

## **CIVIL DEFENCE PREPAREDNESS**

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### **1. Purpose of Report**

This report outlines the current resilience of the city, the level of resilience that is desirable and the works that would be required to reach that desired level.

### **2. Executive Summary**

The level of resilience in the City is variable. The Council has control over many contributing aspects, but other agencies are equally vital in building a resilient City. The Council's role is complex, but ultimately is one of leadership, as the Council has a legislated responsibility to take all steps necessary for effective civil defence emergency management.

The task is challenging and dynamic. New science and technology, operational experience, legislative changes and community expectations are continually evolving and influencing the desired level of resilience.

The only way we will truly know if we are adequately prepared for a major disaster will be when we have one.

### **3. Recommendations**

Officers recommend that the Committee:

1. *Receive the information.*
2. *Note the level of current resilience in the city.*
3. *Note the level of resilience that is desired for the city.*
4. *Agree the current programme of works that are proposed to achieve the desired level of resilience.*
5. *Note the programme of works being carried out by non Council Utilities and agencies to achieve their desired levels of resilience.*
6. *Note that progress against items in this report that are the responsibility of the Council will be reported on a quarterly basis in the Council's quarterly report.*

7. *Note that the current Long Term Plan includes emergency preparedness performance measures and that residents are surveyed on preparedness through the residents satisfaction survey.*

#### **4. Background**

Under the CDEM Act 2002, the Council's responsibilities are to "*take all steps necessary on an ongoing basis to maintain and provide, or to arrange the provision of, or to otherwise make available suitably trained and competent personnel, including volunteers, and an appropriate organisational structure for those personnel, for effective civil defence emergency management*" in Wellington.

New Zealand's framework for achieving these steps has been constructed around:

*Resilient New Zealand – communities understanding and managing their hazards*

Typical, New Zealand plans assess each hazard against 'the Four Rs':

- Reduction of risk of the hazard
- Readiness for an event
- Response, and
- Recovery

In the past CDEM has been associated with the response phase. Our approach has shifted to place heavier emphasis on reduction and readiness, as effort in these areas will greatly improve the response.

#### **5. Discussion**

At its most basic level, resilience is sought to a level that enables our communities to remain in Wellington following a major event and to play their role in bringing about the rebuilding of the city's economic, social and physical infrastructure.

The Council controls many aspects that contribute to this level of resilience, but not all of them. Those services and facilities that are provided by other agencies are also essential to the function of the city. Where the Council does not have direct control, the Council has an advocacy and facilitation role.

This advocacy could be more effective if it were Regional.

Within Council, most Business Units have a responsibility in ensuring that the City is adequately prepared. This is not the domain of WEMO, as traditionally perceived, but is a whole-of-Council responsibility.

For example:

- Infrastructure for technically designing resilience into Council networks and advocating the same for GW and NZTA networks.
- Operational Units such as CitiOperations and Parks and Gardens for the immediate response.
- BCLS for building strengthening and post-quake evaluations.
- District Planning team for strategic planning to mitigate the effects of hazards through urban design and development.
- Community Engagement building resilience in our communities.
- External Communications, Libraries and the Contact Centre are the front office before, during and following an event.

Other Business Units are equally important, for example Toi Poneke and the Treaty Relations team formed vital parts of the response to Christchurch.

WEMO provides the focus and energy for resilience but is not and can never be the single point of success or failure.

All Council Business Units are required to produce a Business Continuity Plan and a BCP/DR (Disaster Recovery) Steering Group provides oversight to ensure that the Council can continue to provide services in the event of a disruption.

The determination of actions to mitigate risk is assessed against likely consequences, benefits and costs. The City aims to ensure sufficient mitigation has been carried out to save lives during an event and to be able to continue functioning as best as possible after such event.

### **5.1 Earthquake prone buildings**

#### ***The current level of resilience***

There are currently 180 buildings in Wellington that have been identified as earthquake-prone and a further 500- 600 buildings are forecast to be found earthquake prone once the Initial Evaluation Process (IEP) is completed in 2013.

Of the 180 buildings currently confirmed as earthquake prone:

- Twenty three buildings (under the 1991 Act) are required to be strengthened by March 2012 at the latest, with most required to be strengthened before the end of 2011;
- Three high priority buildings with earthquake prone notices are required to be strengthened by June 2020.
- The majority of earthquake prone buildings (135 buildings) are deemed to be a moderate priority and are required to be strengthened by July - September 2025.
- The remainder are low priority buildings (19) and are required to be strengthened by 2030 at the latest.

### ***Heritage buildings***

One of Wellington's strengths and appeals is its heritage – a part of which is defined by architecture and the many much-loved buildings which have been here for many years. Unfortunately many do not comply with modern building code standards and must be brought up to an acceptable strength or demolished.

It should be made clear that, in this context, resilience means ensuring that after a quake, lives are saved – not necessarily the buildings. It is generally accepted that aiming for a performance that ensures the building's survival is in most cases not practical.

Heritage Buildings are covered by the earthquake strengthening provisions of the Building Act 2004 in the same way as other buildings. The Council has a propriety objective of maintaining heritage values of the city's more outstanding buildings. Owners are encouraged to work with the Council's heritage experts to achieve a pragmatic outcome that preserves both public safety as well as the city's heritage.

### **5.2 Council owned buildings**

Council buildings are subject to the same policy and legislative requirements as the rest of the city's buildings and accordingly are being assessed through the Initial Evaluation Process (IEP).

#### **Council buildings**

##### ***The current level of resilience***

A number of buildings and assets have been strengthened already, including the City Gallery, the Embassy Theatre, the City to Sea Bridge, the Chest Hospital and the St James Theatre.

A further ten buildings have been identified as requiring strengthening and are at various stages in the program. This includes the Municipal Office Building and the Town Hall where design solutions will be completed in June 2011 at which time strengthening will be scheduled.

##### ***The desired level of resilience***

The desired level of earthquake strengthening is dependant on the location, the use and the heritage value of the building. However Council buildings will generally be strengthened to a minimum of two thirds of the New Building Standard (NBS).

##### ***The works planned to migrate the organisation from the current to the desired level of resilience***

In addition to the IEP program of assessments, the Council (as landowner) is undertaking an accelerated programme of engineering assessments. This programme has initially targeted buildings with a high level of public use and/or profile. As these assessments are completed the design and strengthening works are scheduled.

## City Housing buildings

### ***The current level of resilience***

Council's Housing portfolio consists of 40 housing complexes ranging from large multi-storey concrete blocks to single storey timber units. The majority of the larger buildings were built in the 1960s-1970s.

15 buildings have been identified within the portfolio requiring varying degrees of seismic strengthening.

### ***The desired level of resilience***

As part of the 20 year Housing Upgrade Programme, all City Housing buildings will be strengthened to a minimum of 70% of NBS. Buildings requiring strengthening have been prioritised in the upgrade programme and will be upgraded by 2016.

City Housing, with the support of WEMO, is working with tenant groups in the larger complexes to build resilience and to ensure access to bulk provisions for tenants in the event of a major emergency.

### ***The works planned to migrate the organisation from the current to the desired level of resilience***

Housing Complex	Buildings	Location	Start Date
Hanson Court	5	Mount Cook	Feb 2010 – Feb 2012
Central Park Flats	1	Central	July 2010 – Sept 2012
Newtown Park Flats	5	Newtown	Feb 2011 – Dec 2012
Berkeley Dallard	1	Central	Sept 2012 – Dec 2013
Marshall Court	1	Miramar	July 2014 – June 2015
Whare Ahuru	1	Thorndon	July 2014 – Dec 2014
Arlington Tower	1	Mount Cook	Feb 2015 – Dec 2016

Note; one block in Newtown Park flats will be demolished.

## **5.3 Water**

The bulk water supply to the City's 77 reservoirs is provided from water treatment plants in Te Marua (Upper Hutt), Wainuiomata and Waterloo (Lower Hutt). In addition Gear Island treatment plant (Petone) acts as a backup supply. The pipelines from each of these treatment plants cross the Wellington fault at least twice. The pipeline from Te Marua crosses the fault at Te Marua, Haywards and at the Karori Sanctuary. The single pipeline from Wainuiomata and Waterloo crosses the fault at Petone and Thorndon. Wellington Regional Council is responsible for this supply.

In turn, water is reticulated from the reservoirs for use across the city. This is the responsibility of the Council.

### ***The current level of resilience***

Should these supply pipelines be severely damaged in an earthquake, it is anticipated that it would take 46 days to restore a limited water supply and might take 66 days to effect full repairs. At this stage it is unclear what reliable

contingencies exist to provide bulk water to Wellington City in the event that pipelines are severely damaged.

Damage to reticulation pipelines might take many weeks or months to repair, depending on the number and severity of breaks. A severely damaged reservoir may take several months to repair or in excess of 12 months to replace. The Council has in place the means to supply water from reservoirs to the public via 36 manifold standpipe setups. These would be initially set up at or near the reservoir. As temporary above-ground pipes are provided, the supply point would be relocated to a more convenient location. In the best case scenario, this water might last up to 20 days.

Current guidelines to consumers as recommended by the Ministry of Civil Defence Emergency Management, is to have at least three days' water supply stored per person. This means that there is a significant gap in our ability to provide water until supplies can be restored.

Also the means to bring water into Wellington will be restricted by the condition of rail and roads (and possibly sea) and the availability of tankers to carry it.

The Council has been replacing pipes with PVC, polyethylene, ductile iron or steel pipes over the past 15 years and currently around 35% of the mains network is constructed from these EQ resilient (not EQ proof) pipes.

The city's water is stored in 77 reservoirs spread around the city. Of this, 90% is in reservoirs with an auto-closing valve. However, currently only 47% of the city's stored water is in secure storage; that is reservoirs that have been built to contemporary seismic standards *and* are protected by auto-closing valves.

### ***The desired level of resilience***

A minimum level of resilience would mean that people would not be forced to leave Wellington due to a lack of water. As Wellington is at the end of the bulk water distribution network, our long term plan is to have as much water stored in the city as possible.

The desired state is to have the ability to quickly make reservoir or stored water available to local residents, within a few days of the event.

Also the ability to provide water from an alternative source is required until such time as repairs to the bulk water supply are completed. These repairs must be in place before reservoirs empty – ie, no more than 20 days.

### ***The works underway or planned to migrate the organisation from the current to the desired level of resilience***

A water services preparedness group meets regularly to develop strategies and policies at a regional level to improve the cities emergency response and recovery. This is attended by representatives from WCC, GWRC, PCC, UHCC and HCC.

We are also improving the inventory of emergency tanks (10,000 to 25,000 litres) distributed around the city. These will be installed as sites are

negotiated with a target of a tank at each welfare centre. It is planned that some 50 tanks will be available by mid 2012.

All new reservoirs will be constructed as large as the site and operating parameters allow. Economies of scale provide an opportunity to construct larger reservoirs when they are due for replacement and at a lesser premium, but this will be considered on a case by case basis. Currently reservoirs are replaced at a rate of approximately one every 2 years. A programme is in place to structurally assess the reservoir inventory against modern seismic design codes.

Pipeline design standards will be improved taking into account national and international learning from recent events. Network criticality and operational redundancy options are being considered to build resilience into the network as a whole. We are also looking into the feasibility of “in line” tanks as an integral part of the water network. If these are feasible they will be installed in conjunction with ongoing pipe renewals.

Alternative sources including rainwater tanks, streams and swimming pools are being considered. However a policy addressing the technical and health implications will be required first which has the support of the Medical Officer of Health. This will also need to be carried out on a Regional basis. Also the potential for importing water from elsewhere in the region is being investigated as are treatment methods.

Many of the pressing issues arise from the current GWRC predictions of a relatively slow restoration of the bulk network at between 46 and 66 days. We have asked GWRC to review its assessment of restoration time and jointly work on ways to improve the resilience of the bulk water network to minimise the overall recovery timeframes. However, indications are that it is highly unlikely the existing bulk water network could be restored within the 20 days before reservoirs empty.

#### **5.4 Wastewater**

Within hours of a major event, the effects of inoperable sewerage pipelines will be immediately apparent and will present an added risk to Wellingtonians. It is anticipated that the lack of sewage disposal would be the leading potential cause of evacuation and would be a potential long-term negative effect on the City.

##### ***The current level of resilience***

Currently people have been told to either dig long-drops in their gardens or to hold waste in plastic bags and containers until such time as it can be collected. These are temporary measures only and can be expected to last for a matter of just days before being deemed unacceptable by the public (and media).

Where toilets are not operable, reliance on external portable toilets or internal self-contained systems (eg, chemical toilets) will be high in the medium to long term. Disposal of collected waste would be at the Southern or Spicer landfill, either dewatered at the treatment plants first, or delivered direct.

Approximately 16% of the wastewater network is constructed from earthquake resilient materials, although, these are mostly smaller diameter pipes.

Initially, as water supply is restored and people use their toilets again, overflows to the streams, coasts and harbour will be unavoidable until trunk sewers are repaired. This is likely to take many months and quite possibly years.

### ***The desired level of resilience***

Even in the complete absence of sewers, measures need to be in place to deal with the collection and disposal of human waste within less than a week of a major earthquake.

### ***The works underway or planned to migrate the organisation from the current to the desired level of resilience***

The regional water services preparedness group mentioned above is developing a plan outlining collection points, methods, resource requirements and the technical issues required to establish an effective and coordinated collection and disposal response. One of the options to be pursued is the possibility of a regional or national stock of chemical toilets that could be deployed within days after an event.

Wastewater design standards will be improved taking into account national and international learning from recent events. This includes a revision of construction materials and methods. This is intended to improve the network resilience in the long-term. The renewals selection process is also being revised taking into account risk of pipe failure and criticality as well as condition and performance.

## **5.5 Transportation**

Wellington's transport network comprises of roads, buses, rail, air and sea. While this variety of transport options is advantageous during disaster response, it is the roading network that is of primary importance.

Roading networks are vital supply lines, and are critical for emergency services and to facilitate reconnaissance and repairs. The topography of Wellington City places the roading network at risk due to the added likelihood of city-wide landslips, which can leave roads impassable immediately after a disaster event

### ***The current level of resilience***

All principal, arterial and connector routes on the road network have been assessed since 1998 and as a result 'critical links' have been identified. These links were selected with the goal of ensuring vital road passageways remain operational immediately after a disaster event.

As a result of the network risk assessment, Ngaio Gorge Road and Churchill Drive have been selected as 'key road links,' as they provide important alternate routes out of the CBD in the event of SH1 being closed. Currently, seven retaining walls have been constructed on Ngaio Gorge Road. These have been further strengthened. The Churchill Drive mitigation works are currently in the investigation stage



The assessment also highlighted the need for 'critical structures' to be strengthened to minimise the risk of isolation of the CBD from the outer suburbs. The structures selected for strengthening include the Karori, Northland, Seatoun and Hataitai tunnels (As part of the state highway network, The Terrace and Mt. Victoria tunnels are assessed and maintained by NZTA.)

### ***The desired level of resilience***

WCC aims to ensure all critical routes remain open after a disaster event. These critical routes are to include alternate routes by way of contingency planning should primary routes become impassable. WCC also aims to oversee the development of a coordinated plan for the early restoration of essential services in the Thorndon Critical Area

### ***The works planned to migrate the organisation from the current to the desired level of resilience***

Planned works:

- Final remaining section of Ngaio Gorge Road to be strengthened in 2011/2012
- Churchill Drive underpinning and support to be carried out in 2012-2014
- Karori Tunnel portal and retaining walls to be completed 2011/2012
- Northland Tunnel strengthening work planned for 2014/2015
- Hataitai Bus tunnel strengthening work planned for 2013/2014
- Seatoun Tunnel strengthening work planned for 2016/2017
- Thorndon Critical Area investigation underway

Ongoing works

- Ongoing 5 yearly assessments of all routes and structures with resultant physical works being planned as a consequence.

Major transportation into the City is controlled by NZTA, WIAL, GWRC (through the Harbourmaster) and KiwiRail. The Council retains close relationship with all of these agencies, primarily through the Lifelines Group. Each of them has a plan for emergency access into Wellington.

## **5.6 Electricity**

Electricity is supplied in bulk by Transpower via the National Grid to four sites in the Wellington City area and distributed around the city to consumer premises by Wellington Electricity.

The major transmission supply points (Grid Exit Points) are at Central Park, Wilton, Kaiwharawhara and Takapu Road. These sites are owned and maintained by Transpower. Electricity is transformed from transmission to distribution voltages at these sites. Wellington Electricity (WE) takes supply from these sites via cables or overhead lines which connect to their zone substations (14 in the Wellington City area) where it is converted to lower voltages and distributed around the city.

### ***The current level of resilience***

The transmission network that supplies Wellington City is mostly overhead transmission lines. These lines are designed to high seismic standards. Transpower's overhead lines performed well during the recent Christchurch earthquakes and electricity supply to the grid exit points was restored in hours. Overhead lines can be repaired in days if a tower fails. The Transpower substations at grid exit points have similar seismic design standards and transformers are able to be replaced in the event of failure. The substations in Christchurch sustained minimal damage during the recent earthquakes.

The subtransmission network owned by WE (the cables and lines between the Transpower transmission network and the WE zone substations) is a key part of the system and the underground cables, in particular the oil and gas insulated cables, are sensitive to impact, harsh vibration and sudden motions as gas or oil leaks may occur rendering the cable unserviceable (note: the insulating oil is a non-ecotoxic and biodegradable substance if it should leak, the gas is inert and harmless).

WE has reviewed each of its substations and undertaken seismic restraining of key plant and loose items, and has undertaken seismic strengthening of older distribution buildings (1930s brick construction). The majority of substation buildings are of more modern low-rise construction and are either timber framed or reinforced concrete construction.

The distribution network consists predominantly of underground cables, and may also be subject to damage in the event of a major earthquake. There is however more interconnection at this level of the network and electricity can potentially be supplied through other paths.

### ***The desired level of resilience***

The highest risk is damage to the subtransmission network followed by the substation and plant, and of a lower risk (but still very significant) is the distribution network supplying homes and businesses.

The potential for damage on the WE network, especially underground cables, is not easily quantifiable, and depends entirely on the magnitude of the event and resulting ground movements or liquefaction that may occur.

WE may require the construction of temporary overhead lines to restore supply to certain areas in the event of major cable damage. The exact routes and types of line can only be planned in advance to a limited extent, but will be specific to the nature of damage incurred and the needs for restoration. This was undertaken in Auckland in 1998 by Mercury Energy following the failure of gas insulated cables, and more recently by Orion in Christchurch.

### ***The works underway or planned to migrate the organisation from the current to the desired level of resilience***

Transpower is currently reviewing its infrastructure in the Wellington Region. Changes to the physical arrangements of assets are being made at Wilton to avoid losses of supply during planned maintenance. Transpower is working with

WE on investigating where security of electricity supply into Wellington City can be improved.

WE believes the highest risks are associated with the subtransmission network becoming unserviceable due to cable damage during a major earthquake and is undertaking a programme of replacement of these cables with solid insulated cables. This programme will take 20 years or more to replace cables at the end of their useful life. Notwithstanding this cable replacement, several cross major fault lines and may be damaged regardless of construction type.

Planning is currently underway to identify routes to restore power via the provision of temporary overhead lines from the grid exit points to the zone substations in the event of an emergency. This will entail the identification of suitable routes for different scenarios, including temporary pole and pylon sites and any physical works that can be carried out prior to the event in preparation.

To achieve this outcome, special exemptions for road corridor access and construction of overhead lines (which is not a permitted activity under the district plan) will be required.

## **5.7 Gas**

There are two gas distribution networks and one supply network in the City:

- Natural Gas Company has a short section of high pressure supply pipe terminating in Tawa.
- PowerCo and Nova Energy have medium and low pressure supply networks throughout the city and suburbs.

Gas is a lifeline utility that many significant premises such as the hospital and major accommodation providers rely on for heat and cooking. Damage to a gas pipe may have widespread impacts. In an emergency all affected connections need to be turned off and on again manually, which is a time consuming and labour-intensive operation. Water or silt may also ingress the system, and if the levels of the pipe have changed (eg due to liquefaction) this makes it harder to isolate the low points to clear the pipes.

### ***The current level of resilience***

Gas is delivered via a medium pressure ring main looped around the perimeter of the city. Along the ring main are pressure-regulating stations that supply smaller low pressure ring mains to end-users. This enables the system to continue to operate in the event of one or more faults (ie if there are two faults only the section between the faults loses pressure and the remainder continues to operate).

All termination points are fitted with above-ground manual shut-off valves.

The New Zealand Fire Service is responsible for responding to gas leaks, and has substantial resources and capability in this regard. The Fire Service is concerned at the risk of fire following a major disaster, particularly in areas with high concentrations of wooden buildings.

### ***The desired level of resilience***

Recent outages including that resulting from water ingress have resulted in the design of the network being reviewed and an improvement plan being developed to improve the resilience of the network.

### ***The works underway or planned to migrate the organisation from the current to the desired level of resilience***

All Wellington gas networks are currently being fitted with additional shut-off and bypass valves to improve the resilience of the network by being able to isolate sections following an outage.

Those reliant on the gas network (eg major hotels) have also started to develop business contingency plans following a gas outage, eg modifications to equipment such that it can run on LPG tank supply rather than reticulated gas supply, or backup equipment that runs on electricity (eg for cooking, heating or water heating).

## **5.8 Telecommunications**

There are four key providers of telecommunications networks in Wellington City:

- Telecom (voice and data via copper and optic fibre, as well as mobile wireless networks)
- Telstra Clear (voice, data and television via cabling)
- Vodafone (voice and data via predominantly mobile wireless network)
- CityLink (predominantly data via optic fibre cabling)

### ***The current level of resilience***

For the major providers, their networks have been designed and constructed taking into account the potential earthquake risk faced by Wellington City. Exchanges are built to much higher structural standards than for normal buildings. Key linkages within the network are implemented as “ring mains” such that if one link is severed, the network will continue to operate. All major facilities are fitted with backup power supplies in the form of batteries and/or generators. All networks have multiple cables connecting Wellington to other parts of New Zealand. The key switches for the mobile communications networks are located in Christchurch and Auckland. It is unlikely that there will be an event affecting these facilities at opposite ends of the country simultaneously.

Most of the underground cabling, particularly optic fibre, is typically flexible and can withstand seismic activity. Overhead cabling and connections to buildings can become detached but are easy to reinstall. Most of the cable-based networks can be substantially reinstated within 2 to 3 weeks, subject to road access.

In addition to the cabling network, communications networks are supplemented by mobile technology. Such mobile technology can be utilised where cables are disconnected. The mobile network is reliant on tower-based repeaters. These

are designed to withstand seismic events, but may be affected by extended power outages.

### ***The desired level of resilience***

One of the key issues highlighted by the Christchurch earthquake is the reliance of the telecommunications networks on power supplies. The networks are able to withstand short outages where there is battery backup. For longer outages, generators are required until power is restored. Telecom, which provides the majority of the exchanges and voice communications network, is well-resourced to deal with power outages. Some problems with other sites need to be addressed:

- Some generators and fuel supplies in private buildings may become inaccessible for servicing.
- Some fuel supplies may be inadequate for extended power outages.
- Some installations may require duplicate backup power supplies to enable one to be taken offline for servicing during extended outages.

In Wellington most of the core telecommunications networks are well resourced to deal with power outages, but some sites are being reviewed.

As with most commercial lifelines providers, telecommunications providers have an immediate commercial imperative to restore services in the event of a disaster.

### ***The works underway or planned to migrate the organisation from the current to the desired level of resilience***

In response to what was learned during the Christchurch earthquake, works are currently underway to:

- Review plans and processes for business continuity, civil defence response and lifelines responsibilities
- Develop inter-organisational agreements and plans to enable a coordinated response, eg through sharing of resources and technicians
- Install larger capacity fuel supplies for backup generators
- Install external connection points for backup power supplies

## **5.9 Welfare**

Welfare provision is ensuring that people's basic needs are met when, due to the effects of the emergency, they are unable to provide for themselves. This includes the provision of shelter, food, medications, first aid / triage, care for children, care for elderly and other vulnerable communities, care for pets, counselling and financial help. Establishing systems, processes and networks to support people's well-being is an ongoing process and responsive to other activities, agencies and events within the community.

A regional welfare advisory group meets quarterly. The Local Welfare Advisory Group (LWAG) whose membership includes agencies responsible for delivering welfare has been re-activated. Currently the group has members from the

Council, CYFS, HNZ, Wellington Free Ambulance, Victim Support, SPCA, Red Cross and Salvation Army. The membership is expanding to include more representatives from the voluntary and community sector and Positively Wellington Tourism. Memoranda of Understanding (MOU) will be developed that outline an agreed way of working in the event of welfare centre/recovery centre being activated.

The Council has been developing a network of facilities that can act as Welfare Centres across the City. This includes signing an MOU and collecting contact details and information about the facilities. At the moment we have signed MOUs with 25 facilities and are in the process with around 40 others.

### **5.10 Community Preparedness**

Community preparedness is a reflection of individuals, households and businesses to cope with the absence of services and infrastructure normally taken for granted. Obviously the length of time communities can be self-reliant is limited due to health and safety factors including the psychological impact of disasters.

Some individuals face greater barriers to preparedness because of their circumstances, such as those with disabilities or language barriers. Because of the diversity of circumstances it is difficult to plan for every eventuality. However we work on ways to plan ahead for particular target groups and we also support local initiatives. The best outcomes are when neighbours and neighbourhoods work together rather than as individuals. Therefore the work the Council does in helping people to build strong and networked communities contributes significantly towards community resilience.

In the event of an earthquake communities will be supported by trained volunteers, to coordinate with authorities. Currently there are approximately 130 trained CDEM volunteers across Wellington, with a basic level of training and two 'light rescue' response teams totalling about 30 volunteers. The target is for around 800 CDEM volunteers and 90 volunteers with light rescue training to support emergency services.

We are currently increasing our training capacity in order to capitalise on the momentum of interest generated by the Canterbury earthquakes.

### **5.11 Planning**

#### ***The current level of resilience***

The District Plan contains provisions related to emergency management and preparedness. The planning maps show *fault line* hazard areas, *ground shaking hazard areas*, and *flood hazard areas*. The fault line hazards areas occur around the City. The ground shaking hazard area is the area most prone to liquefaction, and is largely reclaimed land on the edge of the Central Area, or old stream beds adjacent to the CBD. The flood hazard areas are in Tawa.

Development in these areas is guided by the relevant policies and rules. The general policy approach is to reduce the risk to life from these unavoidable hazards through appropriate mitigation measures (eg Policy 4.2.10.1). Critical

facilities like fire, police and lifeline services should be located to avoid, remedy, or mitigate the adverse effects of hazards (eg Policy 4.2.10.4., Policy 12.2.13.3).

The policies on natural hazards are supported by a range of rules. For example, discretionary consent is required for two or more households within the fault line hazard area (Rule 5.4.5). This controls residential intensification in the areas most likely to be directly affected by fault rupture. Consent is required for any critical facility to be located in any of the three hazard areas (Rule 13.3.2). Consent is required for any significant changes to buildings in the Tawa flooding hazard areas (Rules 5.2.2 and 5.3.10).

### ***The desired level of resilience***

To ensure the District Plan identifies relevant policies and rules to respond to and guide development in areas affected by hazards and risks.

### ***The works planned to migrate the organisation from the current to the desired level of resilience***

Landslide, sea level rise, and tsunami hazards are not currently addressed in the District Plan. These issues will be the subject of central government policy development, legislation reform (e.g. RMA) and the Christchurch Royal Commission outcomes. This could result in National Policy statements and/or National Environmental Standards being developed.

A paper is scheduled for September on the SPC Forward Programme on the review of the District Plan. This paper will look at and identify options on how these issues could be addressed.

### ***Performance measures and research guiding our work***

Our draft 2011-12 Annual Plan includes a range of performance measures addressing emergency preparedness. The targets for 2011-12 are:

- Complete another 500 initial assessments of earthquake-prone buildings.
- 95% of earthquake-prone building notifications (under section 124 of the Building Act 2004) are issued without successful challenge.
- 170 emergency management programmes will be conducted with businesses, schools and community groups.
- All of our emergency management partners will be satisfied with Wellington's emergency preparedness and planning.

We ask a number of questions through the resident satisfaction survey to guide our work in this area. The survey identifies:

- Resident perception over safety of buildings (new question)
- Percentage of households that have an emergency kit in the home
- Percentage of households that have appropriate emergency items in their kit
- Percentage of households that have a 'plan of action' in the event of an emergency
- Percentage of households that have a plan to get in touch with other family members when an emergency occurs.

### **5.12 Role of Councillors**

As leaders of the community, Councillors (and other elected officials) will become focal points for information and advice during and following an event, and will be instrumental in guiding the confidence and mood of the community after an event.

As well as formal training, officers plan to keep Councillors abreast of resilience matters through reports such as this and quarterly reporting.

## **6. Conclusion**

Wellingtonians will only know if we are adequately prepared when we have a disaster. The Council and partners have sensible programmes in place to mitigate the various hazards, these programmes are a balance of cost and benefit.

Contact Officer: *Mike Mendonça: WCC Civil Defence Controller*



## **Supporting Information**

**1) Strategic Fit / Strategic Outcome**

*The report is aligned with the Council's responsibilities under the CDEM Act and the Group Plan.*

**2) LTCCP/Annual Plan reference and long term financial impact**

*Works that are required to achieve the desired level of resilience as described are in the LTP.*

**3) Treaty of Waitangi considerations**

*There are no specific Treaty Issues that need to be considered in this report.*

**4) Decision-Making**

*This is not a significant decision.*

**5) Consultation**

**a) General Consultation**

*The Council is not required under legislation to consult on this matter.*

**b) Consultation with Maori**

*Not required for this paper.*

**6) Legal Implications**

*There are no known legal implications*

**7) Consistency with existing policy**

*This paper is consistent with Council Policy.*