



Slope Instability - Frequently asked questions

<http://www.nelson.govt.nz/environment/nelson-plan/natural-hazards/slope-instability/>

1. What is slope instability and how is it caused?

Slope instability refers to the movement of a mass of rock, debris, or earth (soil) down a slope in areas where topography enables sliding to occur.

Slope instability features can range from large landslides several square kilometres in area to shallow slope failures only a few metres wide. Slope instability can be triggered by rainfall, earthquakes, weathering over time, and human use of the slope (for example logging, forest fire, construction of roads). The risk can extend downslope beyond the unstable area to 'run-out' zones. These areas may be affected by debris run-out sourced from upslope instabilities.

2. Why does Council produce slope instability maps?

Councils are required by legislation to manage risks from natural hazards. Relevant legislation includes the Resource Management Act (RMA), Building Act, Local Government Act, and the Civil Defence and Emergency Management Act. Managing these risks requires assessment of the natural hazards, and identification of areas where they may occur.

Managing natural hazard risks ensures that development occurs in appropriate locations, and in ways that avoid or mitigate the risk. The first step in managing the risk posed by a natural hazard risk is assessing areas, or the entire region, to identify where the hazard may occur (which involves mapping).

What do the slope instability maps show?

The first slope instability maps for Nelson were produced in 1996 and were included in the Nelson Resource Management Plan (NRMP). The maps comprise three overlays:

- Grampians Slope Risk Overlay
- Tāhunanui Core Slope Risk Overlay
- Tāhunanui Fringe Slope Risk Overlay

These overlays define areas where there was a known or potential risk of slope movement or failure, and the NRMP contains rules relating to development within these areas.

The latest maps, produced in 2021, take a region-wide approach to identifying areas of existing and potential slope instability and run-out



zones, not just areas of known existing instability. The latest maps therefore show a larger area, and more properties potentially susceptible to slope instability.

3. What information was used to map the slope instability and run-out zone areas?

Local engineering geologists carried out a Nelson-wide investigation in 2020 to identify areas that are potentially susceptible to slope instability and impacts from the run-out of slope instability.

The resulting report follows the Australian Geomechanics Society guidelines for 'Landslide Risk Management' (2007a) and identified the following areas as potentially susceptible to slope instability:

- Cliffs
- Natural slopes steeper than 35 degrees (rapid landslides may occur)
- Natural slopes 20-35 degrees (landslide travel possible)
- Slopes where geologic and geomorphic conditions are such that sliding is possible
- Land on a ridgeline with a slope greater than 35 degrees if the ridgeline is less than 30 metres wide
- Slopes with a history of instability, including large currently inactive landslides subject to undercutting of the toe or reactivation by development
- Land within 100m downslope of a mapped earthquake fault line.

The report also identified areas susceptible to run-out, including:

- Areas of land downslope of mapped instability, where there is evidence it was previously affected by instability run-out
- Areas where the steepness of the slope profile beneath the mapped area of instability may result in debris material (soil and rock) extending into this area.

4. Why is the mapping of slope instability in the 2021 assessment different to the 2020 mapping?

The 2021 assessment further divided the previous slope instability areas (from 2020) into three tiers of slope instability. The total area mapped as potentially susceptible to slope instability has not changed, and no changes were made to the run-out zones. The revision was based on recommendations from a technical working group of local engineering geologists and geotechnical engineers as set up by the council.

The revised tiers of slope instability are:



- Tier I – Area of known active instability with previous slope failures impacting residential properties which warrants specific planning regulations
- Tier II – Areas identified as having elevated susceptibility to slope instability including areas with existing deep seated or earthflow instabilities and/or geologic units known to have an elevated susceptibility to instability.
- Tier III – Areas identified as susceptible to slope instability based on the geologic and geomorphic setting and/or with previous records of slope instability failure.
- Areas potentially susceptible to debris run-out

You can read the full report on the mapping methodology on our webpage at: nelson.govt.nz/slope-instability

5. Why is my property included in the slope instability area when it has never been affected before?

Councils are required to look at risk over a long time period to help inform decisions regarding future development and land uses.

6. Will being in the slope instability area limit the ability to build a new house or extend an existing one on my property?

The NRMP rules still apply to any property that is identified in the current NRMP "Slope Risk Overlays". Proposed development or building work may require resource consent.

However, if your property is located in a newly identified slope instability area (and not within an existing NRMP "Slope Risk Overlay"), the NRMP rules for activities within the Slope Risk Overlays do not apply to your property.

However slope instability hazard can be considered in some resource consent processes where natural hazards need to be considered more broadly. And, in the future, newly identified areas of Nelson that may be susceptible to slope instability are expected to be included into the NRMP, or into a new resource management plan.

You may still require building consent if you are thinking of carrying out any building work on your property. It is always wise to check with Council first.

7. Can my property still be subdivided if it's in a slope instability area?

Subdivision requires resource consent. The rules for subdivision are contained in the Nelson Resource Management Plan. Natural hazards are taken into account when considering an application to



subdivide land within areas potentially susceptible to natural hazards, including faults.

8. Will this information go on property files and Land Information Memoranda (LIMs)?

Property files had slope instability information added to them and LIM notations were inserted when the 2020 slope instability assessment was released. The information in the LIM notation has been updated to include reference to the most recent information, i.e. the 2021 slope instability assessment by Beca.

9. What does the updated LIM notation say?

Slope Instability Hazard

The Council holds a report (NCC Slope Instability Overlay Report, 9 December 2021) that indicates this property, or part of this property, may be potentially susceptible to slope instability or debris run-out associated with slope instability.

The data contained within the NCC Slope Instability Overlay Report has been generated at a regional scale (1:5,000). It is therefore indicative only of potential slope instability hazard affecting any individual site or property. To determine the specific slope instability affecting any individual site or property, site-specific assessment may need to be undertaken.

Further refinements to the geographic extent of the identified Slope Instability Overlay may occur in the future, for example as the Nelson Resource Management Plan (NRMP) is updated. As a result, the slope instability information recorded on the LIM for this property may be updated in the future.

A copy of the NCC Slope Instability Overlay Report can be obtained online at <http://www.nelson.govt.nz/environment/nelson-plan/natural-hazards/> or by contacting the Planning Administrator on 5460200.

10. Can I get the LIM notation removed?

Under section 44A (2) (i) and (ii) of the Local Government Official Information Management Act (LGOIMA) councils are legally obliged to include this information on LIMS if it is not apparent from the District Plan (in Nelson's case, the NRMP). Once this information is included in an operative District Plan, the LIM notation may be removed.

11. What if I want to sell my property?

Any potential buyer can access the relevant land and property information files in relation to natural hazards. To find out more about requesting property files and fees involved (there is no fee if



you are the property owner) please visit:
nelson.govt.nz/requesting-property-files

Prospective buyers can also purchase a LIM from the Council. To find out more about obtaining a LIM and the fees involved, please visit: nelson.govt.nz/land-information-memorandum-lim-reports

12. Will this information affect my property value or insurance?

Council cannot advise property owners about any effect this information may have on your property values or insurance. We recommend property owners seek professional advice from a property valuation or insurance expert about any concerns regarding these matters.

13. Will I be covered by the Earthquake Commission (ECQ) if my property is affected by a natural disaster causing slope instability?

EQC cover provides natural disaster insurance for residential homes and some areas of residential land after earthquakes, landslips, volcanoes, tsunami and hydrothermal activity. It also provides cover for storm flood damaged land.

For more information, please refer to EQC's website:
eqc.govt.nz/what-we-do/what-youre-covered-for

14. What if a site-specific assessment of slope instability has previously been completed on my property?

If a more detailed site-specific assessment by a suitably qualified expert shows that a property is not susceptible to slope instability, and this information is supplied to the Council, then that becomes additional information that is added to the property file. The LIM notation for slope instability would remain, but both sets of information would be provided in the property's LIM.

15. My property is within a recently completed subdivision. Why is it shown within the instability overlay?

The Slope Instability Overlay shows areas that may be susceptible to slope instability on a regional scale, and was completed in 2021. We are unable to comment on an individual subdivision or development without reviewing the subdivision documentation. However, as part of assessing the application for resource consent to subdivide the land, the Council would have considered natural hazards, including slope instability.