

# Oral Submission to the Proposed Housing and Business Choice Plan Change 14

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# Plan Change 14 Must adequately consider

- The mental health and wellbeing of the population
- Protecting and increasing the existing tree canopy coverage of our neighbourhoods
- The natural hazards affecting our city and its future, such as:
  - Seismic activity
  - Shifting weather patterns
  - Climate change
  - Other Environmental factors

A failure to do so exposes the Government, the Council, and Residents

# The Water City



Christchurch is located on a sedimentary delta

Urban development has resulted in greater volumes of pollutant rich stormwater being discharged into our waterways, green space is being lost and thousands of trees are being clear felled

# Housing intensification has negative impacts

- ▶ Developers are putting profits before the environment
- ▶ Pollutants can no longer be filtered naturally by the land
- ▶ Increased pollutant rich stormwater pouring into our waterways
- ▶ Accelerated development of urban heat islands
- ▶ Loss of tree canopy

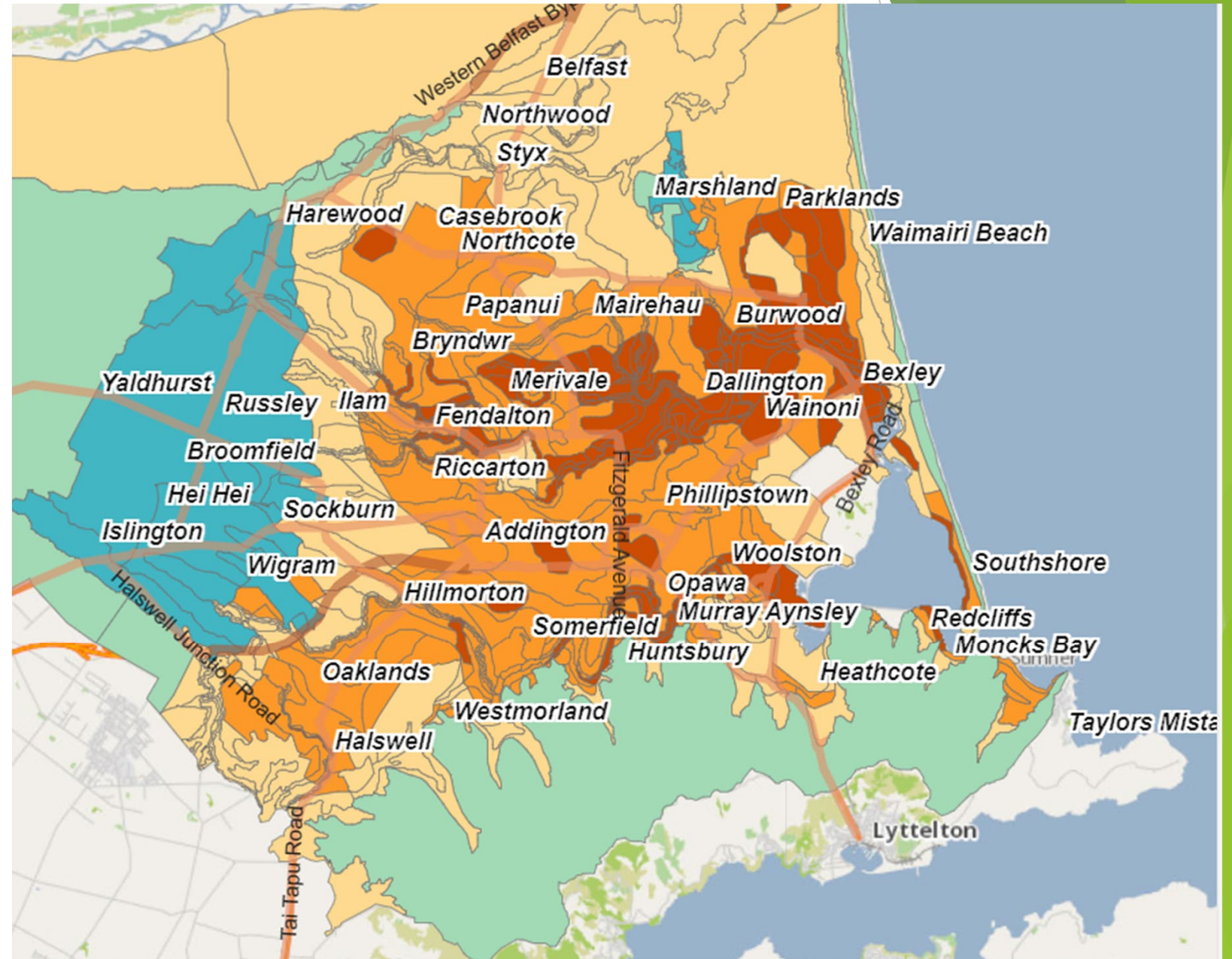


# Plan Change 14 should ensure

- ▶ The retention and protection of the existing natural environment and the dwindling tree canopy coverage of Christchurch
- ▶ It should allow for people and nature to prosper, rather than focusing on accommodating the short sighted demands of politicians and the economic gains of developers who operate without an Environmental and Ecological Code of Ethics.



# Liquefaction City



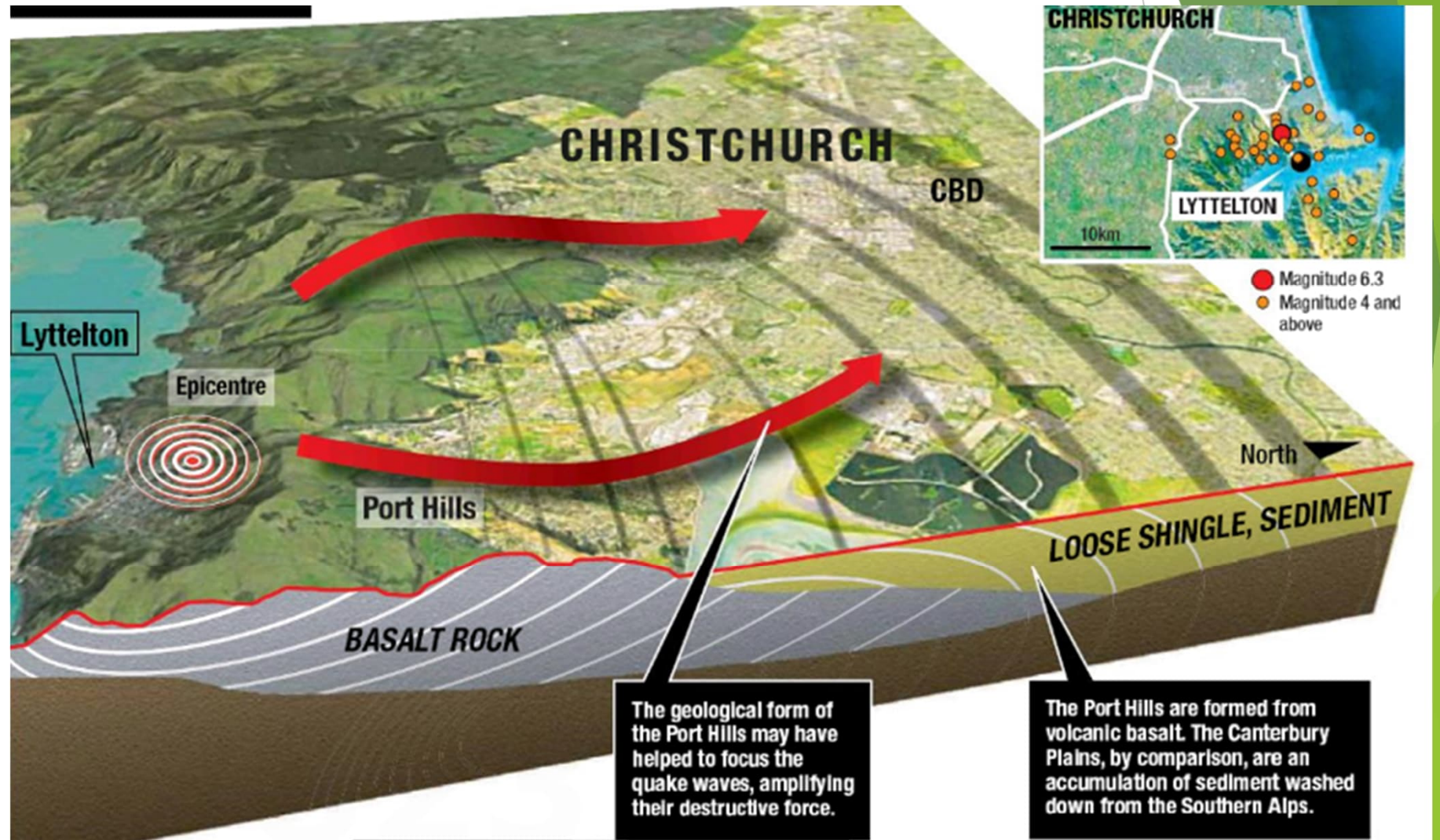
# The Flood prone City

- ▶ 30 mm of rainfall results in surface flooding in Christchurch
- ▶ 35% of Christchurch will be inundated and vulnerable to regular flooding in less than 80 years
- ▶ 83% of central and eastern Christchurch subsided in the earthquakes
- ▶ The water table under Christchurch is expected to increase
- ▶ Niwa indicates that climate change will bring more frequent and more intense rainfall to Christchurch



# The Fault City

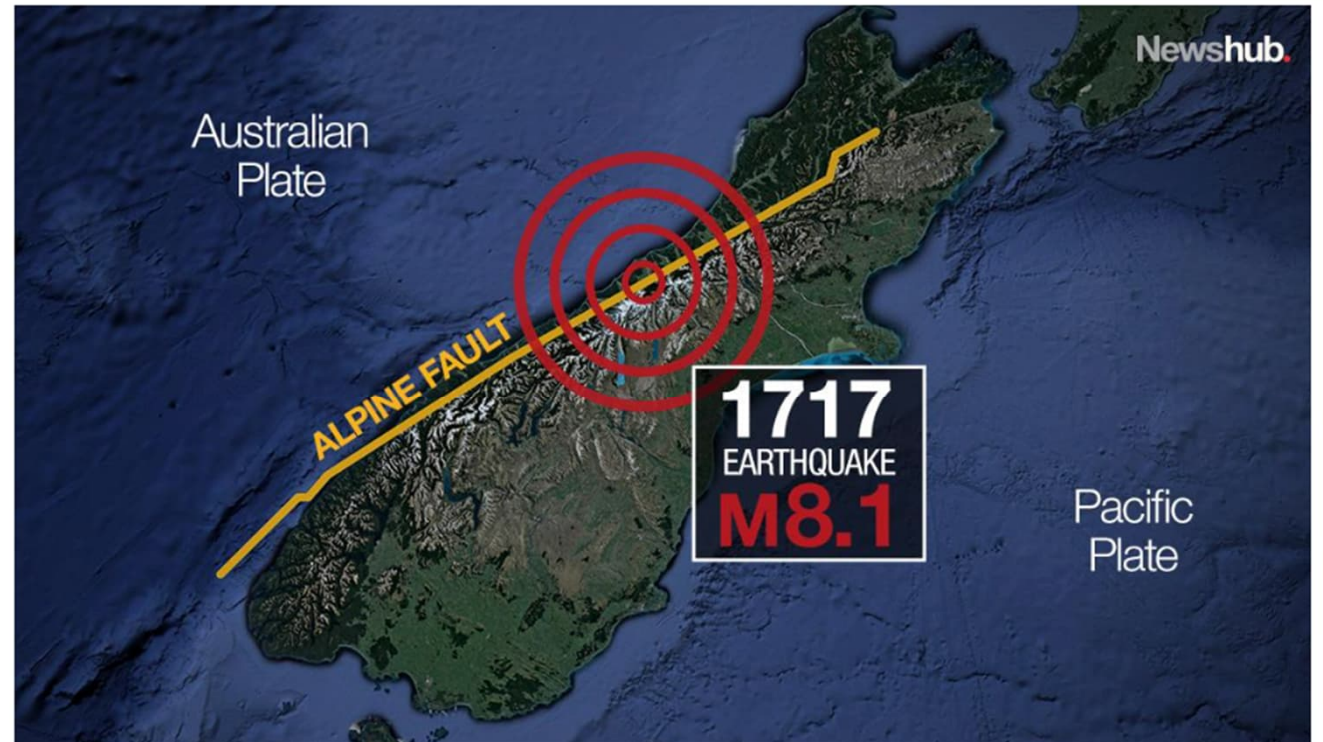
- ▶ Several known fault lines are situated near Christchurch
- ▶ The Port Hills amplify the destructive forces of earthquakes
- ▶ We are only 100km from the Alpine Fault





# The Alpine Fault

- ▶ Ruptures every 300 years
- ▶ Overdue to rupture
- ▶ Not a case of if, but when
- ▶ Will be enormously destructive
- ▶ Generates over Magnitude 8 earthquakes
- ▶ Will cause a long duration of significant ground motion in Canterbury
- ▶ Will lead to a cascade of subsequent hazards



An Alpine Fault earthquake in 1717 moved the fault line by about eight metres. Photo credit: Newshub.

# Damage to land and roading due to liquefaction and lateral spread



# Damage to underground services and critical infrastructure



# Community disruption and displacement



# Infrastructure damage isolating communities



# Plan Change 14 needs to give serious consideration to seismic risk

- ▶ The Independent Hearings Panel need to question if the Government have turned a blind eye to this, if they have forgotten the fact that a Magnitude 8.1 earthquake on the Alpine Fault will release about 1,000 times more energy than the Christchurch Magnitude 6.3 earthquake, and that it will be 32 times more powerful than the Greendale Magnitude 7.1 earthquake.
- ▶ Is the Government's decision to enabling further expansive development in Christchurch a wise decision, particularly when a group of scientists have revealed in a study published in Nature Geoscience that a great earthquake, one of the biggest in New Zealand's modern history, is due?

