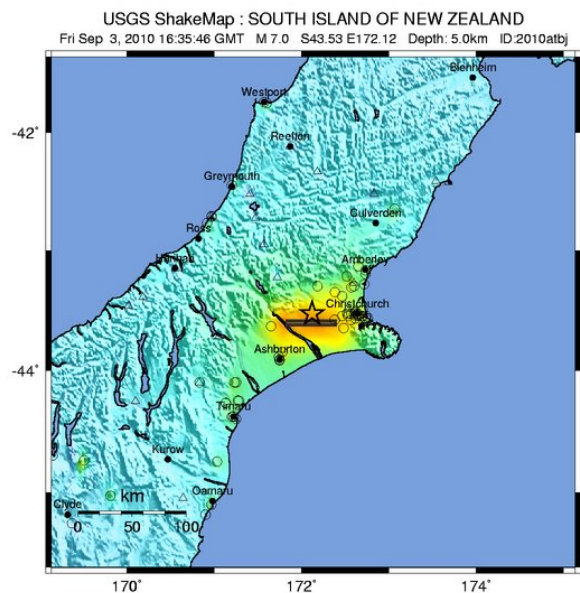


New Zealand Earthquake



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC (%g)	<.17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
PEAK VEL (cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Location: 43.530°S, 172.120°E near Darfield

Magnitude: Mw 7.0

Depth: 5 km

Distances: 45km W of Christchurch, 290km NNE of Dunedin, 330km SW of Wellington

Affected Locations: New Zealand South Island, Christchurch

A magnitude 7.0 earthquake leaves trail of destruction in Christchurch, New Zealand

Estimated insured losses between US\$1bn and US\$4.5bn

A magnitude 7.0 earthquake struck near the city of Christchurch in the early hours on Saturday, leaving two injured and causing major damage to buildings and infrastructure. This event was the most significant earthquake in 80 years since the 1931 M7.8 Hawkes Bay earthquake. A State of Emergency was declared and a curfew was imposed to minimise injuries and to inspect damaged buildings. Based on initial assessments, AIR have estimated insured losses to range between US\$2 and US\$4.5 billion and EQECAT estimates this figure to be between US\$1 and US\$4 billion. There is no figure from RMS at the time of writing.

Buildings and infrastructure suffered structural damage of varying degrees

Stringent seismic building codes in New Zealand have restricted the scale of destruction to buildings and infrastructure. The reported damage includes damage to buildings and contents particularly for old masonry buildings. Disruptions to energy supplies and contaminated water in some parts have been reported. The central business district in particular suffered severe damage as some of these were not retrofitted to stringent seismic designs and cracks have been observed in these buildings. Significant damage has been observed in Canterbury with similar cases of toppled chimneys and damaged contents.

The sources of tremors originate from unmapped fault line

The tremor was felt across a wide region, as far away as Dunedin, 290 km away from the epicentre. Approximately 14,000 earthquakes are registered in New Zealand every year and a few of these cause significant damage to buildings. Scientists believe the source of Saturday's event was caused by an unknown fault line.

Christchurch was subject to ground motion of moderate intensity

According to the USGS, the highest intensity was observed in Darfield where 2,000 people were subject to intensity VII (severe) shaking on the Modified Mercalli Intensity (MMI) scale. At this level of intensity, structural damage to buildings are expected to be moderate for earthquake resistant buildings and moderate to heavy damage for vulnerable buildings. Christchurch which is home to 364,000 people, experienced intensity V (moderate) on the MMI scale, which poses very light structural damage to resistant buildings and light damage to vulnerable buildings.

Aftershocks are still continuing in the region. The gale force winds experienced on Sunday are expected to worsen the condition of damaged buildings in the affected region.

Date written: September 6 2010

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