Annex A ⏩ EMERGENCY SERVICES

LAW and ORDER

Control and Co-ordination

The Police are responsible for law and order in the Gisborne District. Roles and responsibilities are outlined in part 5, clause 23 of the National CDEM Plan. NZ Police retain full control over their own resources but work within policy decisions and priorities set by the Controller.

In many cases the Civil Defence emergency will be declared at the request of the Police when it becomes apparent that extra resources and powers will be needed to cope with the event.

Key tasks of Police during an emergency relate to:

- Missing persons.
- Identification and disposal of the dead.
- Control of movement around the District to facilitate emergency services activities.
- Security of evacuated areas.

The Police also play a more general role in movement control (land).

Advisory Officer and Liaison

The NZ Police Area Commander, Gisborne is the Police Advisor to the Controller. Prior to an emergency a Police Liaison Officer will be appointed, who will work with Civil Defence and other emergency services to ensure that procedures are in place for the management of events prior to and during Civil Defence emergencies; and during Civil Defence emergencies to attend the EOC to:

a. Relay Police advice to the Controller.
b. Relay relevant information to and from the Gisborne Police Station or Wellington Comcen.
c. Provide co-ordination between Police and other agencies operating from the EOC.

The NZ Police Area Commander, Gisborne will operate from the Gisborne Police Station to control and co-ordinate Police operations.

Rural police

Some CD Community Link organisations have their local rural police member as an integral partner in their management structure for local responses to adverse events. It is essential that rural police stations have the necessary manpower to assist their respective Community Link organisation in times of emergency.

Emergency Services Co-ordinating Committee

This committee is organised and chaired by the NZ Police Area Commander, Gisborne Police, or representative.

It is responsible for pre-planning at senior level for the establishment of procedures for control and communications, to ensure the co-ordinated employment of resources during a combined emergency services response. It also is to ensure that procedures are in place for a smooth transition to a Civil Defence emergency. Routine contact and liaison are the responsibility of the Civil Defence Officer and the Police Liaison Officer.

Warnings

Police receive notification of warnings that may lead to a state of local emergency through their own network or locally from Civil Defence. These warnings will be passed on to Rural Stations where appropriate.

If the Police become aware of events that may lead to significant community disruption, they will pass on appropriate information to Civil Defence.

The Police will normally be responsible for warning the public for events not pre-determined in this Plan. They will also assist, where appropriate, Civil Defence in implementing the public warning plan developed for the event.

Planning

The Police are required to produce an emergency contingency plan. The Plan is under constant review and amendments will be sent to plan holders when they are made.

Contact Information

Contact Information for all key staff and organisations is maintained by the Emergency Management Office and distributed on a regular basis.

FIRE SERVICE

Control and Co-ordination

The Fire Service will remain under its own separate and autonomous command (which is based on the Co-ordinated Incident Management System model), but will work in association with other emergency services. It will conform to the policy decisions and priorities of the Group Controller to the extent that these do not conflict with the operations of the Fire Service as laid down by the Fire Service Act 1975 and the Forest and Rural Fires Act 1977.

In recognition of the Fire Services' role in rescue activities they will also be responsible for, during an emergency for co-ordinating urban search & rescue activities not normally associated with the Police.

Advisory Officer and Liaison

a. The Area Manager, Tairawhiti, is the Fire Service Advisor to the Controller.

b. A Fire Service Liaison Officer is appointed to the GEOC during emergencies. This person will provide advice to the Controller, keep the Fire Service appraised of the situation and priorities, and provide a link between the Fire Service and the GEOC for actions as requested by the Controller, e.g. fire suppression, rescue and assistance with evacuation.

c. Routine liaison prior to an event is maintained between the CDEM Officer, the Area Manager and/or, Assistant Area Manager Tairawhiti and one of the Eastern Region staff appointed for that purpose.

d. New Zealand Fire Service have formulated mobilisation plans to provide Fire Service support to the Gisborne District from within National Resources. The request for such support will be made through the Controller but remain the responsibility of the Regional Commander, Eastern Region, based in Napier to arrange and co-ordinate.

Headquarters and Resources

a. The Regional Commander for the Gisborne District is based in Napier.

The Gisborne Fire Station is the Headquarters for Tairawhiti Area having management responsibility and control of all 11 volunteer fire brigades listed below:

- Manutuke
- Patutahi
- Te Araroa
- Tikitiki
- Ruatoria
- Te Puia Springs
- Tokomaru Bay
- Tolaga Bay
- Matawai
- Whatatutu
- Te Karaka

b. Resource lists are maintained for the Brigades at the Gisborne Fire Station and will be made available as required. It is the Fire Liaison Officer's responsibility to advise on the equipment and capabilities as and when the information is required.

c. Through its own command channels the Fire Service can re supply and reinforce operational areas as required from within or from other Region's.

d. Detailed responsibilities and priorities are detailed in the National Civil Defence Plan.

e. The Gisborne District Council Rural Fire appliances and equipment could be made available to the Fire Service if they can be of practical use. If necessary equipment in private organisations will be requisitioned to support Fire Service activities.

f. The Gisborne CDEM Group is responsible for ensuring that the Fire Service has priority access to resources such as fuel and food, also to assist with the accommodation of units from outside the District. Requests for assistance should be handled through the Liaison Officer, if necessary some fuel supplies will be reserved solely for emergency services use.

Planning

The Fire Service is required to produce an emergency contingency plan (review completed, March 2009). The Plan is under constant review amendments are made as appropriate.

Contact Information

Contact Information for all key staff and organisations is in a list periodically reviewed and distributed by the Emergency Management Office.

RURAL FIRE

Rural Fire Authorities within the District include the Gisborne District Council, Eastland Rural Fire District and the Department of Conservation. Each fire District will remain under its own separate command (which is based on the CIMS system of incident management), but will work in association with other emergency services. They will conform to the decisions and priorities of the Group Controller if there is a declaration of state of local emergency made because there is a significant risk to life and property.

Advisory Officer and Liaison

- The Principal Rural Fire Officer of the GDC/Eastland will be the advisor the Group Controller during any emergency that requires. liaison
- Routine liaison prior to an event is maintained between the Civil Defence officer and the Principal Rural Fire Officer Gisborne District Council.
- Lists of resources and response mechanisms are available within each District rural fire plans.

Contact Information

Initial contact with the District Rural Fire Authorities will be made through the NZ Fire Service flex paging service or as otherwise listed within rural fire plans.

MEDICAL and PUBLIC HEALTH

General

The responsibilities of the Ministry of Health, Health Boards, health service providers and Medical Officers of Health are not transferred or modified by a declaration of Civil Defence emergency. The normal day-to-day systems for casualty treatment, public health measures, etc., should be used as much as possible.

Note: The term Health is used through this section as an all-encompassing term for Medical and Public Health and all activities that relate to them.

Co-ordination

The Medical Officer of Health (MOH) is appointed to the role of Regional Medical Co-ordinator (RMC) and is designated as the Health Advisor to the Civil Defence Controller. The MOH and Civil Defence Officer are responsible for ensuring procedures are in place for the integration of Health Services during a Civil Defence emergency.

The RMC is responsible for:

⏩ Prior to a Civil Defence emergency ⏪

a. The development and maintenance of the Tairawhiti District Health Emergency Plan (TDHEP).

b. The initiation, organisation and chair of the Tairawhiti Regional Healthcare Providers Group (TRHPG).

This providers group should have an as wide as possible representation of members. The main aim of the group is the planning of delivery and co-ordination of normal Healthcare services and the extraordinary services required during a Civil Defence emergency. The procedures for the delivery of these contingencies exist to the most part in the plans referred to later in this annex, and the co-ordination of them is summarised in the TDHEP.

The organisations outlined below should be represented on the TRHPG. The group will meet at least once a year.

The group will comprise (subject to periodic change):

- MOH (chair)
- Principal Health Protection Officer PHU
- Emergency Planning, Gisborne Hospital
- Emergency Department, Gisborne Hospital
- District Nursing
- GPs and PHOs
- Te Whare O Ngati Porou Facility Manager/Ngati Porou Hauora
- St John Ambulance Service
- Hauiti Oranga
- Paikea Hauora
- Turanga Health
- Rural Public Health Nurses
- Chelsea Hospital
- Salvation Army
- CCS
- Victim Support
- Rural First Aid Posts
- Civil Defence GDC

During a State of Emergency

a. Continue the role of Advisor to the Controller and assume the role of the Principal Health Liaison Officer in the GEOC.

b. Co-ordinate and re-deploy where necessary, within the priorities and systems established by the Controller, the use of all health resources within the District.

c. Liaise with the Controller, if assistance is required, to obtain any shortfalls necessary when District health resources become inadequate.

Other Responsibilities of the Medical Officer of Health

⏩ Prior to a Civil Defence emergency, in partnership with GDC Environmental Health ⏪

a. Ensure appropriate information is available so that advice can be given to provide for and assist where necessary with:

- Basic sanitary services.

- Basic safe water supply.
- Basic shelter.
- Basic safe food and nutrition.
- Basic facilities for the maintenance of personal hygiene, removal and hygienic burial of the dead.
- Removal and disposal of hazardous or toxic substances.
- The prevention and control of communicable disease.
- Other environmental health services.

These issues are covered in detail in the Tairawhiti District Public Health Plan and GDC Environmental Health Plans.

b. Nominating an alternative person/s to carry out the responsibilities.

c. Routine liaison with the CDEM Officer.

d. Ensure a list is maintained of other Healthcare organisations, their locations, phone numbers, resources and roles they may play in case of emergencies.

During a State of Emergency

Advise the Controller on the issues listed above as outlined for the RMC above.

Planning

The Regional Medical Co-ordinator is responsible for producing an emergency medical contingency plan, (Tairawhiti District Health Emergency Plan) for the Gisborne District. This Plan provides, in the main, for the co-ordination of the actions required in a Civil Defence emergency, detailed in the plans listed below.

Other Related Major Plans Affecting the Health Response

- National Civil Defence Plan.
- Gisborne Hospital Plan.
- Public Health Unit Plan.
- Midland Health Plan.
- Gisborne Airport Emergency Plan.
- Chelsea Hospital Plan.
- Te Whare O Ngati Porou Plan.
- GDC Environmental Health Plan.

Emergency Medical Centres

The following have been identified as facilities most likely to be established as Emergency Medical Centres:

- Gisborne Hospital Emergency Department.
- Desmond Road Medical Centre.
- Mangapapa Medical Centre.
- Kaiti Medical Centre.

- Te Whare Hauora o Ngati Porou.
- Te Araroa Clinic.
- Tikitiki Clinic.
- Ruatoria Clinic.
- Tokomaru Bay Clinic.
- Tolaga Bay Clinic.
- Patutahi Clinic.
- Te Karaka Clinic.

Alternate sites, using resources from the above, could be established in nearby Marae or schools (those used as community emergency centres or welfare centres, see Welfare Section (p38) in the Readiness of this Plan).

None of the health centres identified above have independent electrical power, and that significantly restricts their role in a CD emergency. Medical staffing is limited in the area. The immediate response plan for the DHB identifies that there are a series of key decisions to make early on in the event of CD emergency.

Health Resources

The health resources of the District are confined to the facilities listed above. Stocks of supplies and personnel are limited and in an emergency will be concentrated in the facility/ies identified "on the day". In a major event most of this resource is likely to be pooled for use by the Gisborne Hospital. Extra supplies will be sourced as a priority, using the normal resupply arrangements of the Gisborne Hospital.

Annex B ⏩ LIFELINE UTILITY ISSUES

GENERAL

The energy resources used in the District are electricity, gas and petroleum. Electricity is supplied by a sole transmission line from Tuai (carrying 2 circuits); the line crosses some highly unstable land. The Gas supply comes via a pipeline from Taranaki via Bay of Plenty through the Waioeka Gorge. Petroleum supplies are trucked in principally from Hawke's Bay with limited movements from the Bay of Plenty.

The roading and rail networks are vulnerable to all natural hazards, the loss of which will cause disruption to services and prolong their restoration.

Telecommunications are also vulnerable to the full range of natural and to some extent technological hazards.

Therefore there is a requirement for lifeline Utility 'Owners' to address the following (but not in isolation):

- Hazard mitigation.
- The setting of priorities for the restoration and use of supplies.

ELECTRICITY

Apart from the emergency response outlined below, Eastland Network must maintain a plan for the restoration of services to the priorities shown below.

Responsibilities of the generation companies (the ownership and operation of generation assets is now distributed across a "multitude of Energy Retailing /Generation companies, e.g. the big 5 are; Contact Energy, TrustPower, Mighty River Power, Genesis, Meridian) Transpower and Eastland Network during a state of Civil Defence emergency are:

- **Generation Companies, and Transpower** consult with and assist Eastland Network in the restoration of power to the consumers in the District.
- **Eastland Network:**
  1. Remove electrical hazards that could endanger people, and restore power to essential services as shown below.
  2. Provide an Eastland Network Liaison Officer to the EOC as required to assist and advise the Controller.
  3. Provide information for the Controller and the public concerning restoration times.

Priorities

1. Power should generally be restored in the following order of priority:
2. Hospitals and emergency medical centres.
3. Main welfare centres.
4. Water reticulation.
5. Sewage systems.
6. Old peoples homes/centres.

7. Energy Control Centre/Emergency Services/District EOC.
8. The Community.
9. Emergency Resources.

Emergency Resources/Details

Transpower has thirty 'spare' transmission towers nation wide that are available to replace any damaged on the Tuai line. Once on site they can be erected, provide one circuit (normally two) depending on weather and extent of damage on site and will be functional in 24 hours.

Pool of national resources available for reinstatement – delivery problems only concern.

GAS

Apart from the emergency response outlined below, Vector must maintain a plan for the restoration of services and the neutralising of hazards. They must also plan to meet the priorities where appropriate as shown above.

Responsibilities

The responsibilities of Vector during a Civil Defence emergency are:

- Assess extent of hazards and damage
- Make safe any hazards or damage
- Restore supplies to essential services
- Provide information for the Controller as required and establish links between respective media liaison officers for release of information to the public.

Priorities

- For the restoration of services see Electricity.
- LPG/CNG.
- In the event of an LPG/CNG incident the Fire Service must be called and will provide site control.

PETROLEUM

There is now no one agency able to provide an overview on the fuel status in the Gisborne District (PIAC disbanded). The District EOC Logistics Section will as a priority ascertain this from individual companies from their dispatch centres.

The fuel supply is very vulnerable; delivery is via truck from Hawke's Bay, on average 34 per week or 1768 per year, this is expected to increase with the projected increased activity in forestry.

With normal fuel demand very few outlets in the District would last more than five - six days without running out, in a panic buy - two days.

If necessary the Controller will 'requisition' supplies for essential use only.

Aviation fuel is also supplied by road, four vehicle movements per month, from three different suppliers. The BP site at the Airport has a standby power system, which may require the provision of a generator.

There are 2 outlets in Gisborne that are able to supply fuel in a power outage, they are Gisborne and Makaraka Service Stations (Caltex) which have been prepared to take generators. Both these stations will be strategic assets in a Civil Defence emergency with at least one of them probably being needed for emergency service use only. Shell Midway has indicated that wiring their station for a generator can be carried out "on the day."

This vulnerability will require an active conservation media campaign for the public and perhaps a rationing program, if it appears the event may disrupt the supply route for more than 7 days. Suitable publicity and the fact that vehicle movement will be restricted should mean that normal rates of consumption figures are lower.

The priorities for the Logistics Section of the Emergency Operations Centre once an emergency has been declared or appears imminent will be:

- To establish the fuel reserves and likely consumption period.
- Arrange for the fuel supplies at Gisborne Service Station and Caltex Makaraka to be reserved for Civil Defence use.
- Ensure aviation fuel is available at the Airport.
- Maintain a register of fuel availability for the duration of the event.
- Liaise with the emergency service to ensure their fuel requirements are being met.
- Develop with the media liaison officer an active publicity program of fuel conservation and if necessary initiate the concept of rationing to the Emergency Operations Centre management team.

Emergency Resources/Details

Caltex have portable pumps that are able to pump diesel and petrol from 'bulk' transporters. (unable to pump up, i.e. from barge) Petrol pump needs a compressor.

At anyone time there are five company tankers in the District. Information re current stocks is available from company dispatch centres. There is a small capacity in 'private hands' such as forestry companies. Fuel companies do hold a register of these.

Road Networks

The roading system, both State Highway and Council roads are extremely vulnerable to any natural hazard.

The road systems are vital for the restoration of other lifeline utilities and for fuel supplies so will receive a priority of effort for reinstatement to at least one lane.

Contractors have agreements to provide services in emergency situations, although there is some concern they have the same agreement for the same resources with other roading authorities.

Emergency Resources/Details

In New Zealand NZ Transport Agency hold a stock of 60 Bailey Bridges (30 foot). Up to four (100-120 foot) can be joined as a single span for class one vehicles. Once at the site erection time is relatively short.

Rail Network

The rail network is vulnerable to all natural hazards and in some cases reinstatement will probably not be an option. Even if it is reinstated there could be significant time delays. With this is mind the Group does not consider that the rail link as a strategic asset in times of emergency, except that if the road links are damaged to such an extent that rail can easily be reinstated to provide an outside link.

Telecommunications

The loss of 'telecommunications' through natural or technological hazards will cause significant disruption to every aspect of the Groups area for 'all money transactions,' emergency response systems and normal communications.

All communication facilities are reliant on power and access to service them. Telecom has a number of hazard vulnerable installations and services on key bridges. Loss of any number of these could result in the District being isolated for phone and Internet connections.

Vodaphone mobile service does exit the District via different infrastructure so could provide some minor voice backup, but its infrastructure is still reliant on the same services and access problems.

Emergency Resources/Details

Telecom does hold some stock of fibre replacement and can 'fairly quickly' establish a temporary repair, but any loss to its 'copper network' will require a considerable logistical exercise to bring replacement cable into the District.

There are extensive plans in place to resource repair capability from around the country.

Critical Establishments

Gisborne Hospital uses electricity and gas for water heating. Diesel generators are available to supply electricity to key parts of the Hospital and to run the boilers. Te Whare Hauora o Ngati Porou also has sufficient generating capacity to function at an effective level.

TheGEOC communications room has a diesel generator capable of allowing normal operations. The Council offices in Fitzherbert Street has a generator capable of servicing the whole complex.

Emergency Services, both the Police and Fire Service have enough emergency capacity to sustain their key activities.

Annex C - *Form 8, Schedule 2, CDEM Regulations 2003*

Declaration of state of local emergency

Section 68, Civil Defence Emergency Management Act 2002

I, , declare that a state of local emergency exists in [The Gisborne CDEM Group area, *or* ward (*delete one*)] owing to [*describe emergency*]

.

The state of local emergency comes into force immediately on the making of this declaration/into force at [*specify later time and date*] *.

The state of local emergency expires with the commencement of the seventh day after the date on which this declaration is made/expires at [*specify time and date, which must not be later than the commencement of the seventh day after the date on which this declaration is made*]_____ *.

*Select one.

Declared by: [*signature*]_____

Designation: *Select the applicable designation.*

- Person appointed and authorised by the Civil Defence Emergency Management Group to declare a state of local emergency for its area.
- Representative of a member of the Civil Defence Emergency Management Group [*select this designation where no appointed person is or is likely to be able to exercise the power to declare a state of local emergency*].
- Mayor of the district for which the state of local emergency is declared.
- Elected member of the district for which the state of local emergency is declared (designated to act on behalf of the mayor when the mayor is absent).

Time and date of declaration: _____

Notes

1. This declaration must be—

   (a) notified to the public immediately by any means of communication that are reasonably practicable in the circumstances; and

   (b) published in the *Gazette* as soon as practicable. It is recommended that publication in the *Gazette* occur within 20 working days after the state of emergency is terminated.

2. Calculating "the commencement of the seventh day after the date on which this declaration is made": If the declaration is made at any time on 1 January, it will expire at the beginning of 8 January. If the declaration is made at any time on a Friday, it will expire at the beginning of the following Friday.

Form 9, Schedule 2, CDEM Regulations 2003

Declaration extending state of local emergency

Section 71, Civil Defence Emergency Management Act 2002

I, _____ extend the state of local emergency declared at [*time and date*] _____ † for [the Gisborne Civil Defence Emergency Management Group area, *or* _____ ward (delete one)] owing to [*describe emergency*] _____.

The state of local emergency expires with the commencement of the seventh day after the date on which this declaration is made/expires at [*specify time and date, which must not be later than the commencement of the seventh day after the date on which this declaration is made*]* _____

†Include times and dates of any previous extensions.

*Select one.

Declared by: [*signature*] _____

Designation: *Select the applicable designation.*

- Person appointed and authorised by the Civil Defence Emergency Management Group to declare a state of local emergency for its area.
- Representative of a member of the Civil Defence Emergency Management Group [*select this designation where no appointed person is or is likely to be able to exercise the power to declare a state of local emergency*].
- Mayor of the district for which the state of local emergency is declared.
- Elected member of the district for which the state of local emergency is declared (designated to act on behalf of the mayor when the mayor is absent).
-

Time and date of declaration: _____

Notes

1. This declaration must be—
   (a) notified to the public immediately by any means of communication that are reasonably practicable in the circumstances; and
   (b) published in the *Gazette* as soon as practicable. It is recommended that publication in the *Gazette* occur within 20 working days after the state of emergency is terminated.
2. Calculating "the commencement of the seventh day after the date on which this declaration is made": If the declaration is made at any time on 1 January, it will expire at the beginning of 8 January. If the declaration is made at any time on a Friday, it will expire at the beginning of the following Friday.
3. If this is a second or subsequent extension of a state of emergency, specify the time and date each previous extension was made, as well as the time and date the state of emergency was first declared.

Form 10, Schedule 2, CDEM Regulations 2003

Declaration terminating state of local emergency

Section 72, Civil Defence Emergency Management Act 2002

I, , terminate the state of local emergency declared at [*specify time and date*]† for [The Gisborne Civil Defence Emergency Management Group area, *or* ward (delete one)] owing to [*describe emergency*].

The termination of the state of local emergency takes effect from the time and date of this declaration/from [*specify time and date, which must not be later than the commencement of the seventh day after the date on which the state of local emergency was declared or last extended*]*. _____

†Include times and dates of any extensions.

*Select one.

Declared by: [*signature*] _____

Designation: *Select the applicable designation.*

- Person appointed and authorised by the Civil Defence Emergency Management Group to declare a state of local emergency for its area.
- Representative of a member of the Civil Defence Emergency Management Group [*select this designation where no appointed person is or is likely to be able to exercise the power to declare a state of local emergency*].
- Mayor of the district for which the state of local emergency is declared.
- Elected member of the district for which the state of local emergency is declared (designated to act on behalf of the mayor when the mayor is absent).

Time and date of declaration:

_____

Notes

1. This declaration must be—

   (a) notified to the public immediately by any means of communication that are reasonably practicable in the circumstances; and

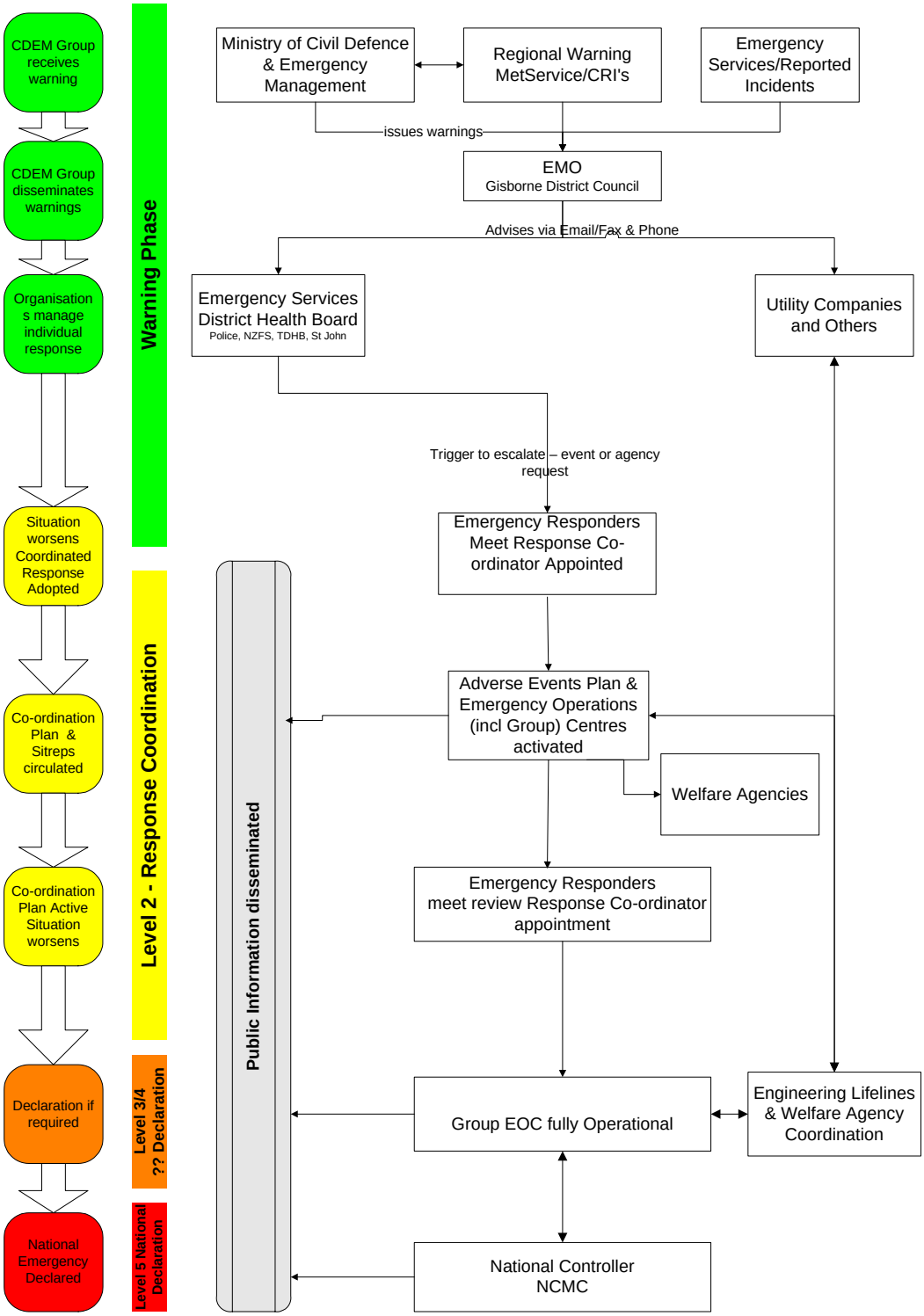
   (b) published in the *Gazette* as soon as practicable. It is recommended that publication in the *Gazette* occur within 20 working days after the state of emergency is terminated.

2. Calculating "the commencement of the seventh day after the date on which the state of local emergency was declared": If the declaration was declared at any time on 1 January, it would expire at the beginning of 8 January. If the declaration was made at any time on a Friday, it would expire at the beginning of the following Friday.

3. If any extension of the state of emergency was made, specify the time and date each extension was made, as well as the time and date the state of emergency was first declared.

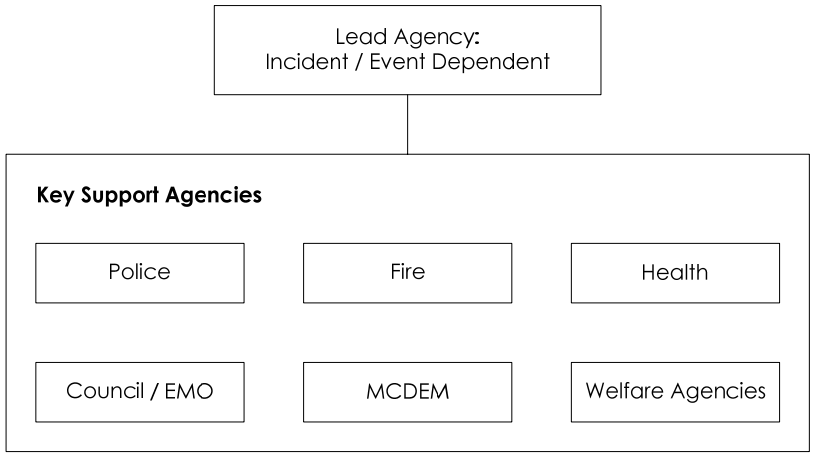
Annex D ⏩ RESPONSE ACTIONS and RESPONSIBILITIES

OVERVIEW FLOWCHART – RESPONSE ACTIONS

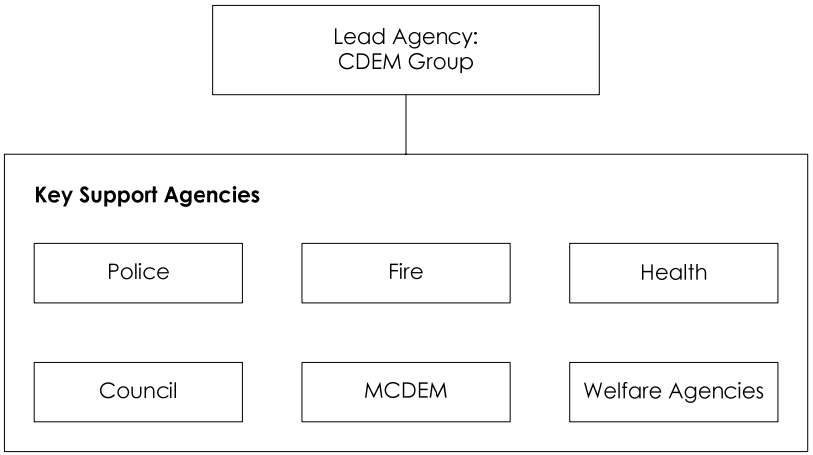


SUMMARY OF KEY AGENCIES RESPONSE ISSUES and FUNCTIONS

INCIDENT / ADVERSE EVENT (Non-Declared)



CDEM Emergency Declared



Ref	Response Issues/Functions	Lead Agency/Mandate	Key Support Agencies
	Medical Health		
1	First Aid/Triage	St John (under contract to ACC)	NZFS, DHB, GPs
2	Primary healthcare	Primary Health Organisation	St John, DHB
3	Hospital – secondary healthcare	DHB	St John, GPs, PHO, Midland DHB
	Public Health		
4	Food	Medical Officer of Health – Health Act 1956	NZFSA, GDC, PHU
5	Water	Medical Officer of Health - Health Act 1956	GDC, PHU
6	Air	GDC – Resource Management Ac 1991t	
7	Sanitation/living conditions	GDC – Building Act 2004	
8	Disposal of dead	Medical Officer of Health - Health Act 1956	Coroner, Police
	Rescue		
9	Sea	NZ Police Coroners Act 2006	NRCC, Coastguard, SLSA, Harbourmaster.
10	Land	Police NZ Police Coroners Act 2006	Land SAR Volunteers.
11	Structure Collapse	NZ Fire - Fire Service Act 1975	USAR, GDC,
	Mass Casualties		
12	Disaster Victim Identification	Police (Coroners Act)	DHB
13	Personal effects reconciliation	Police	

Ref	Response Issues/Functions	Lead Agency/Mandate	Key Support Agencies
14	Mortuary Services	Coroner	DHB, Funeral Directors
15	Notification of dead to NoK	Police	
16	Immediate Support & Counselling	MSD – National CDEM Plan Order 2005	Victim Support, DHB
	Evacuation		
17	People	Police (Level 1&2), CDEM Group (Level 3, 4 & 5)	Police, NZ Fire, Community Link NZDF
18	Isolated people	CDEM Group – CDEM Act 2002	Community Link. NZDF
19	Animals	MAF	SPCA, GDC Animal Control, Vets
	Community Welfare		
20	Registration of people	CDEM Group – CDEM Act 2002	Citizen Advice, Community Link
21	Temporary shelter	CDEM Group – CDEM Act 2002	Community Link, Housing NZ
21	Emergency food	CDEM Group – CDEM Act 2002	Commercial Caterers. Salvation Army Kiwanis
23	Emergency Clothing	CDEM Group – CDEM Act 2002	Red Cross
24	Financial Support	MSD	
25	**Information Management** (Including inter-agency, public information and media management)	Level 1 Incident owner Level 2 Police/CDEM Group (event/situation dependant) Level 3 & 4 & 5 CDEM Group	All agencies
	Warning System		
26	Natural Hazards	CDEM Group – CDEM Act 2002	GeoNet, Media, NZTA, Police, MetServic.

Ref	Response Issues/Functions	Lead Agency/Mandate	Key Support Agencies
27	Hazchem	NZ Fire/DHB - Fire Service Act 1975	GDC
28	Utilities	Utility owner	CDEM Group
	Lifelines		
29	Telecommunications	Chorus	Downer EDI Engineering Ltd
30	Power	Transpower & Eastland Network	EIL, Contractors
31	Gas	Vector	
32	Water	GDC	
33	Waste Water	GDC	
34	Local Roads	GDC	Contractors
	Airport	Gisborne Airport Ltd	Air Traffic Safety, EIL
	Port	Eastland Port Ltd	EIL, Maritime NZ
	Rail	On Track	
35	State Highways	NZTA	Opus, Contractors
	Building and structures		
36	Building Safety	GDC	Opus
37	Re-occupancy	GDC	EQC, MSD, other welfare Agencies, Insurance Council
	Property/Environment		
38	Urban Fire	NZ Fire - Fire Service Act 1975	Rural Fire Authority

Ref	Response Issues/Functions	Lead Agency/Mandate	Key Support Agencies
39	Rural Fire	Rural Fire Authority	NZ Fire,
40	Hazchem	Work Place – GDC - under contract to Dept Labour Incident/Spill – GDC – Haz & New Organism Act 1996	Fire Service, PHU
41	Marine Oil Spill	GDC tier 1&2/Maritime NZ Tier 3	Maritime NZ, Police, NZ Fire, CDEM Group
42	Impact assessment	CDEM Group	Police, NZ Fire, USAR

Annex E ⏩ EMERGENCY LEVELS, PROCEDURES and ROLES

Event Level	Event Status/Procedures	CDEM GEOC Role	Group Controller Role
Level 1 Local incident for which a declaration is not required or appropriate. • Can be dealt with by Emergency Services and/or Local Authority resources alone. • Specialists may be required for specific circumstances.	No Declaration • The incident is dealt with using CIMS Multi-Agency Event structures and process. • Nature of the incident will usually determine the lead agency. • Immediate joint decision as to lead agency/incident controller necessary if lead agency unclear.	Unlikely to be involved.	Notified if GEOC involved.
Level 2 Local incident for which a declaration is not required or appropriate. • Can be dealt with by Emergency Services and/or Local Authority resources alone. • Higher level of inter-agency co-ordination required. • Specialists may be required for specific circumstances.	No Declaration • The incident is dealt with using CIMS and joint co-ordination through lead agency EOC. • Nature of incident will dictate the lead agency. • Potential need for CDEM Welfare. • Local Authority support may be required.	Lead Agency EOC/incident controllers communicating event intelligence with GEOC. GEOC partially activated and co-ordinating functions in support of lead agency. GEOC collecting and collating information in support of lead agency.	Or delegated staff – CDEMO Co-ordination of Local Authority functions and support. • Inform MCDEM.

Event Level	Event Status/Procedures	CDEM GEOC Roles	Group Controller Role
Level 3 Immediately recognizable as an event that will need significant co-ordination to manage, or may need the use of special powers but the area of impact does not involve the whole District. • Escalates from Tier 1 or 2 event, or a warning of a major event is received • A multi agency emergency led by an agency other than CDEM. • Co-ordinated support is required to support another CDEM Group.	Potential for Declaration of State of Local Emergency or actual declaration. Only one ward adversely affected others could be to a lesser extent. Plan for the transition from lead agency to GEOC. • Immediate joint decision as to lead agency/response co-ordinator necessary if lead agency unclear.	Group EOC activated in CDEM Office collecting and analyzing information to assist with joint co-ordination/supporting lead agency. • Support to lead agency if not CDEM. • Monitor event closely to gauge need to escalate to Tier 4. • Support to Community Link.	Or delegated staff - CDEMO • Be prepared to act as Response Co-ordinator as lead agency or provide support to lead agency. • Co-ordination of Local Authority functions and support. • Inform MCDEM
Level 4 Immediately recognisable as an event that will need significant co-ordination to manage, or may need the use of special powers and the area of impact will impact all or most of the District. • A warning of a significant event is received • Co-ordinated support is required to support another CDEM Group.	Potential for Declaration of State of Local Emergency or actual declaration* . More than 1 ward affected or entire District. Plan for the transition from lead agency to GEOC. * most likely option.	GEOC activated either in CDEM office or Council Chambers depending on scale of event collecting and analysing information to assist the Group Controller or lead agency in the management of the event. • Support to Community Link	• Sets Group Priorities. • Co-ordination of Group resources.
Level 5 Imminent or State of National Emergency	Declaration of State of National Emergency is being considered or has been declared	NCMC and Group EOC activated	• Co-ordination of Group resources. • Respond to priorities of National Controller.

Annex F ⏩ 4Rs RESPONSIBILITIES OF KEY ORGANISATIONS

CDEM Group (elected officials)

Reduction	Readiness	Response	Recovery
Promote co-ordination of reduction initiatives across agencies. Set policy for appropriate land-use and building activities. Promote risk avoidance.	Governance and management standard setting. Agree levels of public education and awareness. Operational level emergency planning and resourcing including, providing facilities for a GEOC, staffing for the Emergency Management Office, continuing to endorse the Council policy of maintaining the Community Link and radio system. Co-ordination of planning and resourcing.	Political support to responding agencies. Public advice and information. Support to Community Link, especially in rural areas.	Political support to responding agencies. Public advice and information. Activation and support to disaster relief fund (via trustees).
Council (including EMO)			
Hazard and risk research on regional level hazards. Advice on land use planning. Regional policies promoting risk mitigation and avoidance. Engineering works to reduce risks to infrastructure and protection works – Asset Management Plans. Earthquake prone buildings policy Urban growth/industrial land. Consent management for environmental sustainability. Sustainable land use initiatives and consents e.g. highly erodible land.	Emergency planning assistance. Flood protection systems maintenance. Response training and resourcing. Public education development and delivery. Maintenance of warning systems. CDEM Group administration. Business continuity planning. Responding partner agency relationship building. Emergency planning and procedures. Building standards and property advice. Maintenance of VHF radio system. Training and staffing of Community Link and GEOC staff.	Information gathering, collating and dissemination and co-ordinated impact assessments analysis. Support to the Lommunity Link. Business continuity planning for critical infrastructure and services. Priority setting. Management of the needs of evacuees. Liaison with responding agencies. Implementation of warning systems. Flood warning systems activation. Impact assessment. River engineering responses. GEOC activation. Staff re-prioritisation.	Co-ordination of recovery activities through the Recovery Manager and CEG. Public advice and information about recovery progress and assistance available. Transition to business as usual. Impact recovery assessments – costing and priority analysis. Liaison with affected parties. Policy and procedure reviews. Critical infrastructure reinstatement.

Reduction	Readiness	Response	Recovery
NZ Police			
	Response training and resourcing. Schools public education development and delivery. Chair and manage ESCC Group as a pro-active response to emergency issues. Emergency planning and procedures. Ensure staff training is up to date and sufficient to provide a response in emergency. Ensure a transparent and smooth transition process is in place for a transfer to a declaration.	Take lead role in areas of responsibility as outlined in the Plan i.e. law and order/mortuary procedures. Maintain a Police liaison position at CD HQ. Provide resources and responses as required by the CD Controller. Maintain and resource a communication network for all incidents that Police have to attend in CD emergency.	Maintain a communication link with CD.
NZ Fire Service			
Promote Understanding and function of continuity plan. Assist CDEM with strategy and planning for use of NZFS.	Tairawhiti Area will maintain all volunteer and paid brigade training to meet response requirements Retain full participation in all CDEM teams and functional groups. Tairawhiti National Commanders Instruction ensures Task Force response requirements. Area Communications is current and sufficient to cover whole of Area. Support CDEM strategy around public awareness campaign.	Tairawhiti Area response capability to required alarm response levels. Fire liaison position at the GEOC is filled immediately from Gisborne. Activate continuity plan for fire services. Relocate where requirements dictate.	Maintain continuity plan if necessary. Replacement resources per National plan. Provide after event support to Civil Defence by agreement. Region management team will review and decide on transition to business as usual.

Reduction	Readiness	Response	Recovery
DHB			
Vaccination campaigns across all ages, but focusing on vulnerable groups to avoid preventable illnesses. Full range of health promotion and protection initiatives designed to: ▸ Reduce health inequalities. ▸ Educate the Tairawhiti population on health lifestyle choices. ▸ Enhance the health status of the Tairawhiti population Service providers are funded to provide health services to an audited standard to cater for all demonstrated healthcare needs in Tairawhiti.	All health services on Tairawhiti District Health campus are performing to the required (audited) standard with fully trained staff. All Hospital Departments have emergency and surge capacity plans to deal with unforeseen situations and provision of business continuity. All health service providers in Tairawhiti, as part of their contract, have emergency and business continuity plans to enable them to respond to any emergency or unforeseen situation and to maintain business continuity to an agreed level.	Assume responsibility as Lead Agency for health in Tairawhiti in the event of an emergency or unforeseen situation. Co-ordinate the endeavours of all health services in Tairawhiti. Establish and maintain clear communications between Tairawhiti District Health and all health services. Establish and maintain clear communications between Tairawhiti District Health and the emergency services and the CDEM Group EOC.	Appoint a recovery manager to co-ordinate the recovery of the health sector in Tairawhiti. Communicate clearly all necessary information to health services and the community relating to the provision of health services during the recovery period. Mitigate for all identified weaknesses and areas of concern.
Ministry of Social Development	Be an active member of the Welfare Advisory Group to assist with the wider community welfare planning role. Maintenance of core services to clients, staff, government and key stakeholders. Plan how to reduce non-essential services depending on impacts. Consider staffing issues that may arise during an event. Maintenance of business continuity plan – supplier, agency contacts etc.	Ensure continuation of payments to clients. Make emergency payments to clients and those evacuated from their homes. Ensure clients and those affected by the event have access to MSD services. Take an active role in welfare centres where established if services required. Participate in CDEM response planning. Collate reports for Regional and National Office. Request staff relief if required.	Meet longer term accommodation and other related welfare costs of affected clients and those unable to return home. Be a part of the CDEM Recovery Team that co-ordinates the recovery. Provide regular reports to National Office re outcomes

Reduction	Readiness	Response	Recovery
Housing NZ			
The Earthquake Prone Building Update Programme	Business Continuity Planning. Representation on the CDEM Group Welfare Advisory Group. Networking with local welfare agencies Maintain relationships with local voluntary agencies with a role in welfare. Participate in local exercises to test the CDEM Groups ability to respond in the event of a disaster	Business Continuity management of essential services (to staff and customers) Assist the CDEM Group with accommodation issues for evacuees Collection and distribution of housing information to all required sources Support to other welfare agencies as needed.	Co-ordination of available accommodation as required Continued collection and distribution of housing information to all required sources Support to other welfare agencies as needed.
Ministry of Agriculture and Forestry - MAF Policy			
Promotion of sustainable land management to minimise hill country erosion and downstream impacts on water quality and flooding – including afforestation programmes, capability building and new resources for land managment, and funding to support local authority initiatives. Encouragement of risk management focus – building self-reliant farming families	Participation in planning (e.g. workshops on particular hazards) and welfare groups. Developing networks among the rural community and assist with linking such rural contacts to CDEM planning mechanisms. Business continuity planning and development of adverse events manual (Standard Operating Procedures) and drought guidance document	Provide assistance as required to responding agencies in terms of advice and rural contacts. Main role is information gathering and providing advice to Minister of Agriculture and Forestry on impact of event on rural communities. Assist with advice to local agencies and farming community as required.	Implement the 'On-farm Adverse Events Recovery Plan' Assess scale of event and provide advice to Government on response required (and may conduct economic impact assessments). Liaison with affected stakeholders. Co-ordination of rural family recovery primarily through local Rural Support Trust – can include mentoring and advice from coordinators, or provision of Agricultural Recovery Facilitators in medium or large-scale events. Promote assistance available in medium and larger events which can include labour (via Enhanced TFG and volunteer costs); financial assistance (via MSD); tax relief (IRD). Provide technical advice on recovery via web, media, funding provision of workshops/field days and woolshed meetings etc. Provide funding for local community events to raise morale.

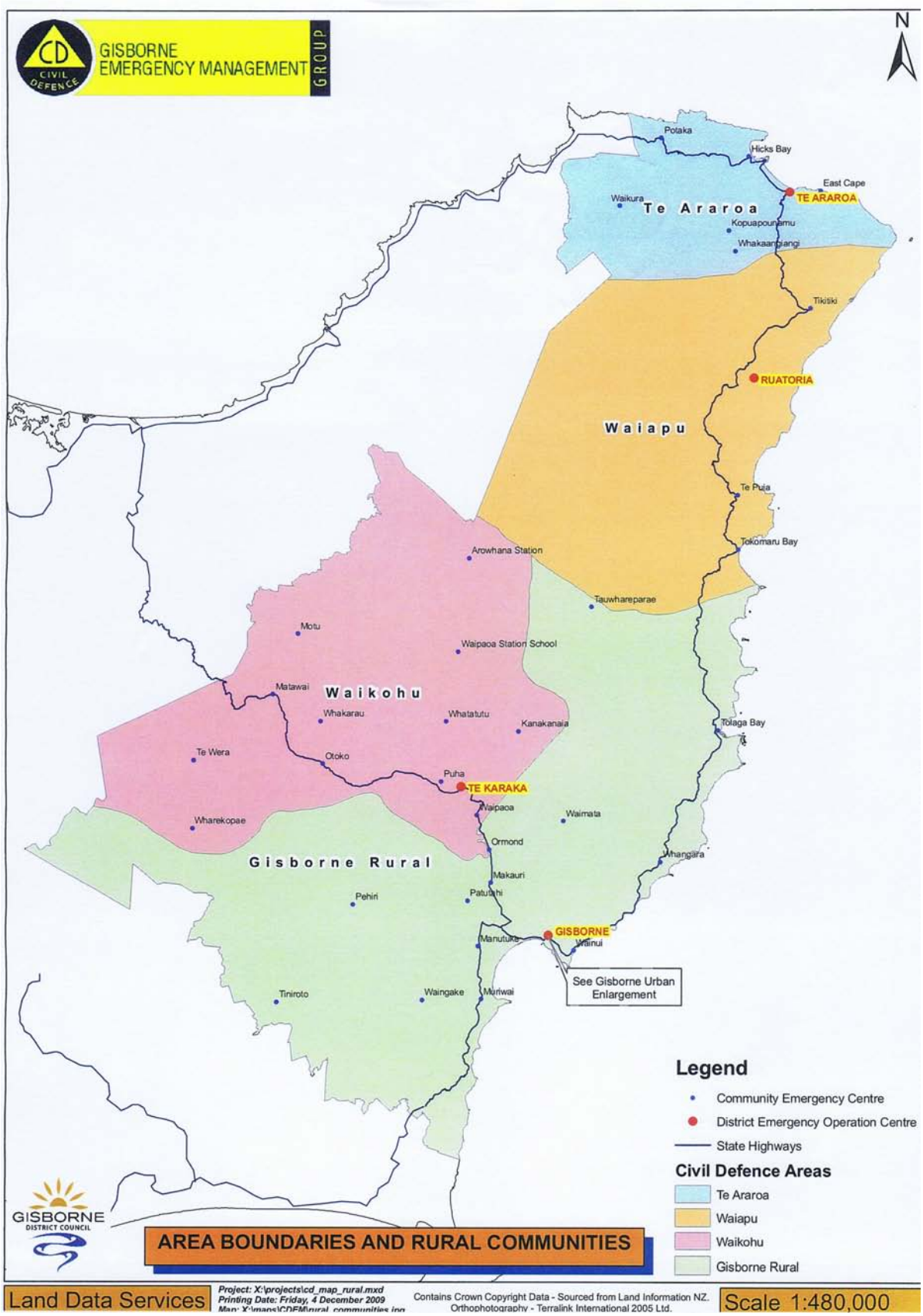
Reduction	Readiness	Response	Recovery
Biosecurity NZ Border control measures. Research.	Investigation and diagnostic capability. Generic response model and response plans. Surveillance systems to detect incursions. Specific response plans for high priority diseases such as foot and mouth disease. Contracts with providers for operational activities.	Leadership and coordination of the biosecurity system. Apply interim measures which may include animal standstill and movement restriction. Determine optimal response plan and implement this with affected stakeholders. Long term management or organism if required. Appropriate regard to animal welfare issues. Communication and co-ordination of activities with importing countries and other stakeholders as required.	Compensation for control activities may be available. Other MAF rural support schemes appropriate.
Eastland Infrastructure - *Eastland Network*			
Robust policies that minimise the impact of engineering and maintenance works and promote a reduction of risk to known hazards. Asset Management Plan.	Ongoing identification and assessment of risks to the Network and safety of users and the assets alike. Robust Emergency Management Planning and Procedures. Training and Resourcing. Central contact for Public to contact for Faults Servicing – MEP 0800 206 207. Public Notices and Information. Inter-agency relationship development and building. CDEM planning mechanisms. Contracts with providers for operational activities.	Implement Electrical Network Control Room Policy and Procedures. Contractor Auditing Programme. Support to community lifelines and inter-agency needs. Restore Power ASAP while Prioritising available Resources. 24/7 Duty Controller and contingency plan back up protocol Provide a liaison to work in with Civil Defence and other services. Implement Emergency Response Plans where appropriate. SCADA Network Monitoring.	Co-ordination of recovery and restoration of power to affected areas ASAP. Assessment and Repairs to Eastland Network Infrastructure. Work with CDEM Recovery Team Policy and Procedure Reviews. Follow up
Gisborne Airport Robust policies that minimise the impact of engineering and maintenance works and promote a reduction of risk to known hazards.	Ongoing identification and assessment of risks to the Airport and safety of Users, Public and the asset alike.	Support to community lifelines and inter-agency needs. Contractor Auditing Programme. Support to community lifelines and inter-agency needs.	Co-ordination of airfield checks post critical incident, CAA. event trigger protocols.

Reduction	Readiness	Response	Recovery
Asset Management Plan.	Robust Emergency Management including the Gisborne Airport Emergency Plan. Fully Revised 31/3/09 Operational Document. ACE Volume 1 Planning (Appendix 1) and CAA Procedures. ICAO Part 7 Airport Emergency Planning. Airways NZ Protocols and Mgmt. CAA Rule Part 139 requirement Rescue Co-ordination Centre NZ. Training and Resourcing. Public Notices and Information. Inter-agency relationship development and building. CDEM planning mechanisms. Contracts with providers for operational activities. CAA Audits and implemented outcomes as required.	Restore Airport Services ASAP while Prioritising available Resources. 24/7 Duty Control Roster & contingency plan back up protocol Provide an EIL liaison to work in with Civil Defence and other Emergency services. Implement Emergency Response Plans where appropriate. Specific Airport User Safety and Security Induction Programme for all employees. Out of hours Medical Evacuation runway service for airfield operations. (Life Flight Air Ambulance Services).	Work with Gisborne Airport tenants and keep all informed and facilitate necessary work to get the Airport operational ASAP. Provide facility for Emergency supplies drops if required and Air Force / Army Facilities to set up camp as required. Policy and Procedure Reviews. Follow up

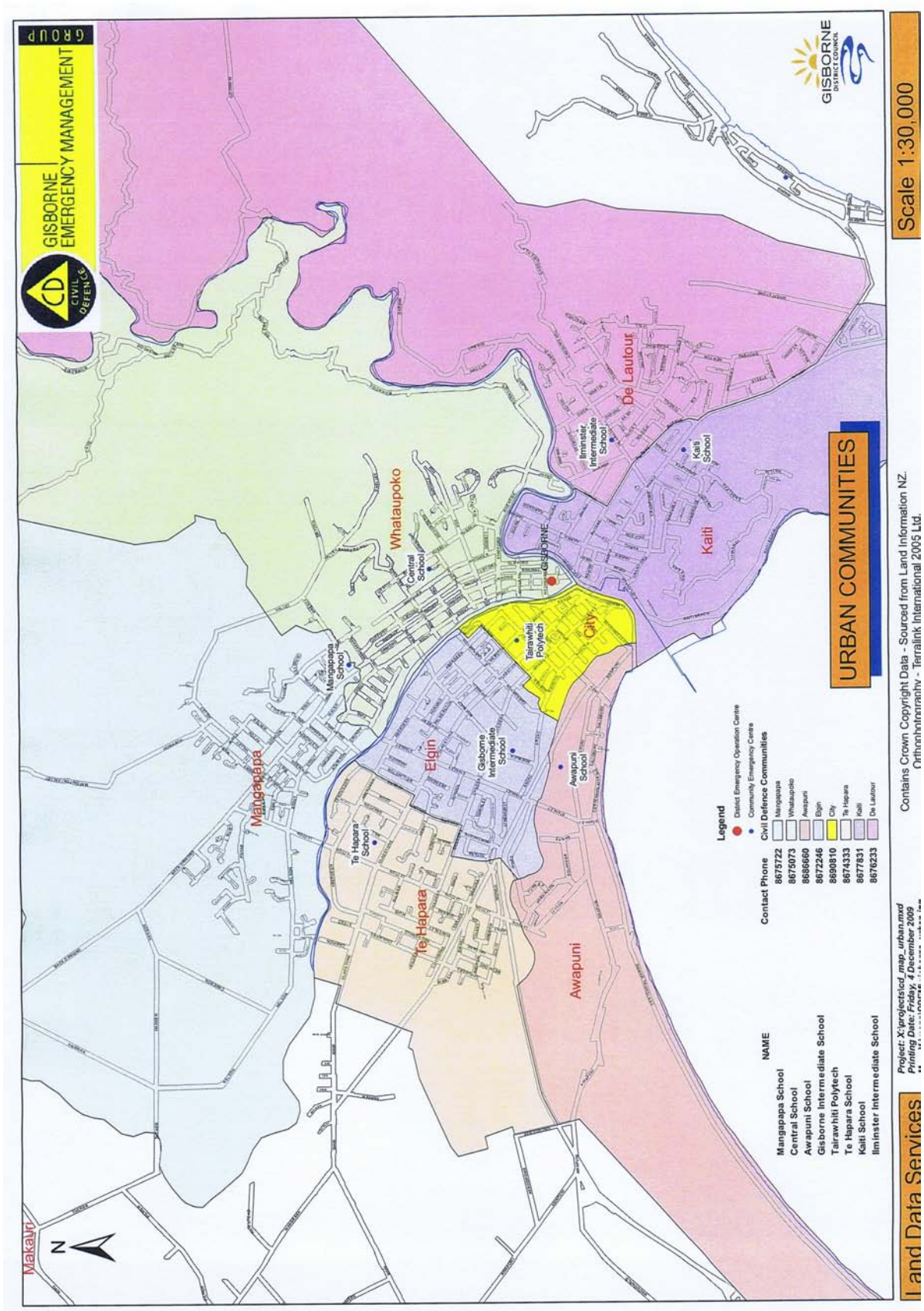
Reduction	Readiness	Response	Recovery
Eastland Port Robust policies that minimise the impact of engineering and maintenance works and promote a reduction of risk to known hazards. Asset Management Plan.	Ongoing identification and assessment of risks to the Port and safety of Users, Public and the asset alike. Robust Emergency Management Planning and Procedures. Public Notices and Information. Inter-agency relationship development and building. CDEM planning mechanisms. Contracts with providers for operational activities. Training and Resourcing. Maritime NZ Statutes, Regulations and COP MNZ & Chubb Security Audits and implemented outcomes as required.	Support to community lifelines and inter-agency needs. Contractor Auditing Programme. Restore Services ASAP while Prioritising available Resources. 24/7 Contactability and contingency plan back up protocol. Provide a liaison to work in with Civil Defence and other services. Implement Emergency Response Plans where appropriate. Provide NIWA monitoring information as required. Maintain Safe Mooring Facilities. Maintain Tug Vessel Facilities and corresponding services as required, (i.e. break waters, draft capacity, turning areas etc).	Implement Emergency Response Plans where appropriate. Co-ordination of Wharf, Shed and Log Yard Facilities to IPIS Regulations. Checks post critical incident / MNZ & regulatory body event trigger protocols & procedures. Work with Eastland Port tenants keeping all informed and facilitate necessary work to get the Port operational ASAP.
NZ Transport Agency **(Further development is required with direct involvement of NZTA)** Robust policies that minimise the impact of engineering and maintenance works and promote a reduction of risk to known hazards. Engineering works to reduce risks to infrastructure and protection works. Elimination or reduction of hazards through normal work programmes.	Ongoing identifying and assessment of risks to the operation and safety of the state highway network. Development of robust emergency management planning and procedures. (Disaster Resilience Plan) Operational level emergency planning and resourcing. (State Highway Emergency Procedures Manual). Response training and resourcing. Public education and warning systems. (Treis, AA Website, local media.) Inter-agency relationship development and building. (Utilities meetings, networking). Inter-agency agreements relating to allocation of physical works resources. (NZTA/GDC unwritten protocol).	Information gathering, collating and impact assessment. Implement emergency planning as set out in the State Highway Emergency Procedures Manual. Allocate and direct physical works resources. Advice to public through Treis, AA Website, and local media. Support to community lifelines and inter-agency needs. Liaise with responding agencies.	Co-ordination of recovery and opening of the state highway network back to the pre-event condition. Public advice and information relating to the recovery process and the state highway condition through Treis, AA Website and local media. Assessment and repairs to critical infrastructure. Policy and procedures review and updating with lessons learnt.

Reduction	Readiness	Response	Recovery
Telecom			
Pan-Telecom standards for the build of all telecommunications infrastructure Robust pan-Telecom change control process to minimise the impact of any change, upgrade or remedial action in the telecommunications networks Inclusion of 3rd Party suppliers in build, problem management and change control standards and processes. Participation in Engineering Lifelines projects to identify hazards	Pan-Telecom Business Continuity Management Policy aligned to BCM best practice Pan-Telecom Crisis Management Plan Individual Line of Business Crisis Management and Business Continuity Plans Operational Disaster Recovery Plans Site Recovery Plans Inclusion of 3rd Party business partners and suppliers in response plans Requirement for 3rd Party suppliers and business partners to have response plans. Pan-Telecom awareness programme Pan-Telecom Business Continuity Management Programme Pan-Telecom Business Continuity Management Governance Audit of response plans Participation in Lifelines Engineering Exercises at local and national level Single point of contact for MCDEM and Local Authorities for reporting and liaison 24/7 National Operations Centre (NOC) 24/7 Alarm monitoring Telecommunication Service Incident process for all planned and unplanned events	Support for Local Authorities during Response Support for MCDEM during Response Prioritisation of recovery as appropriate to situation Support to local communities, specifically communities at risk Monitoring of alarms and effectiveness of response Initiation of response plans as required Participation in the NEAT (National Emergency Alert for Telecommunications) Advice to public via Telecom channels Advice and support to Media teams at local Council and MCDEM via Telecom Media team Liaison with Lifelines Coordinator Liaison and coordination with 3rd Party business partners and suppliers Liaison with MCDEM for access to sites	Co-ordination of telecommunications recovery Recovery of assets and services Liaison with authorities for prioritisation of recovery and access to sites Prioritisation of recovery where appropriate Media liaison Customer liaison Government and local Council liaison Coordination of 3rd Party business partners and suppliers Coordination with Telecommunications Sector via Telecommunications Emergency Planning Forum Post event review

Annex G ⏩ DISTRICT MAP and AREA BOUNDARIES



Annex H ⏩ CITY MAP and COMMUNITY BOUNDARIES



Annex I ⏩ MM EARTHQUAKE SCALE MODIFIED MERCALLI INTENSITY SCALE

Richter scale is the amount of energy released at the epi-centre of the quake whereas the MM scale is a measurement of the felt or impact intensity at a given point.

MM1 People
Not felt except by a very few people under exceptionally favourable circumstances.

MM2 People
Felt by persons at rest, on upper floors or favourably placed.

MM3 People
Felt indoors, hanging objects may swing, vibration similar to passing of light trucks, duration may be estimated, may not be recognised as an earthquake.

MM4 People
Generally noticed indoors but not outside. Light sleepers may be awakened. Vibration may be likened to the passing of heavy traffic, or to the jolt of a heavy object falling or striking the building.

Fittings

Doors and windows rattle. Glassware and crockery rattle. Liquids in open vessels may be slightly disturbed. Standing motorcars may rock.

Structures

Walls and frame of buildings, and partitions and suspended ceilings in commercial buildings, may be heard to creak.

MM5 People
Generally felt outside, and by almost everyone indoors. Most sleepers awakened. A few people alarmed.

Fittings

Small unstable objects are displaced or upset. Some glassware and crockery may be broken.

Hanging pictures knock against the wall.

Open doors may swing.

Cupboard doors secured by magnetic catches may open.

Pendulum clocks stop, start, or change rate (H*).

Structures

Some windows Type 1* cracked. A few earthenware toilet fixtures cracked

MM6 People

Felt by all.
People and animals alarmed.
Many run outside*.
Difficulty experienced in walking steadily.

Fittings

Objects fall from shelves.

Pictures fall from walls. Some furniture moved on smooth floors, some unsecured freestanding fireplaces moved.

Glassware and crockery broken.

Very unstable furniture overturned.

Small church and school bells rings (H).

Appliances move on bench or table tops.

Filing cabinets or "easy glide" drawers may open (or shut).

Structures

Slight damage to Buildings Type 1.

Some stucco or cement plaster falls.

Windows Type 1* broken

Damage to a few weak domestic chimneys, some may fall.

Environment

Trees and bushes shake, or are heard to rustle.
Loose material may be dislodged from sloping ground, e.g. existing slides, talus slopes, shingle slides.

MM7 People

General alarm.
Difficulty experienced in standing.
Noticed by motorcar drivers who may stop.

Fittings

Large bells ring.

Furniture moves on smooth floors, may move on carpeted floors.

Substantial damage to fragile* contents of buildings.

Structures

Un-reinforced stone and brick walls cracked.

Buildings Type 1 cracked some with minor masonry falls.

A few instances of damage to Buildings Type II.

Un-braced parapets, un-braced brick gables, and architectural ornaments fall.

Roofing tiles, especially ridge tiles may be dislodged.

Many un-reinforced domestic chimneys damaged, often falling from roofline.

Water tanks Type I* burst

A few instances of damage to brick veneers and plaster or cement-based linings. Unrestrained water cylinders (Water Tanks Type II*) may move and leak.

Some windows Type II* cracked. Suspended ceilings damaged.

Environment

Water made turbid by stirred up mud.

Small slides such as falls of sand and gravel banks, and small rock-falls from steep slopes and cuttings.

Instances of settlement of unconsolidated or wet or weak soils.

Some fine cracks appear in sloping ground. A few instances of liquefaction (i.e. small water and sand ejections).

MM8 People

Alarm may approach panic.

Steering of motorcars greatly affected.

Structures

Building Type I, heavily damaged, some collapse*

Building Type II damaged, some with partial collapse*

Buildings Type III damaged in some cases.

A few instances of damage to Structures Type IV.

Monuments and pre-1976 elevated tanks and factory stacks twisted or brought down.

Some pre-1965 infill masonry panels damaged.

A few post-1980 brick veneers damaged.

Decayed timber piles of houses damaged.

Houses not secured to foundations may move.

Most un-reinforced domestic chimneys damaged, some below roofline, many brought down.

Environment

Cracks appear on steep slopes and in wet ground.

Small to moderate slides in roadside cuttings and unsupported excavations.

Small water and sand ejections and localised lateral spreading adjacent to streams, canals, lakes etc.

* items marked * in the scale are defined in the following note.

** Dowrick, D.J. 1996: The Modified Mercalli Earthquake Intensity Scale – Revisions Arising from Recent Studies of New Zealand Earthquakes. Bul. NZ Nat Soc. Earthquake Eng. 29(2): 92-106.

MM9 Structures

Many Buildings Type I destroyed*.

Buildings Type II heavily damaged, some collapse*.

Buildings Type II damaged, some with partial collapse*.

Structures Type IV damaged in some cases, some with flexible frames seriously damaged.

Damage or permanent distortion to some Structures Type V.

Houses not secured to foundation shifted off.

Brick veneers fall and expose frames.

Environment

Cracking of ground conspicuous

Land-sliding general on steep slopes.

Liquefaction effects intensified and more widespread, with large lateral spreading and flow sliding adjacent to streams, canals, lakes, etc.

MM10 Structures

Most Buildings Type I destroyed*.

Many Buildings Type II destroyed*.

Buildings Type III heavily damaged, some collapse*.

Structures Type IV damaged, some with partial collapse*.

Structures Type V moderately damaged, some with partial collapse*.

A few instances of damage to Structures Type VI.

Some well-built* timber buildings moderately damaged (excluding damage from falling chimneys).

Environment

Land-sliding very widespread in susceptible terrain, with very large rock masses displaced on steep slopes. Landslide dams may be formed.

Liquefaction effects widespread and severe.

MM11 Structures

Most Buildings Type II destroyed

Many Buildings Type III destroyed.

Structures Type IV heavily damaged, some collapse*.

Structures Type V damaged, some with partial collapse.

Structures Type VI suffer minor damage, a few moderately damaged.

MM12 Structures

Most Buildings Type III destroyed

Many Structures Type IV destroyed.

Structures Type V heavily damaged, some with partial collapse.

Structures Type VI moderately damaged.

NOTE TO 1996 NZ MM SCALE

Items marked* in the scale are defined below.

Construction Types

Buildings Type I ▸ (Masonry D in the NZ 1965 MM scale).

Buildings with low standard of workmanship, poor mortar, or constructed of weak materials like mud, brick or rammed earth. Soft storey structures (e.g. shops) made of masonry, weak reinforced concrete, or composite materials (e.g. some walls timber, some brick) not well tied together. Masonry buildings otherwise conforming to Buildings Types I – III but also having heavy unreinforced masonry towers. (Buildings constructed entirely of timber must be of extremely low quality to be Type I).

Buildings Type II ▸ (Masonry C in the NZ 1966 MM scale).

Buildings of ordinary workmanship, with mortar of average quality. No extreme weakness, such as inadequate bonding of the corners, but neither designed nor reinforced to resist lateral forces. Such buildings not having heavy unreinforced masonry towers.

Buildings Type III ▸ (Masonry B in the NZ 1966 MM scale)

Reinforced masonry or concrete buildings of good workmanship and with sound mortar, but not formally designed to resist earthquake forces.

Buildings Type III – V at MM10 and greater intensities are more likely to exhibit the damage levels indicated for low-rise buildings on firm or stiff ground and for high-rise buildings on soft ground. By inference lesser damage to low-rise buildings on soft ground. By inference lesser damage to low-rise buildings on soft ground and high-rise buildings on firm or stiff ground may indicate the same intensity.

These effects are due to attenuation of short period vibrations and amplification of longer period vibrations in soft soils

Structures Type IV ▸ (Masonry A in the NZ 1966 MM scale).

Buildings and bridges designed and built to resist earthquakes to normal use standards, i.e. no special collapse or damage limiting measures taken (mid-1930s to c. 1970 for concrete and to c. 1980 for other materials).

Structures Type V

Buildings and bridges from c. 1980 with well-defined foundation behaviour, which have been specially designed for minimal damage e.g. seismically isolated emergency facilities, some structures with dangerous or high contents, or new generation low damage structures.

Structures Type VI

Structures dating from c. 1980 with well defined foundation behaviour, which have been specially designed for minimal damage, e.g. seismically isolated emergency facilities, some structures with dangerous or high contents, or new generation low damage structures.

Windows

Type I – Large display windows, especially shop windows.
Type II – Ordinary sash or casement windows.

Water Tanks

Type I – External, stand mounted, corrugated iron water tanks.
Type II – Domestic hot-water cylinders unrestrained except by supply and delivery pipes.

H – (Historical) More likely to be used for historical events.

Other Comments

"Some" or "a few" indicates that the threshold of a particular effect has just been reached at that intensity.

"Many run outside" (MM6) variable depending on mass behaviour, or conditioning by occurrence or absence of previous quakes, i.e. may occur at MM5 or not till MM7.

"Fragile Contents of Buildings". Fragile contents include weak, brittle, unstable, unrestrained objects in any kind of building.

"Well built timber buildings" have: wall openings not too large, robust piles or reinforced concrete strip foundations; superstructure tied to foundations.

Annex J ⏩ RISK ANALYSIS PROCESS

RISK EVALUATION PROCESS

Risk evaluation provides a means of determining priorities for significant hazards. To identify those hazards two processes were used. Firstly this list of likely hazards was identified

Flooding
Human Pandemic
Information Systems Failure
Local Tsunami
Erosion
Ashfall: within Group
Ashfall: external to Group
Animal Epidemic
Plant and Animal Pest and Diseases
Earthquakes
Liquefaction
Drought
Financial Crisis
Ponding
Storm Surge: tidal effects
High Winds
Lightning Strike
Snow
Hail
Frost
Distant: tsunami
Mud Volcanoes
Cliff/Headland Erosion
Rural Fire
Extreme Temperature
Electricity
Communications
Water Supply
Wastewater
Fuel Supply
Roading Lifeline
Marine / Port
Civil Unrest
Hazardous Substance Spill
Tornadoes
Rock Falls
Flows
Beach Erosion
Roading Accident
Air
Food Supply
Gas
Rail
Dam Breach
Urban Fire

To refine the list they were ranked using the likelihood/consquence model from the AS/NZ Standard 4630: 2004. The list of hazards identified in table 8 were then subject to the SMG process described below.

The risk evaluation profile template uses the SMG Model, incorporating seriousness, manageability and growth to further refine the understanding of the relative importance of risks which gave them a priority.

The model measures the following factors:

- **Seriousness:** *The relative impact measured in terms of the social, built, economic and natural environments. The process of assigning consequence ratings for each of the environments for Seriousness is outlined in on p41.*

These impacts can be scored from either 1 to 5 or 1 to 3, with 1 being the lowest impact and the highest number being the greatest impact.

The Serious environments are the same as those used in the Context development and those used in Recovery Management. They are:

- Social environment
- Built environment
- Economic environment
- Natural environment.

Social	Built	Economic	Natural	Average

- **Manageability:** *The relative ability to reduce the risk by managing the hazard, the consequences, or both. The process for identifying the manageability rating is outlined on p141. A rating is determined from a combination of management difficulty and the current level of effort being applied. The rating is established for each of Reduction, Readiness, Response and Recovery.*

  Manageability is defined by how much work is going into managing the risk and their consequences, again using 1 – 3 as:

  1 - low

  2 - medium

  3 - high

  The management is divided into the 4Rs as it provides an indication whether too little effort is taking place or in fact too much is happening for a risk that is easy to manage. Using the table below provides and analysis of the management of risk.

  The letters in the middle row are:

  D – Degree of difficulty to manage

  E – Current effort taking place to manage the risk.

Reduction			Readiness			Response			Recovery			Total
D	E	=	D	E	=	D	E	=	D	E	=	

To provide a figure in the = column the number in the 'Effort' box is subtracted from the 'Difficulty' box, if the effort is greater than the difficulty there will be a negative in the = box.

- **Growth:** *The rate at which the risk will increase, due to an increase in the likelihood, the consequences of both. A growth rating is determined using combination of the probability of an event occurring and the changes in community exposure to that event. A rating is developed for each hazard.*

  Growth is determined by the increase or decrease in frequency of the risk and the changing affects on the communities and its exposure to the risk, for example more people live near the coast than ever before - therefore increasing the risk of tsunami impacts. Use of the table below will determine the figure that would further help with analysis of the risk.

Event Occurrence Probability Rise	Changing Community Exposure	Rating
Low	Low	1
Low	Medium	2
Medium	Low	
Medium	Medium	3
Low	High	
Medium	High	4
High	Low	
High	Medium	
High	High	5

Following the analysis of the risks, a table can be drawn up using the ratings and score for each of the determined risks and provide a ranking of importance or priority.

Below is an example:

A weighting for each section should be added as the sections may be considered as having different emphasis, weighting examples are: S average X 6, M X 4, G X 1. This is because seriousness could be considered the most important of the elements.

Once the analysis of the risks is complete a table can be collated using the ratings and scores for each of the determined risks to provide a ranking of importance or priority.

Risk	S						M		G		Total	Priority
	S	B	E	N	Avg	X6		X4		X1		

Not only is the final analysis important but also the process of analysis and the discovery of issues and identifying future work programmes to continue risk reduction for the protection of communities.

RISK ANALYSIS

(i) Consequences

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

(ii) Likelihood

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

(iii) Risk Analysis Matrix

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

RISK EVALUATION

(i) Seriousness

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

Seriousness Environments

Social	Built	Economic	Natural	Average

(ii) Manageability

Manageability is defined by how much work is going into managing the risks and their consequences, using 1-3:

1 low
2 medium
3 high

Management is divided into the 4Rs to provide an indication as to too little effort being afforded or in fact too much is happening for the risk that is easy to manage. The following table provides an analysis of the management of risk, where **D** represents the degree of difficulty to manage and **E** the current effort taking place to manage the risk.

Reduction			Readiness			Response			Recovery			Total
D	E	=	D	E	=	D	E	=	D	E	=	

The sub-total represents an average manageability value:

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

High	Low	5

(iii) Growth

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

Annex K ⏩ PERSONS APPOINTED TO KEY POSITIONS

GROUP CONTROLLERS

Jon Davies is appointed as the Group Controller.

John Clarke is appointed to act as Group Controller in Jon Davies' absence.

GROUP RECOVER MANAGER

John Clarke is appointed as the Recovery Manager.

Patrick Willock is appointed as the Alternate Recovery Manager

AREA CO-ORDINATORS

Hal Hovell	Te Araroa
Paul Sollitt	Waiapu
Ian Smith	Waikohu
Jon Davies	Gisborne