



Promoting Awareness of the Implications of Wellington Lifelines to Earthquake

Project process overview



Site layer of hard basaltic

steep of abrupt slope of slope

1200'

1000'

1200' above site level

1990 rock fall area

NMT

-500 m

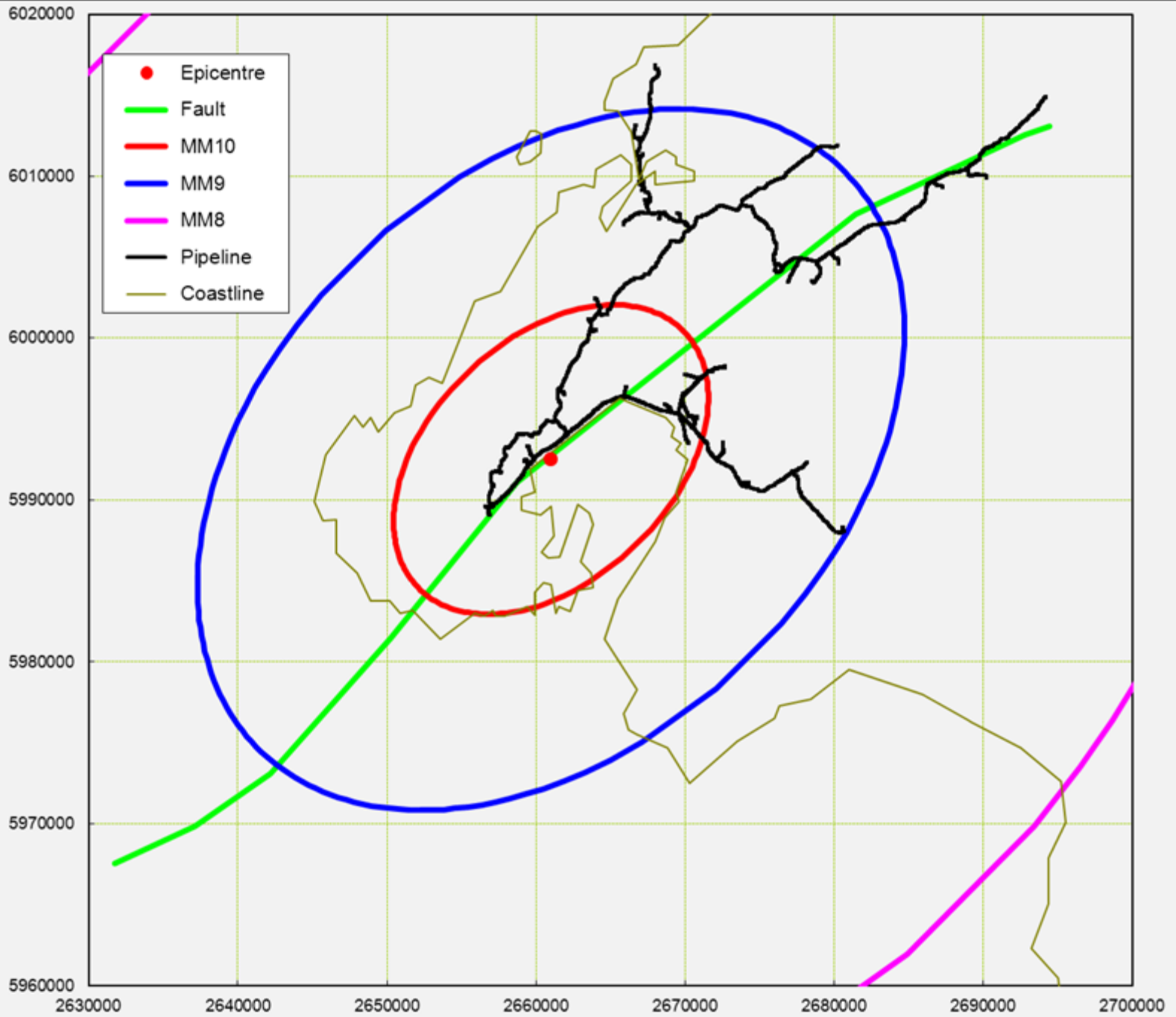
1200'



Land reclamation, Thorndon, Wellington, circa 1925. Taken by an unidentified photographer. Evening Post Collection. Reference number: EP-0114-1/2-F. Alexander Turnbull Library, Wellington, New Zealand.

Wellington seismic hazard

Shaking intensity	Return period	Last event	People	Structures	Environment
MM6	8 years	1/11/1968	Felt by all.	Damage to a few weak domestic chimneys, some may fall.	Loose material may be dislodged from sloping ground, e.g. existing slides.
MM7	30 years	24/6/1942	Difficulty experienced in standing.	Unreinforced stone and brick walls cracked.	Small slides such as falls of sand and gravel banks, and small rock-falls from steep slopes and cuttings.
MM8	120 years	22/11/1848	Steering of motorcars greatly affected.	Weak masonry buildings heavily damaged, some collapse.	Cracks appear on steep slopes and in wet ground. Small to moderate slides in roadside cuttings.
MM9	400 years	23/1/1855		Many weak masonry buildings destroyed.	Landsliding general on steep slopes.
MM10	1,500 years in Ngauranga Gorge location	?		Reinforced masonry buildings heavily damaged, some collapse.	Landsliding very widespread in susceptible terrain.



‘Promoting Awareness’ – project objectives

- Summarise past and recent work carried out on the implications of a major Wellington earthquake
- Inform the public of findings
- Provide a ‘snapshot’ of future mitigation works

‘Promoting Awareness’ – how this project fits into philosophy

1. Produce an intuitively understood **vulnerability mapping**
2. Work out the **consequences to the community**
3. Outline potential **upgrade of assets** for future Asset Management Plans
4. Inform emergency **pre-plan** work-arounds
5. **Communicate the outputs** to local CDEM

‘Promoting Awareness’ – information used and writing process

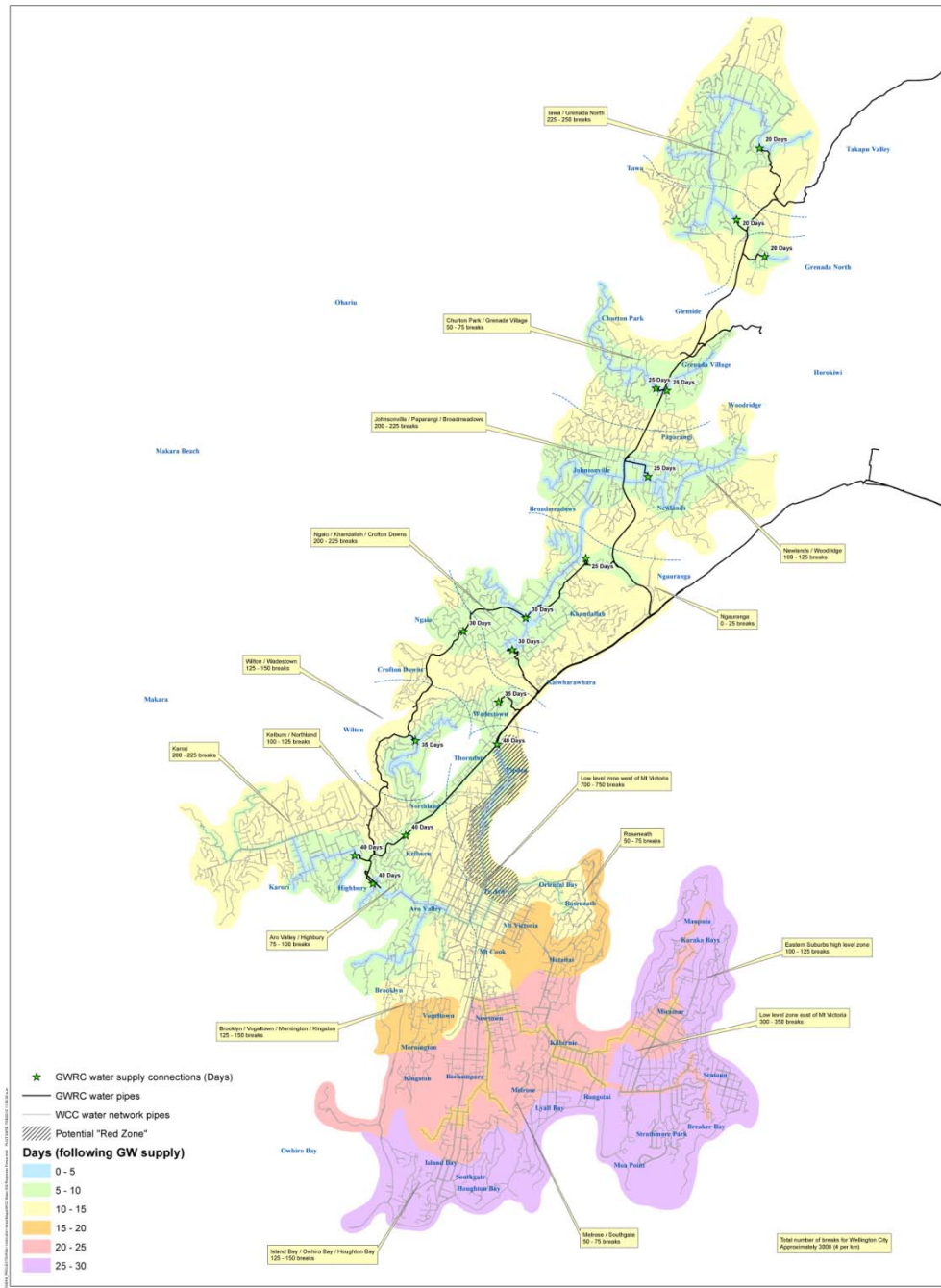
- Collate / use past project outputs and experiences:
 - GNS Science “It’s our fault”
 - Exercise Phoenix(s)
 - BERL Report
 - Other work by various Lifelines
- Information provided by Lifelines orgs
 - Text supplied by individual organisations
 - Figures (water restoration & road outages)
- Information edited together

‘Promoting Awareness’ – political issues

- High-level political buy-in of project from early stage
- A variety of motivations for lifeline organisations to participate
- Universal participation / sharing of information
- Managed media release

‘Promoting Awareness’ – finalisation

- Document presently in final edit
- Release to media on 13 November (likely in press on 14 November)
- Present document to Wellington CDEM Joint Committee on 16 November



24/11/2016
 Prepared by: [unreadable]
 Checked by: [unreadable]
 Approved by: [unreadable]
 Date: 24/11/2016
 Version: 1.0
 Project: [unreadable]
 Client: [unreadable]

WCC Estimated Network Pipe Breaks & Water Restoration Times*
 Following a Magnitude 7.5 Earthquake
 *Following return of supply at GWRC connections

Scale: 1:30,000
 North Arrow
 Capacity logo

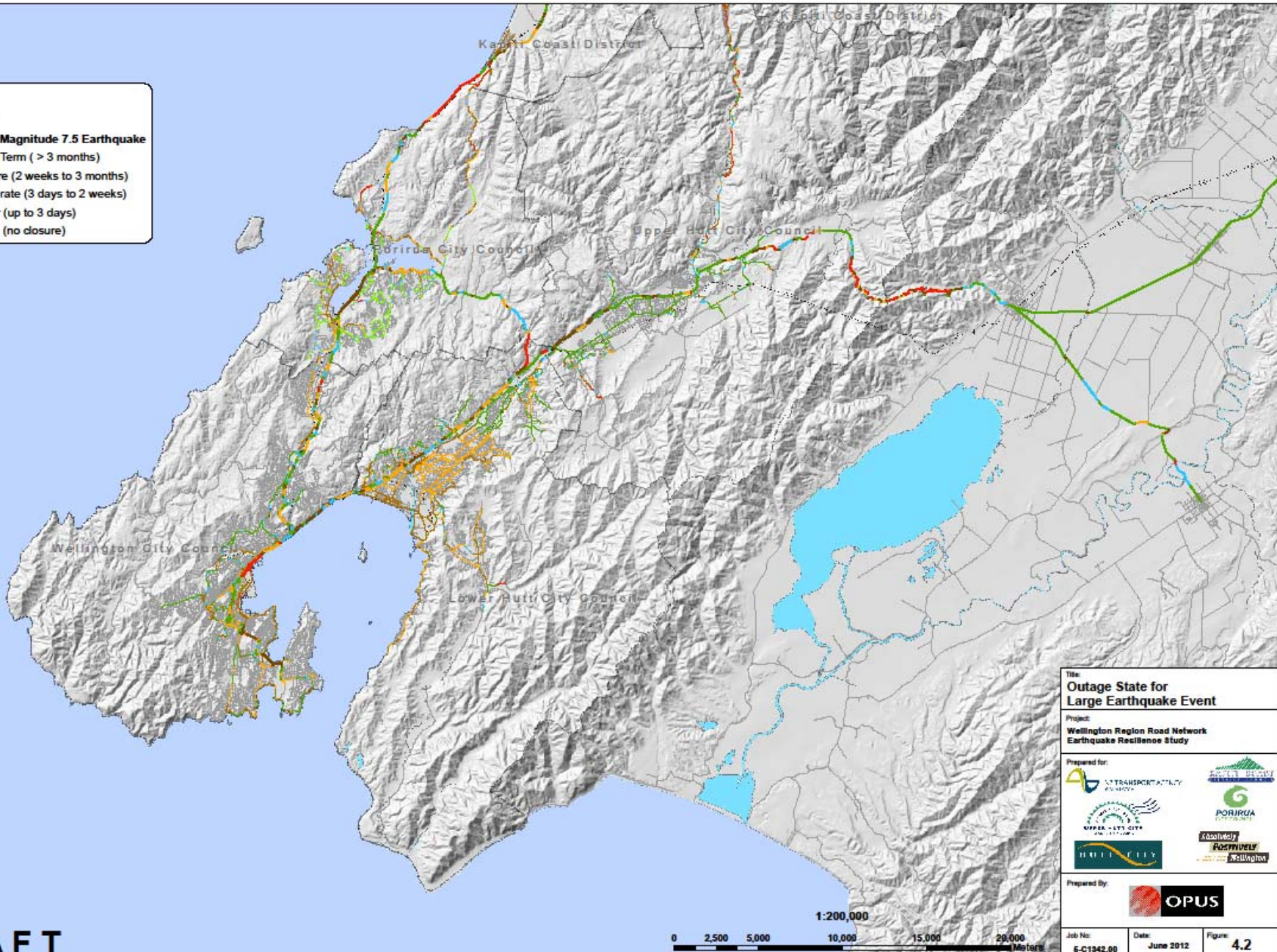


Legend

Outage State

Local Richter Magnitude 7.5 Earthquake

- 5 - Long Term (> 3 months)
- 4 - Severe (2 weeks to 3 months)
- 3 - Moderate (3 days to 2 weeks)
- 2 - Minor (up to 3 days)
- 1 - Open (no closure)



Title:
Outage State for Large Earthquake Event

Project:
Wellington Region Road Network Earthquake Resilience Study

Prepared for:

Prepared By:

Job No: 6-C1942.00	Date: June 2012	Figure: 4.2
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DRAFT

Thank you