

Waitakere News

SPECIAL EDITION APRIL 2008

Tsunami Public Alerting – Evacuation Siren System

Keep this edition handy for any emergency tsunami situation

EVACUATIONS

The authority to order evacuations within Waitakere City rests with the Local Civil Defence Controller or the Auckland Region Civil Defence Emergency Management Group Controller.

Following the disastrous 2004 Boxing Day tsunami in Asia, and another recent tsunami in the Solomon Islands, the Waitakere City Council decided to commission a project for the installation of a siren-based alerting/evacuation system designed to warn our coastal communities of a tsunami threat for which Meerkat Alerting Systems was awarded the contract.

This special edition of Waitakere News reports on the locations of Waitakere's new tsunami sirens, gives advice on how they work and how residents should evacuate from coastal communities if necessary. It also contains wider civil defence emergency information for the general public.



Mayor Bob Harvey says that while we hope Waitakere will not experience a major natural disaster, the tsunami alert system is a prudent measure to ensure the city is prepared. "I have been concerned for some time that we were not well prepared to respond to a major tsunami on our coastline and the safety of the public for a tsunami event is paramount."



Chairman of the Council's Emergency Services Committee, Councillor Derek Battersby, says the sirens can be activated via a radio command or a signal down a power line called ripple control.

"The introduction of the alerting system is the first in Auckland and we hope other councils will adopt the same system for use in the near future, to ensure a common system for the region," Councillor Battersby says.

While Waitakere City is funding the project, Vector Power Ltd is also participating in the project, using a number of its power poles to mount the sirens.



WHAT DO THE SIRENS LOOK LIKE?

As shown in the picture, the Meerkat Alert System comprises a series of pole and building mounted sirens positioned to maximise reception at locations considered to be at greatest risk from any tsunami threat.

WHEN WILL THE SIRENS BE USED?

Initially the system will only be activated to notify the public of any tsunami threat as may be notified to Civil Defence authorities by the National Warning System. The system has three tones to signal an alert only, evacuation required and all clear.

TSUNAMI SIREN SYSTEM SIGNALS

Alert Signal –
(- dash - dash · dot · dot)
sounded for 15 minutes

Action to take;

- Evacuate beaches
- Listen to radio/tv for information
- Prepare to evacuate if required

Evacuate Signal –
(· dot · dot · dot) sounded in
continuous bursts for 15 minutes

Action to take;

- Evacuate immediately to nearest safe high ground
- Avoid using personal transport unless essential

All Clear Signal –
(—) continuous tone
for 5 minutes

Action to take;

- Return to premises if not affected
- Follow directions of the emergency services if your area has been affected

Information Guide



DO THE SIRENS COVER ALL COASTAL AREAS?

No they don't. The selected sites and coverage areas are designed for populated locations from sea level and up to 10 metres from sea level. There are a few areas that fit these criteria where there are no sirens installed, such as at the northern area of Whenuapai and at Laingholm where there is little or no identified risk from any tsunami. Similarly, there are other populated coastal areas where the sirens are not fitted as they are higher than 10 metres. Some locations on the Te Atatu Peninsula fit this criterion.

WILL THE SIRENS HURT MY EARS?

The sirens are designed to start at a low noise level and increase to full volume over the first four or five repetitions. This gives people in close proximity to a siren warning to cover their ears while moving away to a safe distance.

THE SIRENS WILL BE TESTED AT MIDDAY ON THE SUNDAYS COMMENCING AND FINISHING OF DAYLIGHT SAVING.

MAKE A NOTE OF THESE TESTING TIMES IN YOUR DIARIES AND CALENDARS

The testing sequence will be:

alert signal for 1 minute, 15 second pause

evacuate signal for 1 minute, 15 second pause

all clear signal for 1 minute

TEST COMPLETE

SPECIAL NOTE

As the system installation will not be completed in time for the change of Daylight Saving on Sunday April 6. The first test will be conducted at midday on Sunday April 27 2008. Thereafter, future tests will be as shown above. **Please note this date.**



THREE T'S

Alert signal dash dash dot dot -

Turn on your radio

Evacuate signal dot dot dot in continuous bursts

Take off to a safe zone

All Clear Signal continuous tone

ReTurn home

RADIO STATIONS TO LISTEN TO FOR MORE INFORMATION

Listen to any of the following radio stations for information after hearing the Alert Signal.

- National Radio – AM756 or FM101.4
- More FM – FM 91.8
- Newstalk ZB – FM 89.4
- Classic Hits – FM 97.4
- Radio Live – FM 100.6 or AM 702

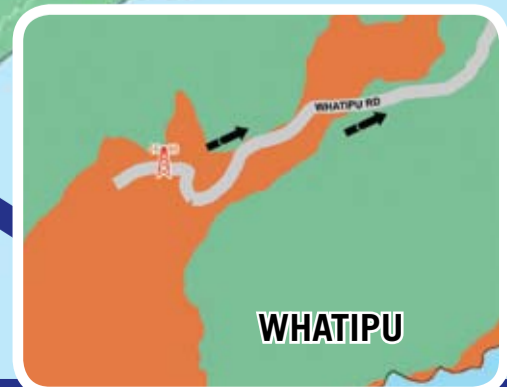
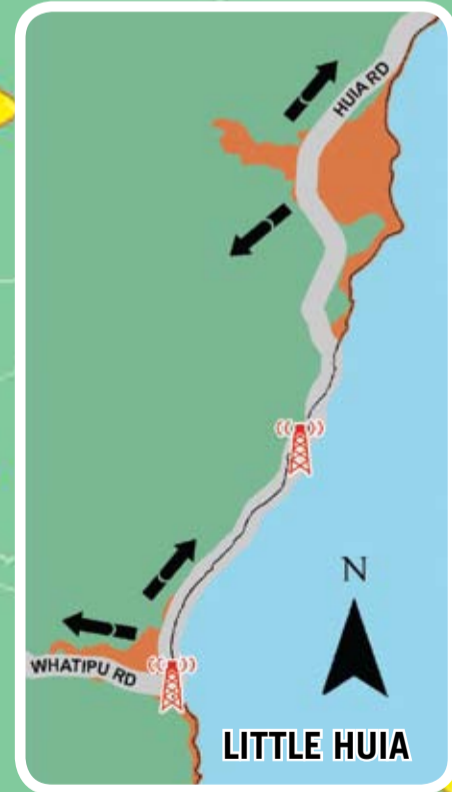
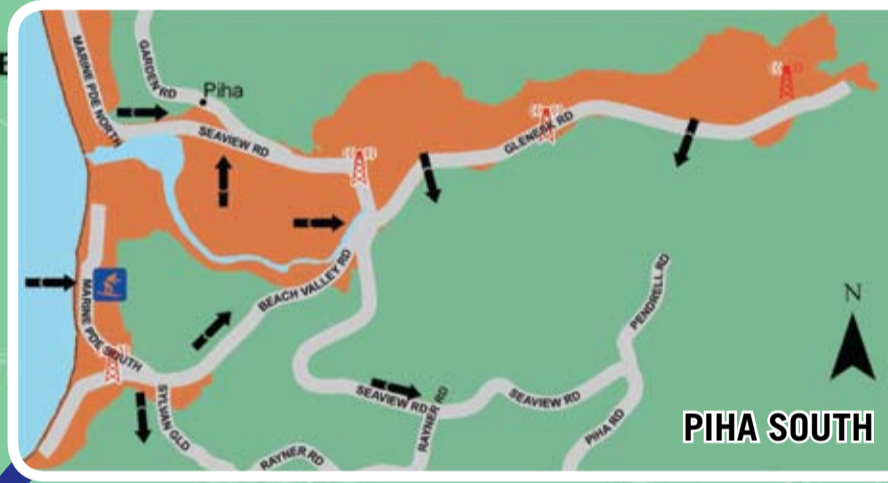
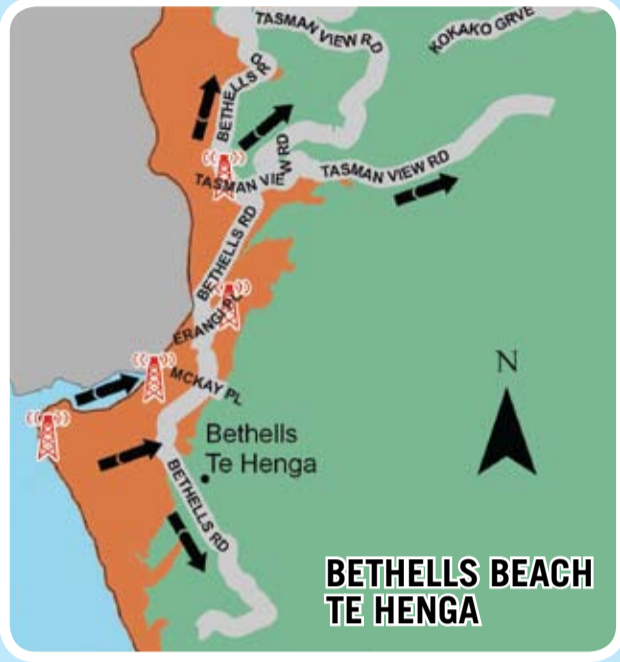
TV 1 and TV 3 will also broadcast emergency messages.

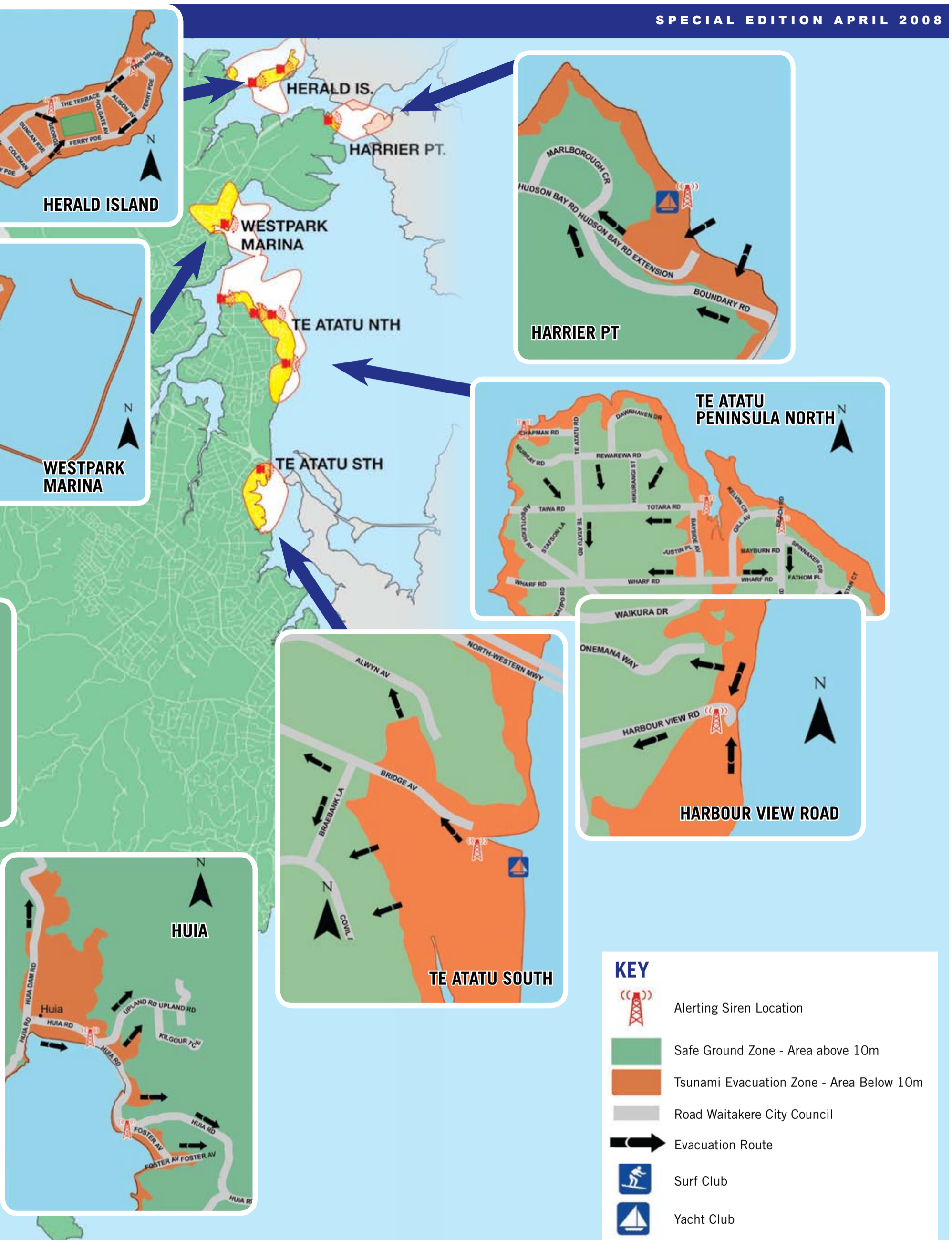
INSIDE • Important information for communities
• Where do you go to be safe?
• What creates a Tsunami?





Public Alerting – Evacuation Siren System





KEY



Alerting Siren Location



Safe Ground Zone - Area above 10m



Tsunami Evacuation Zone - Area Below 10m



Road Waitakere City Council



Evacuation Route



Surf Club



Yacht Club

THREE T's

Alert signal	dash dash dot dot - T urn on your radio
Evacuate signal	dot dot dot in continuous bursts T ake off to a safe zone
All Clear Signal	continuous tone ————— R e T urn home

TSUNAMI SIREN SYSTEM SIGNALS

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Tsunami and sources

A tsunami is most commonly caused by an up thrust of the ocean floor and massive release of energy following a large earthquake. Tsunami can also be caused by a coastal landslip or from an island type volcanic eruption such as White Island in the Bay of Plenty. Most generated tsunami are very small and are not noticeable however occasionally large tsunami are generated and can be hugely destructive.

Tsunamis can also travel thousands of kilometres and while in deep water are only in the form of an energy wave moving through the sea at about

600 kph. It is only when they get into shallower water that the energy waves are compressed and form destructive waves travelling inland when they reach the shore. The first sign of a tsunami is often a rapidly receding sea level – only to be followed by the arrival of the first tsunami wave.

Tsunami are sometimes referred to as storm surges which is incorrect. Storm surge waves are created by the build up of wind driven pressure creating waves that can be driven far inland. It was such waves that caused the majority of flooding in New Orleans during Hurricane Katrina in 2005.

For emergency planning purposes tsunami are categorised into three sources as follow:

DISTANT SOURCE - MORE THAN 5 HOURS NOTICE

Distant source tsunami give a generally long period of time in which to conduct successful evacuations of any areas likely to be at threat. In the case of historical tsunamis generated off the coast of Chile which have reached New Zealand, up to twelve hours warning could be given.

REGIONAL SOURCE – 2 - 5 HOURS NOTICE

A Solomon Islands tsunami generated in March 2007 is an example of a regional source tsunami. Despite the shorter warning time and with good information, it would still be possible to evacuate coastal locations at risk.

LOCAL SOURCE – LESS THAN 1 HOURS NOTICE

In the case of a local source event there would be little or no time to give any warning to the public if indeed a tsunami had been generated. The general principle of response in these situations is that if you can feel a large earthquake, and live by the sea, then to go a safe area inland immediately.

WHAT IS THE TSUNAMI THREAT TO WAITAKERE CITY?

The actual threat of a significant tsunami affecting the coastal communities of Waitakere City is small but cannot be discounted. In general terms, the maximum predicted height of any tsunami affecting the city's west coast is 2 metres and for the East coast up to 3 metres. Run up height for any tsunami wave can far exceed the actual wave height on reaching the shore given the energy behind the waves.

The 10 metre safe zone for evacuation on the enclosed maps allows for maximum public safety and for any excessive run up from tsunami waves.



DO'S AND DONT'S

- Don't panic when you hear the siren
- Do identify if it is an alert or evacuate signal
- Don't travel in your car unless you have to
- Do evacuate all beaches immediately on hearing the alert or evacuate signal
- Don't return until you have heard the all clear signal
- Do know where your essential documents and medicines are to take with you
- Do make sure you have a charged torch available (if you have to evacuate at night) and battery operated radio

SURF LIFESAVING - BEACH EVACUATIONS

In the event of any tsunami alert or evacuation warning for West Coast beaches, local surf clubs will ensure that beaches are evacuated on hearing the alert or evacuate signals. Where possible, visitors will be advised to leave the area immediately, through the use of loud hailers or voice sound systems.

FUTURE DEVELOPMENTS

The introduction of the Meerkat Alert Siren System is only one means of communicating with the public for tsunami evacuation purposes and is the first step of a three tier warning system to be introduced in Waitakere City.

Following the completion of the siren system, work will commence on the introduction of mass telephone and text messaging for emergency warning purposes.

Currently being established is a tsunami sign system which can be used throughout the country. An example of the type of sign being developed is shown above. Once the national standard tsunami signs have been agreed, they will be introduced at coastal locations in the city.



MAKING A FAMILY PLAN

Based on the safe/danger zones shown on the enclosed maps, make a family or business plan for the shortest and safest route you need to take, to reach safe ground if you have to evacuate.

Know where essential documents and medicines are that you may need to take with you.

Identify friends or people living in the safe zone that you could stay with during an initial evacuation period.

If you have a child at any educational facility or work within a red zone, discuss evacuation plan arrangements.

Every family or work member must know where to go to safe ground and how to get there.



In most cases, you will only have to travel a short distance to reach safe ground and where possible should avoid the use of private transport.

If you have elderly neighbours include them in your family evacuation plan consideration.

WHERE TO GET MORE INFORMATION

Read more about

- What to do in more emergency situations
- Plans for businesses and schools
- Civil Defence & Emergency & Management Information

Waitakere City Council Civil Defence & Emergency Management
civildefence@waitakere.govt.nz

Waitakere City Council
Call Centre 839 0400
www.waitakere.govt.nz

Auckland Region Civil Defence & Emergency Management
www.auckland.cdemg.org.nz

Ministry of Civil Defence & Emergency Management
www.civildefence.govt.nz

Waitakere City Neighbourhood Support
roi@neighbourhoodsupportwaitakere.org.nz

Pacific Tsunami Warning Centre
www.prh.noaa.gov/ptwc/

Meerkat Alert Systems
wilfried@meerkatalert.co.nz



Looking for a challenge?

Want to help your community?

Want to learn new skills?

Want to meet new people?



**Become a
Civil Defence
Volunteer.**

*Roles available: Welfare,
Rescue, Communications and
Operational Support.*

If you are interested in one of the following roles please contact
Civil.Defence@waitakere.govt.nz or phone (09) 837 0790

Applicants should preferably, live in Waitakere City, be over the age of 18 years and be physically active.
Training is completed to National Standards

