

# 22 February 2011 Christchurch New Zealand earthquake

On 22 February 2011, at 12:51 pm Christchurch was struck by a magnitude 6.3 earthquake on the Richter scale. The quake was centred 10km south-east of the city at a depth of 5km. 185 people died, 164 people were seriously injured and there was major, widespread damage.

## What happened?

The quake was centred 10km south-east of the city at a depth of 5km. In the ten minutes after it hit, there were 10 aftershocks of magnitude 4 or more.

Water pipes, roads, bridges, power lines, cell phone towers and ordinary phone lines were broken or damaged.

There was a lot of liquefaction. Liquefaction happens when underground water in the soil comes to the surface. Thick muddy slush spreads everywhere, causing buildings and other structures to sink into the ground.

There was a lot of confusion and panic, especially in the centre of the city. People were desperately trying to contact their friends and families, and to get back home. The phone lines and roads almost immediately became jammed.

## About the earthquake

The fault that caused the quake cannot be seen from the surface, but it runs about 6 km south of the city centre. Land around the fault, rose, fell and slid.

The February earthquake was disastrous because there was a very high 'ground acceleration'. Ground acceleration measures how much and how fast the ground (and things on it like buildings and natural features) moves during an earthquake. The February earthquake was much shallower (closer to the surface).

## Earthquake damage

Many stone and brick buildings in Christchurch were damaged. Up to 100,000 buildings were damaged and about 10,000 buildings needed to be demolished.

The water and sewage pipes were badly damaged. Many people needed to use portable or chemical toilets, and got their water from tankers for months after the quake.

