

**AGENDA FOR A MEETING OF THE EMERGENCY SERVICES SPECIAL COMMITTEE
TO BE HELD AT WAITAKERE CENTRAL, 6 HENDERSON VALLEY ROAD,
HENDERSON, WAITAKERE, ON TUESDAY, 12 JUNE 2007,
COMMENCING AT 4.00 PM**

TABLE OF CONTENTS

<u>ITEM</u>		<u>PAGE NO.</u>
1	APOLOGIES	1
2	URGENT BUSINESS	1
3	CONFIRMATION OF MINUTES	1
4	OVERVIEW OF CIVIL DEFENCE EMERGENCY MANAGEMENT AND RURAL FIRE ACTIVITY	1
5	WAITAKERE TSUNAMI RESPONSE EMERGENCY WARNING SYSTEM - CONCEPT DESIGN	7

**AGENDA FOR A MEETING OF THE EMERGENCY SERVICES SPECIAL COMMITTEE
TO BE HELD AT WAITAKERE CENTRAL, 6 HENDERSON VALLEY ROAD,
HENDERSON, WAITAKERE, ON TUESDAY, 12 JUNE 2007,
COMMENCING AT 4.00 PM**

1 APOLOGIES



2 URGENT BUSINESS

Section 46A(7) of the Local Government Official Information and Meetings Act 1987 provides that where an item of business is not on the agenda, it may only be dealt with at the meeting if:

- (i) the Committee by resolution so decides; and
- (ii) the Chairman has explained at the beginning of the meeting (when open to the public) that the item will be raised for discussion and decision, why the item is not on the agenda, and why it cannot be delayed until a subsequent meeting.

The Committee may make a decision on a matter determined to be urgent.

NOTE: Urgent Business need not be dealt with now and may be delayed until later in the meeting.



3 CONFIRMATION OF MINUTES

Meeting Minutes - Tuesday, 3 April 2007

RECOMMENDATION

That the minutes of the Meeting of the Emergency Services Special Committee held on Tuesday, 3 April 2007, as circulated, be taken as read and now be confirmed.



4 OVERVIEW OF CIVIL DEFENCE EMERGENCY MANAGEMENT AND RURAL FIRE ACTIVITY

PURPOSE OF THE REPORT

The purpose of this report is to give the Emergency Services Special Committee an overview of Civil Defence Emergency Management (CDEM) and Rural Fire activity since the last report, and to outline future planned activity.

BACKGROUND

The CDEM Act 2002 introduced a new framework for CDEM in New Zealand. The legislation has established a regional basis for the leadership of emergency management with the establishment of Civil Defence Emergency Management Groups (CDEMG), and Coordinating Executive Groups (CEG) to support them. Alongside this regional framework, there is still a strong responsibility for local emergency management that lies with district/city councils. The basis for this management is summarised within the "4Rs" of emergency management, namely Reduction, Readiness, Response and Recovery.

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

Readiness - Developing operational systems and capabilities before an emergency happens. These include self-help and response programmes for the general public, as well as specific programmes for emergency services, utilities and other agencies.

Response - Actions taken immediately before, during or directly after an emergency, to save lives and property, as well as help communities to recover.

Recovery - Activities beginning after initial impact has been stabilised and extending until the community's capacity for self help has been restored.

Rural Fire is an integral element of the City's CDEM response organisation, although generally involved on a daily basis in dealing with fire events. In this regard they work in the same way as the volunteer forces of the New Zealand Fire Service but under the auspices of the Waitakere Rural Fire Authority. In an emergency, Rural Fire Forces become an element of the overall CDEM response.

STRATEGIC CONTEXT

CDEM is a responsibility of Council under the CDEM Act 2002. CDEM forms part of Council's strategic framework, in that it contributes to community wellbeing and building strong communities by increasing community readiness for and resilience to emergency events, reducing exposure to such events, and providing for emergency response in the case of such events. The requirement for local planning and coordination is essential to meeting these requirements. Rural Fire contributes to the green network through protection of rural forest areas and strong communities through its volunteer programme, supporting communities to meet their own emergency needs.

ISSUES

1 New Emergency Operating Centre

At the time of writing this report, it is expected that the Contractor, Skyward Construction Limited, will ask for an extension of time for practical completion by two weeks from the original date of 3 August 2007. The extension request has been caused by some days lost to rain and re-engineering requirements for some of the steel roofing structure. All internal fitting and furniture requirements have been identified and are in the process of being ordered. Ongoing reporting on the project is occurring, as agreed, via the Projects Special Committee and the project is still expected to come in within budget.

Preliminary planning has also commenced with Public Affairs for an official opening. At this time, a mid-to-late September date is envisaged and it is suggested that the Minister of Civil Defence be invited to do the official opening.

2. **Warning Sirens and Public Alerting Systems' Project**

The Committee will be aware of the successful ripple-control and radio-activated tests conducted at Karekare during May. This project is the subject of a separate report elsewhere on the agenda.

In order to ensure that the alerting systems can be fixed to existing structures, and in particular power poles, a Memorandum of Understanding between Vector Power and Council is still to be completed, plus agreement by Maritime New Zealand for the installation of a radio repeater antenna at a site overlooking Piha. This antenna will give full radio coverage into the Bethells Valley, Piha, Karekare and Whatipu locations.

The Committee will also recall from previous reporting that staff were exploring the introduction of a text messaging service for voluntary subscription as an additional means of alerting the public. This is a system that the public can subscribe to at no cost but any alerting messages sent will be at a cost to Council of 17 cents per message. The system was recently introduced by the Rodney District Council but was not continued within Waitakere, given conflicting priorities. It is still recommended that Waitakere adopts the system in the near future where maximum publicity can be gained by linking this, the siren alerting system and potential telephone messaging system. The Rodney District have offered Council a copy of their agreement with Optn, the company promoting the text messaging system and examples of their promotion literature that could be used as required. Of note is that this system was used to warn residents in the Ruapehu District of the lahar from Mt Ruapehu in April 2007, with some 1,400 messages sent and received within five minutes.

An additional activity for public alerting is a telephone messaging system similar to that being tested by the North Shore City Council. This received New Zealand Herald publicity in late May 2007. This system relies on messages being sent out via the Council's Call Centre to houses in the community considered to be at threat of any impending tsunami. Initial consideration for a system for this Council commenced late last year, but was deferred due to other business priorities. It is pleasing to note that a software package has now been identified that can be used for this purpose within Council and that the system can be made to work. Further work now is required in identifying specific areas of the population to target and then developing a public education programme for the community in the selected areas that agree to join the project. Staff resources will be applied to this in the near future.

Finally, while no alerting system can guarantee to reach everyone in a targeted area, the introduction of siren alerting, plus text and telephone messaging options would ensure the widest coverage possible and, combined with a public education campaign, would complete a four-tier warning/alerting system that would be a first for the region.

3. **CDEMG Work Programme in response to the Capability and Capacity Assessment Report**

The Committee will recall from the last meeting that CEG and CDEMG have commissioned a business case overview of the draft CDEMG work programme adopted by CDEMG in response to the capability and capacity assessment. This report presents the final draft report of the business case analysis carried out by Cranleigh Merchant Bankers and the Kestrel Group. A copy of the report will be circulated to Members separately.

Generally, the report confirms the direction being taken by CDEMG. The most significant change from the work programme adopted is the recommendation to appoint some additional resources to the Emergency Management Office in year one, and to then conduct a review to see whether further additional resources are required.

CEG now has the opportunity to review the report, ask questions of the authors, and discuss any changes that might be sought. Following this discussion, the overview report will be reported through to CDEMG, and distributed formally to member organisations. (It has been distributed now on the understanding that it has not been formally received or considered by CDEMG.)

4. Civil Defence Emergency Management Activity

The reporting period has been an extremely busy one for all emergency management staff, with involvement in both local and regional activities. In addition, the Principal Rural Fire Officer (PRFO) has been supporting the Rodney District Council for Rural Fire purposes until a replacement officer is employed, due to the resignation of their former PRFO.

The primary areas of activity have been:

- Exercising Council's Crisis Management Team (CMT);
- Exercising the Council's Alternate Emergency Operating Centre during a four-hour exercise in April 2007;
- Coordination, conduct and participation in the four-day Ministry of Health national pandemic Exercise Cruickshank, both regionally and locally;
- Planning and organisation for the Engineering Lifelines regional communications Exercise Marconi, to be held on 8 June 2007;
- Review of Council's Business and Pandemic Continuity Plans;
- Ongoing coordination meetings and organisation for the proposed national Exercise Ruamoku, based on an impending volcanic eruption in the Auckland Region, to be conducted between November 2007 and March 2008;
- New Emergency Operating Centre (EOC) planning and organisation; and
- Public alerting system planning and organisation.

Other Regional CDEM Group Activities include:

- Chairmanship of the Coordinating Executive Group (Director: Corporate and Civic Services);
- Chair of the GEOC Working Party (Manager: Emergency Management);
- Member of the Group Communication Review Working Party;
- Member of the Group Training and Professional Development Working Party;
- Member of the Group Public Education Working Group; and
- Group Controller and principal support for the Group Controller.

5. Rural Fire Activity

Operational

The reporting period has been fairly quiet from a fire perspective, although responses involving non-fire incidents have remained at a high level. It is to be hoped that the recognition of fire danger levels by the general public has improved to the point where the use of fire has been more sensible.

Statistics of responses for the year are as follows:

Medical Responses	45	Power Lines	7
False Alarms	44	Vegetation	34
Animal Rescues	3	Miscellaneous Fires	23
Chemical Incidents	6	Rubbish Fires	24
M.V.A. / Rescue	41	Assist Police	13
Flooding	4	Structure Fires	16
Car Fires	52	Bonfires	6
Storm Incidents	9	Oil Spills	1
Special Service	6		

Total responses within the Waitakere Rural Fire District were 334. The percentage of vegetation fires of this total is 9.8% of all responses. The call categories shown clearly demonstrate the increased skill range of our volunteer fire crews; this is most evident in the number of medical assists attended.

Overall a good year, with minimal harm to the community, damage to property or destruction of the environment.

Training

Historically, specialised training courses are tapered off during the height of the fire season due to the greater operational workload. During this period, courses held involved Basic Fire-fighter; Breathing Apparatus; Pump Operation, Coordinated Incident Management System and the continuation of subjects in Civil Defence - a heavier load than usual.

Waitakere crews are at present providing training to Council's Civil Defence Initial Response Team in basic pump operation, which will provide the Team with the skills to operate in flooding situations and to be utilised as a support crew on the fire-ground.

Equipment and appliances

Equipment levels are good, with minimal wear or damage sustained through operations during the fire season. The same can be said for the appliance fleet.

Management

Cost recovery for items of clothing and equipment purchased has been received through the Grant Assistance Scheme.

The service contract with the Rodney District Council has been operating successfully; and an appointment for their new PRFO has been made with a start date of 25 June 2007. They have requested that Waitakere continue to provide a service to them for a short period of time, to allow a smooth transition to occur.

General

Stations, equipment and crews are in a positive mode and are ready to accept the challenges that the winter season brings, including a greater level of training.

As resolved at the last meeting, a formal letter of appreciation has been forwarded to all fire crews for their continuing dedication and commitment they bring in the protection they afford to our communities.

6. Initial Response Unit (NZRT3) Activity

Six members of the Initial Response Unit (IRU) have recently completed a weekend Rope Responder training course to strengthen the IRU's Rope Rescue capabilities. The weekend was held at Karamatura in Huia and was a combined training environment, with members of the North Shore City Council Initial Response Unit also in attendance.

The IRU is currently undertaking a Portable Pump Operating course with Waitakere Rural Fire Force, to strengthen the ability of the IRU to operate in an operational support role for Rural Fire Forces. This course will also be beneficial for the team when they undertake a Storm Response course in the middle of June 2007.

The IRU attended the launch of the Project Twin Streams walk and cycleway, where the team provided traffic control, parking and first aid services. The team dealt with two minor injuries during the day and their participation and professionalism was well received.

The IRU continues to develop and train to a high professional standard and remain an asset to Waitakere City Council and the Auckland CDEMG. All equipment and team member levels are adequate and the team continues to operate effectively.

7. Recovery Organisation

It is pleasing to report that significant progress has also been made during the reporting period in terms of the Council's Emergency Recovery Organisation. Three managers are now in place, led by the Group Manager: Project Services, with the Services Delivery Manager and the Special Projects Manager being the other members. The team has reviewed the existing Council Recovery Plan and is in the process of further developing the various working groups that would be required for community recovery post an emergency event. Their combined attendance at two recent region-wide recovery seminars and workshops served as an example to all other organisations in attendance. The Chief Executive Officer is aware of this development and has congratulated them on the work they are doing.

RESOURCES

The emergency management section remains well resourced for normal activity requirements and there are no specific operational issues.

A final review of the Emergency Management budget expenditure for the 2006/2007 financial year indicates that end-of-year expenditure will be within the approved budget figures.

CONCLUSION

The reporting period, and indeed the 2006/2007 year, has been an extremely busy and disruptive year for all emergency management staff. Despite the inconveniences of having to work within restricting workspaces, a high level of activity and output has been maintained. A huge amount of staff and management time has been given to Group activities but this will hopefully reduce over the coming months when full-time staff are employed for regional activity.

The remainder of the year is also going to be particularly busy as the new EOC comes on line, the introduction of alerting systems, plus meeting other normal day-to-day activity.

RECOMMENDATION

That the Overview of Civil Defence Emergency Management and Rural Fire Activity report be received.

Report prepared by Bill Morley: Manager Emergency Management Services and Emergency Management Services Officers Peter Barber and Brandon Guttery



5 WAITAKERE TSUNAMI RESPONSE EMERGENCY WARNING SYSTEM - CONCEPT DESIGN

PURPOSE OF THE REPORT

The purpose of this report is to present to the Emergency Services Special Committee the findings from the concept design investigations and trial demonstrations held recently for a Tsunami Response Emergency Warning System.

BACKGROUND

The requirement for the proposed system stems initially from concerns expressed by the Finance and Operational Performance Committee Meeting of 8 May 2006, regarding the measures in place to warn and evacuate coastal communities in a tsunami threat situation. This concern was prompted by the Tongan earthquake on Thursday, 4 May 2006, and subsequent publicity regarding national warnings to the public of a possible tsunami threat.

Current Tsunami Warning Procedures:

- The Pacific Tsunami Warning System Centre (PTWSC) in Hawaii is responsible for the issue of tsunami watch and warning messages throughout the Pacific Ocean;
- Such messages are passed to the Ministry of Civil Defence and Emergency Management in Wellington, who then forward the information to all civil defence organisations;
- Police, Fire Services and the Waitakere Civil Defence Emergency Management organisation (CDEM), then issue warnings to the community in areas likely to be affected. The response comprises a combination of radio and television broadcasts, telephone calls to surf clubs, and pager activation of all Fire Service and Rural Fire Forces, plus Police resources, to concentrate vehicle mounted sirens and loud hailer messages in areas that need to be evacuated. With sufficient warning time, CDEM response vehicles can also be used for this purpose.

At the Emergency Services Special Committee on 13 June 2006, approval was granted to approach the Long Term Council Community Plan and Annual Plan Special Committee for approval of funds to develop a warning system package consisting of both fixed and mobile siren systems, plus a public education programme. Funding was granted and the Waitakere Public Alerting Siren System Concept Project was established.

The use of mobile or portable siren systems is to be arranged at a later date at the same time that the public education programme will commence.

The Waitakere Tsunami Response Warning System is planned to be implemented to meet the needs, as resolved in the Emergency Services Special Committee Meeting held on 13 June 2006:

- “2. *That a proposal to pursue the introduction of a portable siren based warning system with messaging capability be endorsed and that negotiation with the North Shore City and Rodney District Councils be commenced immediately for a common system to be implemented for the North West Zone.*
3. *That a warning system package consisting of both fixed and mobile siren systems plus a public education programme be developed and recommended for consideration to the Long Term Council Community Plan and Annual Plan Special Committee.*
4. *That a copy of the Tsunami Response Warning Systems for Waitakere City report be forwarded to all Councillors, Community Board Members, and Te Taumata Runanga for their information.”*

1013/2006

The Ministry of Civil Defence Emergency Management has the responsibility for issuing national warnings for tsunami threats. This may be for a distant source (greater than three hours' notice) or regional source (three hours' or less notice) tsunami. A formal warning for a local source tsunami is unlikely to be made, because the notice period will be less than one hour.

The PTWSC based in Hawaii is the primary source for all tsunami warnings in the Pacific region. The PTWSC monitors an array of seismic and tidal sensors around the Pacific Ocean. Current procedure is that an “advisory bulletin” will automatically be generated to all receipt agencies the moment an earthquake or other seismic event with potential to cause a tsunami is recorded. This does not mean a tsunami has been generated; simply that some seismic event has occurred. In the case of an earthquake occurring in excess of 7.5 or greater on the Richter scale, a “tsunami watch” bulletin will be issued. If/when it is confirmed that a tsunami has been generated, a tsunami warning will be issued to countries likely to be affected.

Obviously, the sooner a warning or advice of the possibility of a tsunami can be generated, the sooner action can be taken to advise the public and, if considered necessary, commence evacuating communities in likely-to-be-affected areas. Unappreciated by many, is that the lead responsibility for public evacuation lies with the Police, supported by the Fire Service and other response agencies, as per local plans. CDEM organisations do not have a direct responsibility for evacuation and are primarily concerned with the welfare of the population that has been evacuated. There is however, a responsibility to ensure that there is close liaison with Police for the provision of additional resources as may be required to assist with a large-scale evacuation and as may be determined in local CDEM plans.

Since the 2004 Boxing Day Tsunami, there has been widespread concern regarding New Zealand's readiness to respond to a major tsunami, and the lack of a recognised public warning system other than media broadcasts. There has been research undertaken on this at the Civil Defence Emergency Management Group level, and considerable debate regarding instituting cell broadcasting of messages as a means of warning the public on a regional and national basis. Siren technology was not favoured. Following the Tongan earthquake event, the CDEMG has conveyed to the Government through the Minister of CDEM for “the need to take urgent action to put into place cell broadcasting and/or other electronic measures for issuing of tsunami broadcasting”. A further recommendation was “the need for clear, common-sense leadership statements from Government to notify the community in emergency events, or rumoured emergency events”.

STRATEGIC CONTEXT

CDEM is a responsibility of Council under the CDEM Act 2002. CDEM forms part of Council's strategic framework in that it contributes to community wellbeing, a safe city and building strong communities, by increasing community readiness for and resilience to emergency events, reducing exposure to such events, and providing for emergency response in the case of such events. The requirement for local planning and coordination is essential to meeting these requirements. The incorporation of a coastal public alerting siren system would greatly reduce community exposure to any emergency event, and in particular the threat of tsunami.

ISSUES

The Project Team, made up of the Special Projects Manager, the Project Manager, and the Technical Administrator Project Services, plus the Manager: Emergency Management, called for tenders from specialist warning system contractors and electrical engineering consultants, requesting that priced proposals be made for the concept design and testing of a tsunami warning system suitable for Waitakere. A formal request for proposal was issued on 31 January 2007 and only one tender was received from Meerkat Alert Systems Limited (Meerkat).

Meerkat have a track record of successful warning systems being trialled in the Far North and Bay of Plenty Districts. Furthermore, Meerkat have tied up to licensing agreements with overseas technology partners providing specialist know how and skills. The Project Team was of the opinion that Meerkat had the correct skills and expertise to undertake the proposed works. A formal contract was placed on Meerkat on 19 March 2006.

The Meerkat contract required the following activities to be undertaken:

- Survey of low-lying areas and identification of warning sites;
- Concept design of a prototype warning system;
- Trial of the system using radio and ripple control signals. ("Ripple" is a system of communicating signals through existing utility company power cables); and
- Generation of a technical report.

Two successful trials of the Meerkat system were undertaken at Karekare beach on Friday, 11 May 2007 and on Monday, 21 May 2007. The trials proved that a tsunami warning signal could be successfully sent via radio and via ripple control from CDEM headquarters to the warning siren on Karekare beach.

The Meerkat report has been received and has formed the basis of this report.

The report highlights the following:

- Ripple control is an effective means of activating outdoor sirens, as well as indoor domestic mini units plugged into a standard power socket, with a lag time of three minutes;
- The radio signal can reach Karekare and other isolated beaches but only with signal boosting using repeater stations;
- The audible warning siren using the internationally accepted emergency "Zulu Signal" (Dash – Dash – Dot – Dot) worked extremely well and was clearly audible at a great distance;
- The capital costs of the final design and installation of a citywide tsunami warning system is estimated to be \$474,100;
- Subject to approval by Long Term Council Community Plan and Annual Plan Special Committee for the final installation phase, it is estimated that a citywide alert can be in place by March 2008;

- A formal Agreement between Vector Power Company Limited (Vector) and Waitakere City Council is required to allow ripple control signals to be sent using Vector's power cables, and to allow Council to use Vector poles for siting of siren units;
- Public consultation and education will be required to advise residents of Waitakere about the tsunami warning system and how to react in the event of an alert;
- Cell phone coverage to Karekare Beach is unreliable, while ripple signals at Karekare Beach were viable during the tests;
- An Agreement with Maritime New Zealand is required in order for Council to erect a repeater station within the lighthouse building on Log Race Road, Karekare;
- Sufficient operational budget is available to fund operational costs; and
- It is proposed that subject to funding availability, a full system be implemented using the Meerkat system. A full report on this will be submitted to the Tenders Subcommittee.

RESOURCES

A capital budget of \$300,000 is available in the 2007/2008 Annual Plan for the purpose of establishing a tsunami siren warning system. If Council wishes to proceed with the full system, a further \$174,100 will be required. It is recommended that this loan funded capital expenditure be sought through the Annual Plan process.

CONCLUSION

The concept tsunami warning system designed and trialled by Meerkat at two trials at Karekare beach proved successful in providing an audible alarm for communities in low lying coastal areas. In addition, Meerkat was the only respondent in a publicly-advertised tender process and are currently working with Bay of Plenty District Council and Far North District Council to develop a similar siren warning system.

RECOMMENDATIONS

1. That the Waitakere City Tsunami Response Emergency Warning System - Concept Design report be received.
2. That the Emergency Services Special Committee endorse the use of the Meerkat Alert Siren System for use in Waitakere coastal regions.
3. That approval BE given to enter into agreements with Vector Power Company Limited for mounting equipment onto Vector's power poles and use of the ripple control system, and with Maritime New Zealand for the rights to erect a repeater station on their asset.
4. That it be recommended to the Long Term Council Community Plan and Annual Plan Special Committee that an additional \$180,000 capital funding be provided in the 2007/2008 Annual Plan to implement the full Tsunami Response Emergency Warning System.

Report prepared by: Bill Morley: Manager Emergency Management and Kim Robinson, Technical Administrator

