



Tauranga City Council

Storm Recovery
Public Information Meeting
4 October 2005





What happened ...

- 18 May 2005 (19 weeks ago) 347mm rainfall in 24 hours
- The highest autumn rainfall recorded since records began in 1898
- 789 properties damaged by flooding or slips
- Over 2000 insurance claims
- 625 Earthquake Commission claims accepted
- 400 people evacuated
- No reports of injury or death
- 40 hours State of Civil Defence Emergency





‘A one-in-one-hundred-year’ event means there is a 1% probability of that event occurring in any one year.

It does not mean that the event is likely to happen once every one hundred years.





What we did ...

- 3 public information meetings (22, 24 May and 8 June)
- Councillors and staff conducted door to door visits in affected areas
- Established housing and welfare support for victims
- Urban Search and Rescue Squad brought in
- Co-ordinated insurance response
- Co-ordinated donations and volunteers
- BOP Mayoral Relief Fund established






What we did ... (continued)

- 1067 home and property inspections carried out by 4 August
- 850 people attended the 28 'street meetings' (July and August)
- Fixed damaged infrastructure to water pipes, roads and Mauao (estimated cost to be around \$5 million in total)
- Engaged independent consultants to assess situation and make recommendations





Where we are now ...

- 39 dwellings deemed a total loss and so far 12 have been demolished or transported from their sites
- \$715,000 raised via Joint Mayoral Relief Fund
- \$135,000 has been gifted to date from the Joint Mayoral Relief Fund
- A project to reinstate five adjoining properties is underway to prevent future failure of the land and enable the residents to continue to live there
- 82 households still in temporary accommodation



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Retaining Wall





Independent Report of Causes

Tauranga Storm Event of 18 May 2005 :
Landslip Issues

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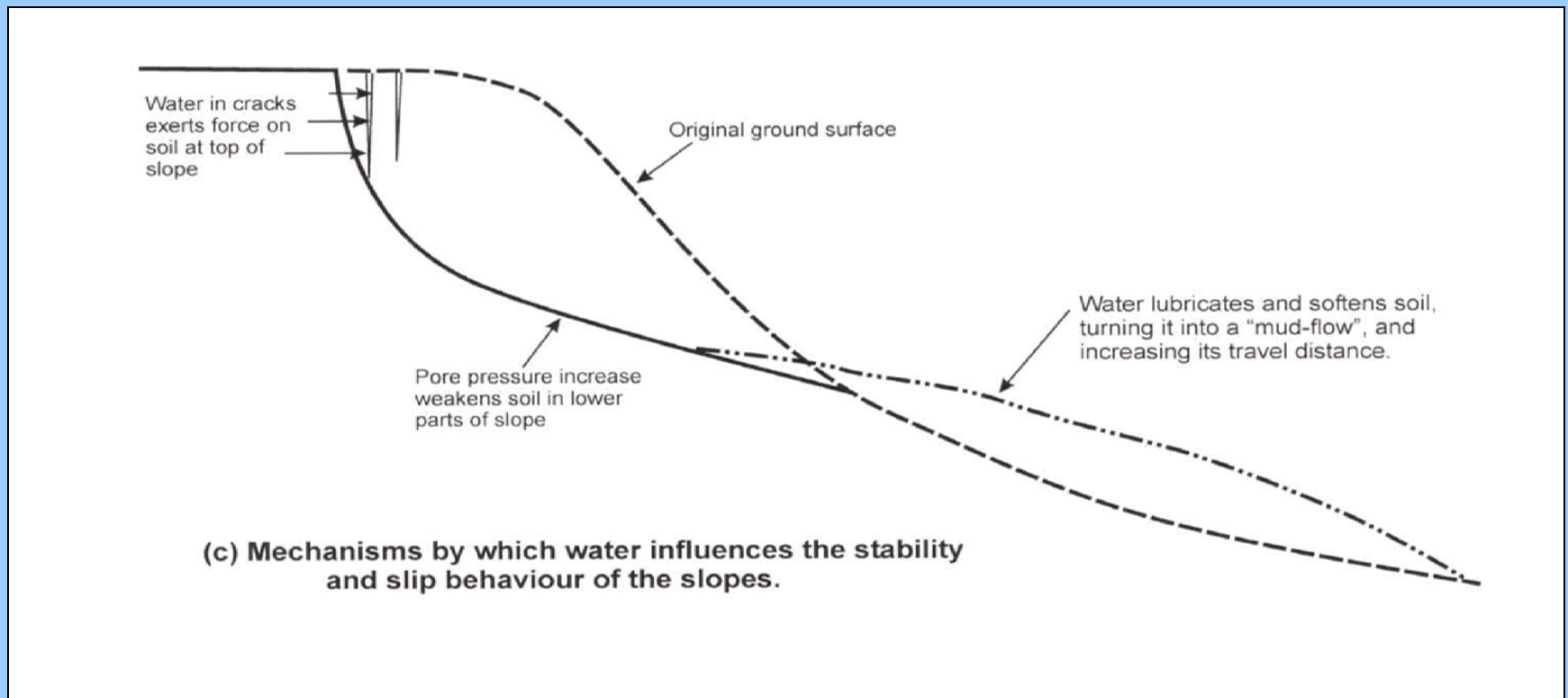
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Natural

- Primary cause of the slips was 'overland flow due to the extreme rain event on 18 May' following heavy rain two weeks earlier
- Steep slopes – volcanic ashes – random vertical fissures
- Remains of sea cliffs formed by erosion
- Slopes facing east suffered more slips than those facing west
- Relic (old) valleys are masked by subsequent volcanic ash fall
- Soil types like those in Tauranga already contain large quantities of water



Diagrammatic representation of slip cross section





Urban Development

- Surface cover eg driveways, houses, other sealed areas either:
 1. limits the amount of water entering the soil which can reduce the chance of slips; or
 2. concentrates the uncontrolled water into certain places which increases the chance of slips.
- Ground re-shaping – flattening or extending land, placing fill at the top of slopes, retaining walls, poles walls, pipe trenches without seepage cut-offs.



Soakholes

- Soakage holes can act like ‘random vertical fissures’ in some areas but not necessarily in all areas.
- Report concludes *“there is no general relationship between the presence of soakholes and the occurrence of slope failures”*
- However, while not an overall contributing factor to the slips, the recommendation is to remove the presence of soakholes where feasible to reduce future risk.





Recommendations from Report




Tauranga City



For the Council ...

- Where practicable, dispose of all stormwater via piped systems.
- The city may also need open drains (overland flowpaths) and holding ponds in high risk areas.
- Where practicable, discontinue soakhole use 150 metres from edge of 'relic' slips.
- Via the District Plan, impose restrictions on the management of earthworks that can be carried out on urban properties.
- Strengthen some Council 'rule of thumb' guidelines for determining when specialist advice might be needed before building.





For home owners or groups of home owners ...

- Obtain proper advice before construction of:
 - retaining walls
 - on site stormwater and surface water disposal systems





Council Actions So Far

- Actioned the recommendations described above
- Plus increased education for resource consent applicants on managing overland flow
- Preparing detailed catchment stormwater plans for the future (still underway)
- Prepared notices with information for property files



Flood

- A note will be put on your property file that identifies your property as suffering from a flood as a result of the significant storm event of 18 May 2005.
- Where remedial work has been undertaken and damage has already been repaired, this has also been noted against your property file.



Slips

- A note will be put on your property file that identifies your property as having experienced a slip as a result of the significant storm event of 18 May 2005.
- Where remedial work has been undertaken and damage has already been repaired, this has also been noted against your property file.





Climate Change

Ministry for the Environment and New Zealand Climate Change Office: “Climate Change Effects and Impacts Assessments: a Guidance Manual for Local Government in New Zealand” (2004).

- Rainfall design projections to be based on a mean temperature rise of 1.2 degrees Celsius by 2050
- SmartGrowth growth projections already accommodate this view
- We can expect to experience a greater number of high intensity rainfall events in the future.





Council Plans

- Monitoring Forum of the Council will receive a full report with estimates of costings for stormwater works on 12 October 2005.
- These costings and works will then be included in the draft Ten Year Plan alongside all other possible expenditure over the next ten years and made available for Council and public consideration.





Bureta Catchment

- Upgrading the outlet from Ngatai Road to the harbour including bunding part of the Otumoetai golf course
- Piped systems to each property boundary





Pillans Point Catchment

- Two options:
 - upgrade the existing system down to the outlet by the boat ramp in Maxwells Road; or
 - re-direct the top part of the catchment down Pillans Road using a large diameter pipe.



Otumoetai Catchment

(this includes the Sherwood/Vale, Western Road, Princess Road, Carlton Street and Beach Road catchments)

- Upgrading proposed over ten years includes more street drainage and provision of piped connections to properties.





Matua Catchment

- Four sub-catchments where significant flooding occurred need upgrading.





The Avenues Catchments

- Upgrade proposed between First Avenue, Cameron Road, Arundel Street and Devonport Road.
- Upgrade area of Tanner Street impacted by overland flows – work to be undertaken in 2006. Drainage improvements to the Tauranga Intermediate School will be undertaken as part of this project.






Mount Maunganui

- Residential areas affected have some work underway or it is proposed.
- Industrial area between Hull Road and Hewletts Road: a proposal is already in place for a new trunk main along the length of Hull Road and discharging to the harbour (includes treatment prior to discharge).
- Industrial area around Te Maire Street: proposal is to remove the top part of the catchment and redirect the flows to a new pipeline down Aerodrome Road and under or around the airport into the harbour.





Next Steps

- Continue to keep people informed about progress
- Continue with in-depth catchment studies
- Continue Storm Recovery Project works and activities
- Report to Monitoring Forum on 12 October with estimated costs for works proposed
- Elected members include the proposals in the draft Ten Year Plan
- Draft Ten Year Plan out for consultation February 2006





Questions



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