‘Increased risk’ land damage factsheet

January 2013

What does ‘increased risk’ land damage mean?

‘Increased risk’ land damage is a change in the susceptibility of land to future earthquakes. This type of land damage is uncommon in EQC’s claims settlement processes. This damage is found in some areas of flat land (ie not the hill suburbs) damaged in the Canterbury quakes.

There are two types of increased risk land damage:

1. Land with an increased risk of flooding,
2. Land with an increased risk of liquefaction causing damage to the property.

These types of land damage are covered by EQC and may form part of a land claim settlement if the damage is significant and the land meets specific criteria, which are broadly summarised below.

What is increased risk of flooding damage?

Broadly speaking, land is considered to be at ‘increased risk of flooding’ if it meets the following criteria:

- The land in its current state is at risk of flooding in a 1-in-100 year rainfall or high tide event.
- The land was not at risk of flooding in a 1-in-100 year event before the quake, or the risk has materially worsened as a result of the subsidence caused by the quake.
- The cause of the increased flood risk on the property is due to subsidence of the insured property.

EQC works out if land is at an increased risk of flooding in a 1-in-100 year event using topographical information from LiDAR surveys.

LiDAR surveys are made by laser scanning the ground surface from an aircraft. LiDAR elevation maps were created after each of the major Canterbury earthquakes. These elevation maps have been compared to record changes in land height.

The LiDAR topographical information has been run through the Christchurch City Council computer-simulated flood models that simulate the extent of flooding from a 1-in-100 year event. This is so a comparison can be made between the estimated flood depth before and after each damaging quake.

What is increased risk of liquefaction causing damage to property?

Broadly speaking, land may be considered to be at increased risk of liquefaction causing damage if:

- The land, in its current state, is at risk of liquefaction causing moderate to severe damage to property in a 1-in-100 year event and
- The land was not at risk of liquefaction causing damage in a 1-in-100 year event before the quake, or the risk has materially worsened as a result of the subsidence caused by each quake.

EQC works out if the land is at increased risk of liquefaction causing damage using a number of inputs such as:

- Aerial LiDAR surveys which were made after each of the major earthquakes. These surveys show elevation changes.
- The geotechnical ground tests from the drilling programme. These help EQC understand soil structure.
- Ground water level measurements.

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Drilling programme

Drilling is being used to collect soil samples. These samples will help EQC understand the soil structure and the predicted impact on the ground surface of a possible future 1-in-100 year earthquake. A 1-in-100 year earthquake has levels of shaking comparable with the September 2010 event.

- EQC drill sites are located in the Residential Red Zone, TC3 and parts of TC2.
- EQC will drill between 1500 and 2000 sites, but only a portion of these will be on private land.
- Holes are drilled at approximately 100m intervals. This means the drill sites are further apart than is the case for TC3 foundation design purposes.

This EQC drilling programme uses the same rigs, and the same approach as the TC3 foundation design testing drilling.

Where properties are within 50m of a drilling site used for TC3 foundation design testing, no additional drilling is needed.

What happens next?

EQC is gathering the information it needs to make claim decisions for land considered to be at increased risk of flooding and/or liquefaction damage.

It’s expected that all land claim decisions will be made by the end of 2014.

Land claimants do not need to do anything further to have their land assessed as ‘at increased risk of flooding and/or liquefaction damage’. EQC will automatically consider these types of damage for claims that have been made in areas where these types of damage could be relevant.

However, if you’d like information on your land claim, please phone EQC on 0800 DAMAGE (0800 326 243).

Q&A

Q. My land has dropped. Will EQC provide cover for increased risk of flooding or liquefaction?

A. Not necessarily. For example, if land has dropped in elevation, but not significantly, the land is not considered to be at ‘increased risk’.

Q. Why is the future risk based on a 1-in-100 year (September 2010) sized event, not a February 2011-sized event?

A. A 1-in-100 year event is a more realistic measure of the performance of a property. The 1- in-100 year event is a return period commonly used by councils for assessing natural hazards.

Q. EQC hasn’t drilled my land – how can you say if it’s damaged or not?

A. Subsoil composition can be inferred by drilling at regular intervals in an area.

Q. If EQC decides my land is now at greater risk of liquefaction damage, does this mean my house can’t be rebuilt or repaired?

A. No. Land assessed as being at increased risk of liquefaction damage in a 1-in-100 year quake will still be able to be built on, subject to the relevant Building Code standard.

Q. I’m in the Christchurch City Council flood management area. Does my property have ‘increased risk’ of flooding land damage?

A. Not necessarily. Being in an identified Flood Management Area does not automatically mean that the land might qualify for the increased flood risk land damage category. EQC insures damage to the insured land caused by each Canterbury earthquake event. This is based on increased flood risk resulting from the change to the insured land, relative to the condition before each damaging quake.