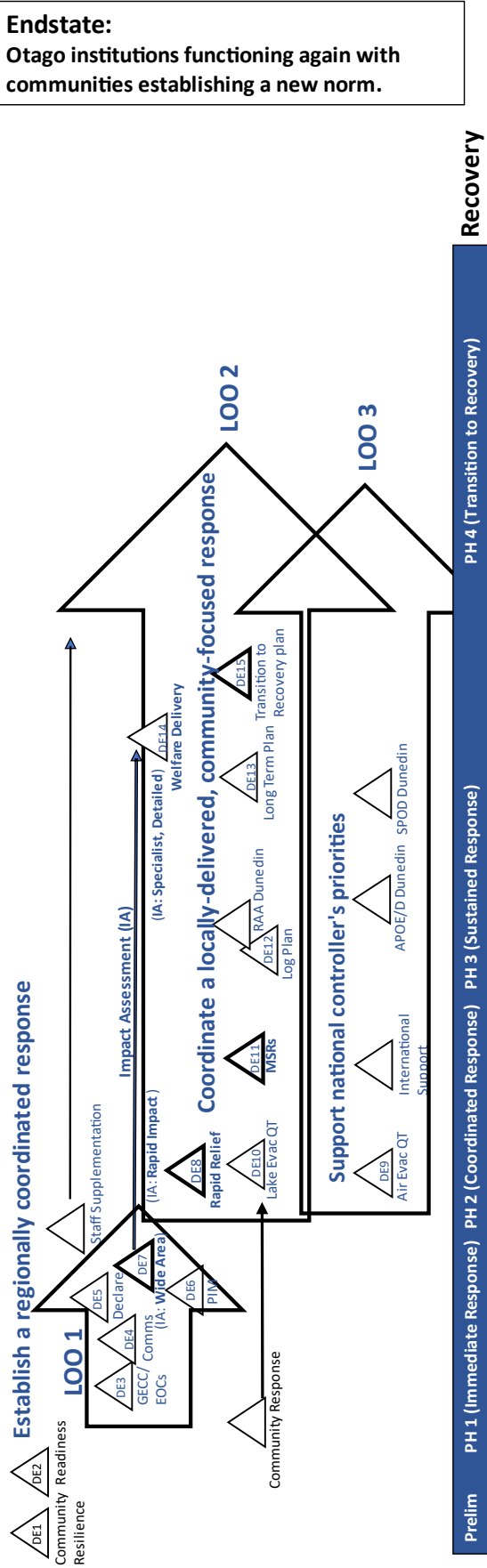
- EOCs are able to commence execution of local CATPLANS. Urgent staff augmentation required at QLDC EOC and Wanaka Incident Coordination Centre
- Although GECC is functioning adequately, the Regional Air Desk cannot effectively manage regional airspace and coordinate aviation operations.



Modified Mercalli Intensity Scale

Otago CATPLAN Campaign Plan

Reduction & Readiness



Recovery

PH 4 (Transition to Recovery)

PH 3 (Sustained Response)

PH 2 (Coordinated Response)

Prelim

Now	Event Day	E+12	E+24	E+48	E+72	D+1	D+2	D+3	D+4	D+5	D+6	D+7	Week+1	W+2	W+3	W+4	Month 1-6?	M+6 to M+?	Year to Y+?

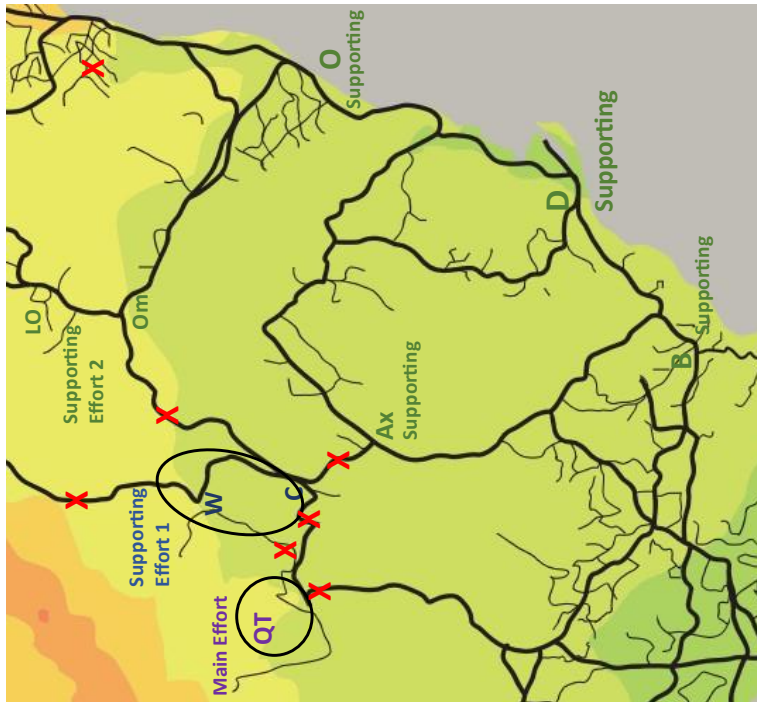
Otago CATPLAN CONOPS

Mission:

EM Otago GECC is to coordinate a nationally enabled, locally delivered and community-focused response to a catastrophic event in Otago in order to provide MASS RELIEF, prevent an escalation of the emergency and set the conditions for a transition to a long-duration recovery.

Intent:

- To deliver innovative risk reduction and readiness strategies whilst creating a framework for action in a catastrophic response environment.
- Initial tasks are pre-planned, with Controller's expectations already established, to allow for initiative and to prevent inertia during the critical first 2-3 days.
- Actionable intelligence will be generated early to allow for a coordinated response, which will become sustained after the first week or so.
- The movement of key response staff and the targeted MASS RELIEF distribution of essential goods and services will be delivered by air and water.
- The large number of visitors isolated in Queenstown (and Wanaka/Cromwell) will be reduced by deliberate evacuation operations.
- A key imperative is the re-opening of critical road links to Queenstown and Wanaka to allow for commercial Fast Moving Consumer Goods (FMCG) distribution networks to be reestablished.
- The sustained phase will last for months and allow for transition to recovery planning. Throughout the response, Otago will be prepared to supportational priorities and requests from neighbouring regions.
- Transition to recovery will occur on a conditions basis.
- The anticipated recovery period will be measured in years under a bespoke national framework.



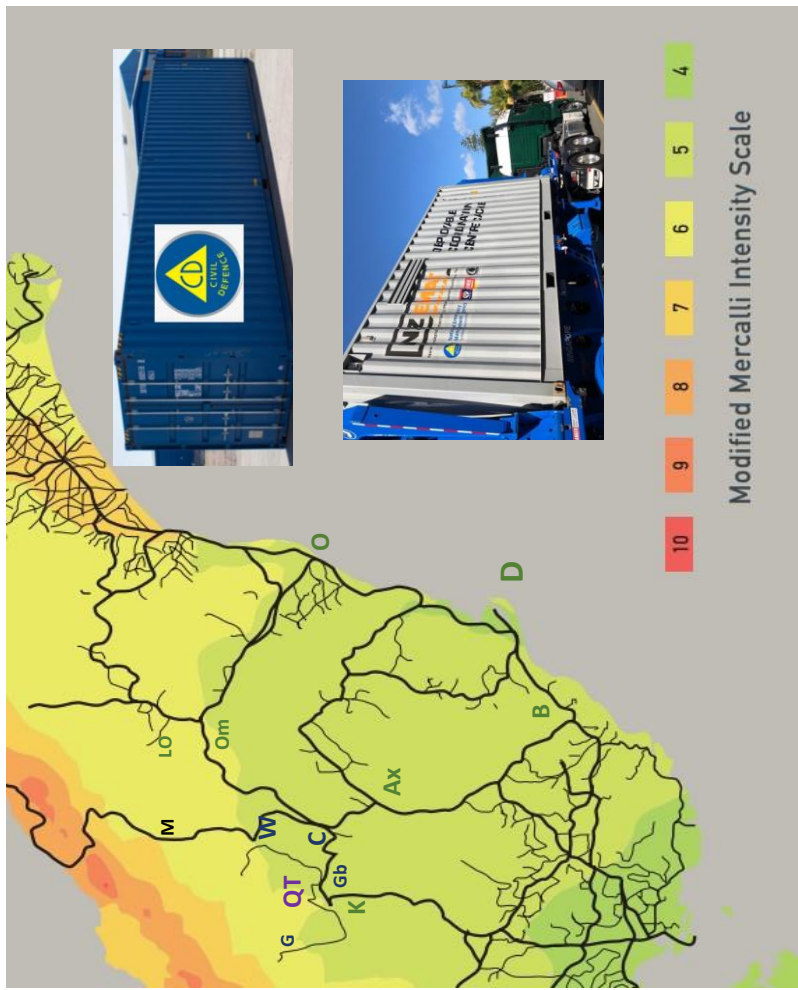
Endstate:

Otago institutions functioning again with communities establishing a new norm.

Scheme of Manoeuvre:

4 x Response Phases with a preliminary and a sequel:

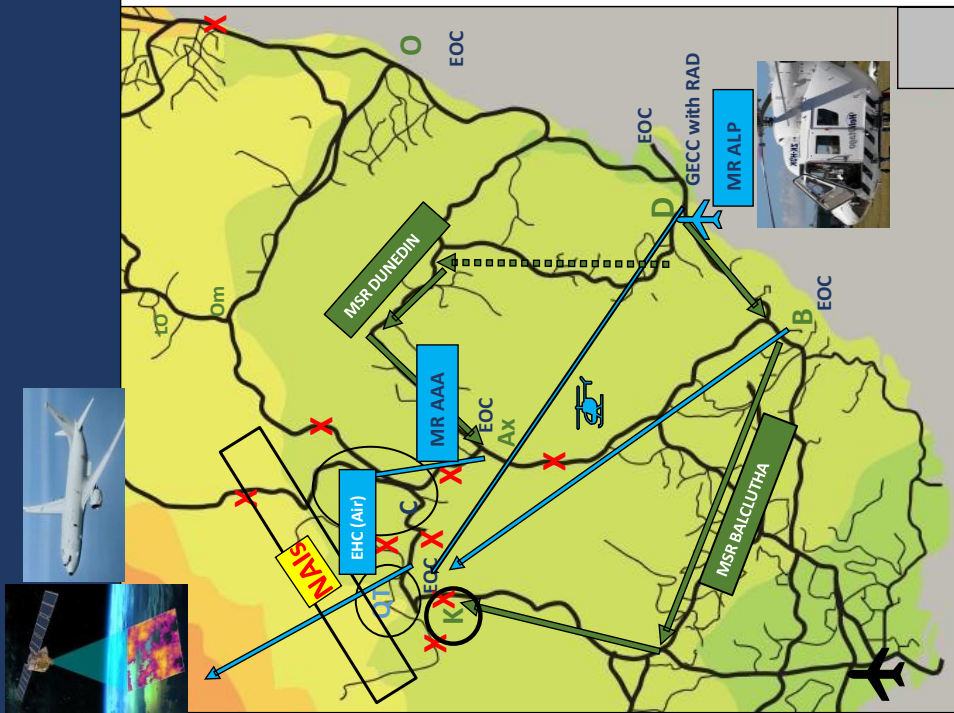
Prelim (Now)	Reduction & Readiness
Phase 1 (E to E+48) Response	Immediate
Phase 2 (D+3 to D+7)	Coordinated Response
Phase 3 (W+2 to M+3?)	Sustained Response
Phase 4 (Conditional)	Transition to Recovery
Sequel (Years)	Recovery



- Prelim Op: Reduction + Readiness (From now until 2071)**
- Understand the Risk.**
- Identify and understand Otago's hazards, exposure and vulnerabilities.
- Reduce the Risk.**
- Use emerging national operational and financial structures (*System Reform*) to fund pre-event risk reduction measures.
 - ORC and District Councils consider Alpine Fault risks in Long Term Plans, and fund identified risk reduction measures.
 - NZTA build-in Alpine Fault risk reduction measures at two priority routes: SH6 Devil's Staircase and SH8 Lindis Pass.
 - Other Critical Infrastructure entities factor Alpine Fault in operational plans. e.g. Transporter, Queenstown Airport.
 - Encourage FMCG industries to increase key foodstuffs and fuel stockholding capacity in Queenstown and Wanaka.
- Build Resilience.**
- District EMAs build community resilience (14+ days) IAW EM Otago Community Resilience Strategy and ongoing public education.
 - EM Otago deliver ongoing Business Continuity initiatives focused on QLDC hospitality sector (7+ days) and regional lifelines.
 - Encourage partners and stakeholdersto build in Alpine Fault scenarios to their Business Continuity Plans.
 - Encourage innovation and resilience measures: communityfunded solar/wind schemes or grants and interest free loans for domestic solar.
- Increase Readiness**
- Develop District CATPLANS for Alpine Fault.
 - Socialise, train, test, exercise and review plan to optimise readiness. FTX in 2026.
 - Raise Otago Regional Response Team (RRT) (Inland) and Otago Regional Response Team (Coastal).
 - Cache expedient shelter materials in most at risk locations. Create prominent 'Civil Defence rallying posts' to raise awareness of where help can be received for residents and visitors alike.
 - Pre-position a sixth NEMA Deployable Coordination Centre at ZQN (Queenstown Airport).

Ph1: Immediate Response 'First 48 hours'
(E to E+48)

- **Activate EM Otago Response Structure (GECC + 5 x EOC).**
(Best endeavour: E+1),
- **Declare a State of Emergency.**
(As appropriate, NLT E+6).
- **Execute PIM Plan.**
(By E+8)
- **Conduct Stage 1 Impact Assessment: 'Wide Area Assessment'.** (Main Effort).
(From E+8)
- **Move key staff/teams by air and available roads**
(From E+8):
 - Estb **MASS RELIEF Air Loading Point at Taieri Airfield** by E+24.
 - Estb **MASS RELIEF Air Assembly Area at Alexandra Aerodrome** by E+48.
 - Estb **Log Base Kingston** by E+48.
 - Estb **Evacuee Handling Centre (Air)** at ZQN by E+48.
- **Open MSR DUNEDIN and MSR BALCLUTHA.**
(By E+48)



Wide Area Assessment

Pre-designated Reconnaissance and Surveillance targets (R&S) known as **Named Areas of Interest (NAI)** as per **Collection Plan 01**.

Imagery from Satellite, RNZAF fixed wing and Otago Helicopter companies, collated by GECC Intel commencing E+12.

Corroborated by EOC reports from First Responders including community.

Staff Supplementation to:

- QLDC EOC and WICC.
- QL Hospital EOC.
- Civil Defence Centres.
- Evacuee Handling Centres.
- Log Base Kingston.
- Rapid Relief Air Assembly Area Alexandra.

Log Base Kingston
Estb by NZ Red Cross to prepare for MASS RELIEF and Evacuations ops.

MSR DUNEDIN
SH 87 then SH85 (TBC)
Will require survey and minor repair

MSR BALCLUTHA
SH1
May require survey (bridges and culverts)

Ph 2: Coordinated Response 'First Week'

(D+3 to D+7)

(Continue to **move key staff/teams**).

District EOCs conduct Impact Assessment Stage 2: **Rapid Impact Assessment**.
(D+3 to D+7).

Deliver **MASS RELIEF**. (**Main Effort**).
(D+3 to D+21).

Clear **MSR SOUTHLAND and MSR CANTERBURY**.
(D+3 to D+14).

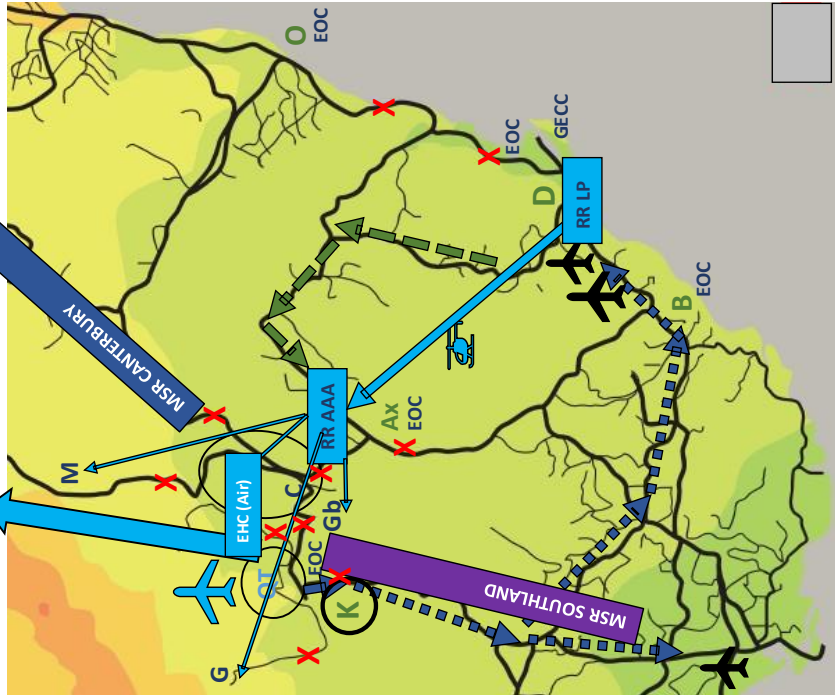
Ratify Support Plans (Log, Lifelines, Health, Welfare Delivery).
(D+3 to D+7).

Appoint Recovery Team.
(D+3).

BPT Support NCMC Air Evacuation of QT (OP WAKATIPU VITTLES).
(D+3 to D+7).

BPT Conduct Lake Evacuation of QT (OP WAKATIPU DYNAMO).
(**Main Effort on activation**).
(D+4 to D+8).

BPT support national priorities.
(From D+3)



MASS RELIEF:

Following EOC Rapid Impact Assessment, we will deliver goods to locations where the type and amount of need is confirmed.

Assessed priority is:

- **Expedient shelter** (Tents, Tarpsaulins, Tools plus space blankets. "T3+").
- **Food and water**.
- **WASH** supplies.

Delivered by:

- **Helo from Loading Point Taieri Airfield**
- **Landing Craft from Kingston.**

MSR Clearance:

NZTA clear critical supply routes to allow re-establishment of FMCG distribution network.

OP WAKATIPU VITTLES:

- NEMA-led air evacuation of 30,000 visitors To a place of safety (AKL).
- Conducted by EMAT using their Deployable Coordination Centre (DCC) parked permanently at designated Evacuee Handling Centre (EHC) atZQN.

OP WAKATIPU DYNAMO:

- Otago GECC-led lake evacuation of 10,000 visitors to a place of safety (Kingston).
- Subsequent onward roadmovement to Invercargill Airport (IVC), Dunedin Airport (DUD) and Dunedin via Balclutha.
- NZDF support is requested to conduct this complex operation.

Ph 3: Sustained Response 'First few months'
(W+2 to M+3)

Coordinate Impact Assessment Stage 3: Specialist Detailed Assessment. Then deliver Welfare Support Plan. (From W+2).

Complete **MASS RELIEF** then transition to Logs Plan. (D+21).

Open **MSR SOUTHLAND (Main Effort)**, **MSR CANTERBURY** and **MSR BALCLUTHA**. (Not Before W+3).

Conduct Road Evacuation of QT (OP WAKATIPU CONVOY). (W+3)

Execute Support Plans (Logistics, Lifelines, Health, Welfare Delivery). (W+2 to M+3).

Draft Long-Term Plan. (W+2).

Draft Transition to Recovery Plan. (M+2).

Major Roads still closed for 3-6 months:

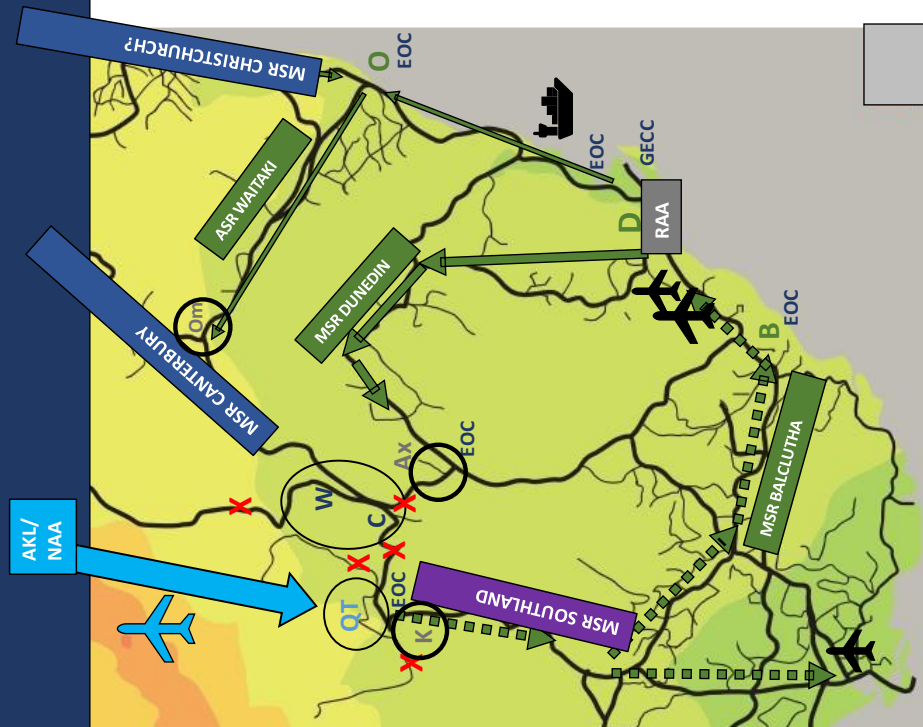
- Crown Range
- SH 6 Kawerau Highway
- SH 8 Dunstan Gorge
- SH 6 Haast Pass.

Local Roads also closed.

Regional Assembly Area (RAA) established Dunedin. Supplied from National Assembly Area (NAA), ChCh.

Logistics Nodes in Alexandra, Kingston, Oamaru.

Alternative Supply Routes now in use.



Ph 4: Transition to Recovery
Sometime after 'first few months'
Execute Transition to Recovery Plan.

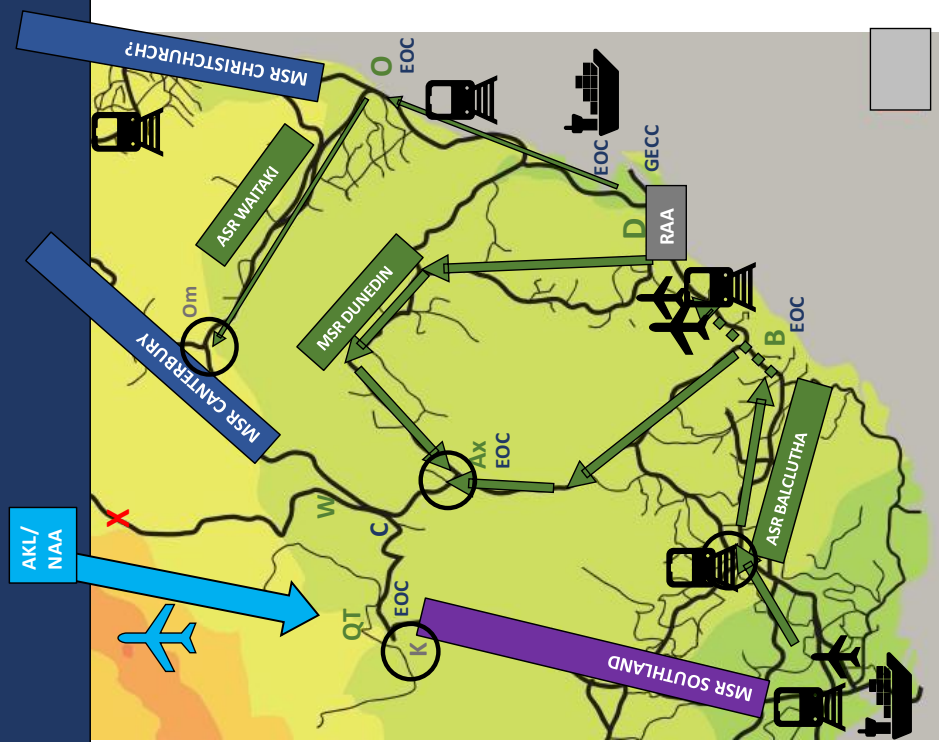
- Anticipated Conditions:**
- No longer a risk to life or property.
 - Immediate community needs have been met during response.
 - SONE no longer required. Some districts may no longer require Local Emergency status.
 - Response workplans have been delivered across the social, Built Economic and Natural environments.
 - No concurrent natural hazard events occurring.

Major Roads still closed
SH8 Haast Pass.
Others?

Regional Assembly Area established Dunedin. Supplied from National Assembly Area, ChCh

Logistics Nodes in Alexandra, Kingston, Omarama.

Potential for increased use of coastal shipping and rail for heavy construction materials to QT.



Sequel: Recovery

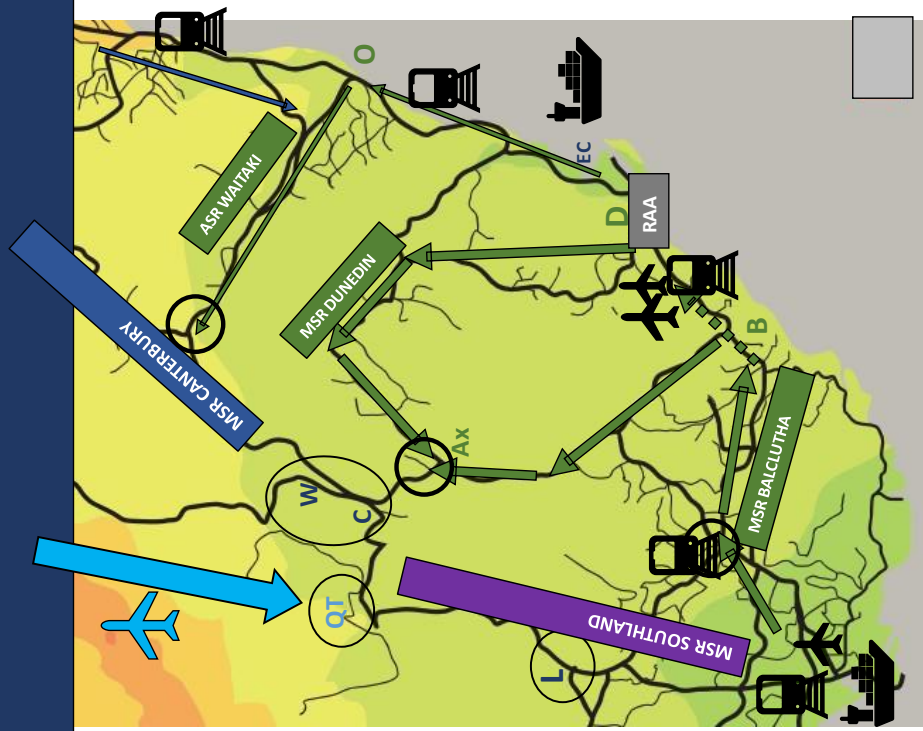
Timeline measured in 'years'

10-20 Billion NZD event.

Execute Recovery Plan under bespoke Alpine Fault National Recovery Framework.

What will the new Otago look like?

This sequel occurs under the authority of the appointed Otago Recovery Manager.



Acronyms

Standardised operational abbreviations are used for brevity. Specific CDEM terms are used. Where clarification as to meaning is required, refer to glossaries in the references.

ACC	Aviation Coordination Cell.
ADC	Air Division Commander.
AF	Alpine Fault.
AF8	Alpine Fault magnitude 8.
Alt Comms	Alternative Communications.
APOD	Aerial Port of Debarkation.
APOE	Aerial Port of Embarkation.
ASAP	As soon as possible.
ASR	Alternative Supply Route.
BAU	Business as Usual
BCP	Business Continuity Plan.
BPT	Be Prepared To.
CATPLAN	Catastrophic Plan.
CC	Coordination Centre.
CDC	Clutha District Council.
CDEM	Civil Defence and Emergency Management.
CODC	Central Otago District Council.
CONOPS	Concept of Operation.
CPX	Command Post Exercise.
CRG	Community Response Groups.
D	Day.
DCC	(EMAT) Deployable Coordination Centre.
DCC	Dunedin City Council.
DE	Decisive Event.
DVI	Disaster Victims Identification.
DGL	Director's Guideline.
DUD	Dunedin Airport.
D+7	7 days after E. Same as W+1.
E	AF earthquake event occurrence.
E+1	One hour after Alpine Fault earthquake.
ECC	Regional Emergency Coordination Centre.
EM	Emergency Management.
EMA	Emergency management Advisor.
ES	Emergency Services.
EOC	District Emergency Operations Centre.
Estb	Establish/established.
FMCG	Fast Moving Consumer Goods.
FTX	Field Training Exercise.
GECC	Group Emergency Coordination Centre.
HEA	Hazard and Environment Analysis.
IMINT	Imagery Intelligence.
IAW	In Accordance With.
IMT	Incident Management Team.

IOT	In order to.
LERT	Local Emergency Response Team (NZDF)
LNO	Liaison Officer
LOE	Line of Operation.
M	Month.
M+1	One month after E. Same as W+4.
ME	Main Effort.
MD	Most Dangerous
ML	Most Likely.
MSR	Main Supply Route.
N2S	North to South rupture of the AF.
NAA	National Assembly Area.
NCMC	National Crisis Management Centre.
NCCC	National Crisis Coordination Centre.
NHCC	National Health Coordination Centre.
NLT	No Later Than.
NMB	No Move Before.
NZ EMAT	Emergency Management Assistance Team.
NZ R-T	Regional Response Team.
PACE	Refers to Alt Comms Plan: Priority, Alternative, Contingency, Emergency.
PBNA	Population Based Needs assessment.
QLDC	Queenstown Lakes District Council.
RAA	Regional Assembly Area.
RAD	Regional Air Desk.
R&S	Reconnaissance and Surveillance.
SA	Situational Awareness.
S2N	South to North rupture of the AF.
SONE	State of National Emergency.
SPOD	Sea Port of Debarkation.
SPOE	Sea Port of Embarkation.
W	Week. W+4 4 weeks after E. Same as M+1.
WCG	Welfare Coordination Group
WDC	Waitaki District Council.
WICC	Wanaka Incident Coordination Centre.
ZQN	Queenstown Airport.