greater WELLINGTON
THE REGIONAL COUNCIL

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Committee Regional Land Transport Committee
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Progress Report: Regional Emergency Road Access Project

1. Purpose

To inform the Committee on progress with the Regional Emergency Road Access Project

2. Background

Hazard information prepared by Wellington Regional Council during the 1990s and the Wellington Engineering Lifelines Study (1995) indicated that many of the principal access routes around the Wellington Region were vulnerable to landsliding and liquefaction **(see Attachment 1)**.

Subsequent work by the Region's emergency management agencies and the Wellington Lifelines Group has highlighted the many operational challenges that would face us after a major earthquake. Many of these would involve longer timeframes than originally thought. This was revealed after the recent major exercise, Operation Phoenix.

The hazardscape of the Region exposes most of our cities and districts to a wide range of natural and technical hazards (earthquake, flooding, landslide, tsunami, storm, chemical, terrorist) that could either impact on a particular area or the whole Region. Population centres are separated by vulnerable roading; cities and districts could be isolated after a major storm, flood or earthquake event (**see map: Attachment 2**).

Local incidents do not usually last a long time because support is available from nearby areas. However, a regional earthquake event will have catastrophic consequences in that access could be severed both within and to the four cities and four districts, possibly preventing any outside help – at least in the immediate term.

Immediately after such a regional earthquake event there will be an urgent need to supply critical resources from outside the Region to each city and district within the Region. While this can be initially done by a helicopter air-bridge,

road access from the north of Wellington Region and within the Region will be critical for:

- Urban Search and Rescue (more than 2,000 people entrapped)
- the treatment and movement of the injured (more than 4,000 people severely injured)
- reconnaissance
- provision of emergency water (more than 200 breaks on the bulk pipeline)
- welfare (food, shelter, etc.) (more than 18,000 houses severely damaged and more than 50,000 people displaced from their residences)
- health
- sanitation
- moving of critical resources (people, equipment, material)
- moving of contractors' plant for rescue and lifelines restoration work

Local authorities in the Wellington Region, Transit NZ, emergency services, lifelines utilities and contractors are now part of a project group working to develop a comprehensive emergency road access strategy.

3. The Regional Emergency Road Access Project

The project's objectives and the participants are set out below:

Project Objectives

- To develop a comprehensive emergency road access strategy incorporating recommended actions across each of the 4Rs of *Reduction*, *Readiness*, *Response* & *Recovery*
- To establish an agreed priority road access strategy for the Wellington region following a major earthquake
- To assist all key response agencies to improve their plans to respond to a major emergency

Project Participants

- Local Road Controlling Authorities of the Wellington region
- Transit New Zealand
- Emergency Managers of all response agencies
- Lifeline Utilities (power, water, telecommunications, sanitation, etc.) and their contractors.

4. Current Situation

The project participants have met on several occasions since August 2002 to discuss weaknesses regarding link roads, seismic screening and emergency fuel arrangements. The following issues arose from these discussions:

- Communications – a Communications Plan needs to sit on top of it all. Communications is necessary between Transit NZ, contractors and the

Local Authorities. A project covering emergency communications is underway, which will involve all role-players (emergency services, lifeline utilities, local authorities, contractors, etc.).

- Reconnaissance – important that prompt reconnaissance determines best routes for access to damaged lifeline structures and networks so as to ensure best options for repairs and movement of people, material and equipment. A project in this regard is underway.

- Fuel – "just in time" supplies. Most tankers are out of the region during daytime. Most fuel stored in Seaview, which delivers to the lower half of the North Island. This project has been completed in July 2003. The recommended action is for local authorities and emergency services/contractors where appropriate, to purchase a suitable fuel hand pump capable of extracting fuel from underground tanks at service stations.

- Local Road Controlling Authorities in the Region and Transit NZ are already engaged in identifying and mitigating weak links and other vulnerabilities (overbridges, culverts, etc.) in their respective areas.

5. Proposed Emergency Road Access Strategy Framework

A draft point-by-point work programme to feed into the proposed integrated strategy is listed below. The points/actions indicate where more work needs to be done to increase emergency response capability. They fall across the 4Rs of *reduction, readiness, response and recovery.*

Reduction

- Identify and focus mitigation programmes following seismic screening of bridges, culverts and retaining walls along key roads.

- Incorporate of seismic considerations with asset improvement / renewal programmes.

- Address location of Bailey Bridges stock as a contingent capability.

Readiness

- Each city / district within the Region to make robust provision for emergency fuel following a damaging major earthquake.

- Identify key segments along the Region's roads required for immediate emergency response activities, prepare competent restoration arrangements or establish resilient alternate routes.

- Identify key supply items required from outside the Region and make arrangements for delivery within a realistic timeframe.

- Develop means of combining key intra and inter between city / district roads reconnaissance and pass information to the Wellington Region Lifelines Information Centre (part of the Civil Defence Emergency Management Group's emergency operations centre).

- Clarify hierarchy of demands on road plant in each city / district and set up procedure to manage acute interdependencies and prioritising.

- Develop an integrated post-event communications plan across the local authorities and linking road access with emergency management.

Response

- Establish hierarchy of key access sites and routes.

- Clarify currently available resources for assessment and initial repairs
  – as there will simply not be enough, develop contingency plans to mobilise additional and alternate resources
  – develop pre-event arrangements to focus specialised local equipment on meeting key route needs to adjacent cities / districts

- Clarify principle of external contractors clearing into Wellington region with plant within the region committed internally

Recovery

- Prepare strategy for management of mutual aid to maintain activities over long period

6. Other Transportation Needs

It is important that the other transportation forms, in the Region, as well as roads, be taken into account.

Seismic risk mapping and the Wellington Lifelines Group studies have shown that Wellington's air, sea and rail transport facilities are either on, or pass through, high seismic risk areas subject to amplified shaking, liquefaction, seiching, or slope failure. This will have implications for adjacent regions after a severe earthquake.

Those regions will need their own resources to check their own infrastructure and may be fully committed with their internal emergency response for several days. This means that, in such events, the Wellington Region will have to be self-reliant.

Indications from the Wellington Lifelines Group are that Wellington transportation agencies will be stretched to do any damage assessment and containment and will be struggling to provide minimal local services.

The other transportation nodes could be affected in the following ways:

- Rail – lines twisted, blocked by slips, undermining, tunnels suspect, slumping
- Harbour – seiching, wharves suspect, logs and debris in harbour, moored vessels damaged, retaining walls displaced
- Airports – runway slumped, tarmac broken, liquefaction, surface slumping, building damage

7. Conclusion

The report shows that transportation is a big factor in emergency management and, therefore, should be incorporated in any associated planning processes or documents. It is therefore imperative that the findings of the Regional Emergency Road Access Project are incorporated in the Regional Land Transport Strategy Review process.

8. Recommendation

That the Committee:

1. ***receive** the report;*

2. ***include** the findings of the emergency road access project as an input to the review of the Regional Land Transport Strategy process.*

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