

18.13 FAULT RUPTURE RISK AREA

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*Refer to Policy set 13.1.
Refer to Rule section 16.3.*

18.13.1 Scope of Section

This section deals with the earthquake hazard risk of ground rupture from movement of active faults, in relation to subdivision and buildings throughout the District. Chapter 19 details information required with resource consent applications.

Advice Note: The Resource Management (National Environmental Standard for Freshwater) Regulations 2020 may apply to some activities, including farming activities and activities in or near wetlands and rivers. The National Environmental Standard may alter the activity status of an activity and impose additional standards, information requirements, matters for assessment and criteria. Please ensure you have met any requirements in the regulations in addition to those in this plan.

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18.13.2 Subdivision

The following rules apply in addition to the rules of section 16.3.

18.13.2.1 Restricted Discretionary Activities (Subdivision)

Any subdivision extending into the Fault Rupture Risk Area is a restricted discretionary activity, if it complies with the following conditions:

- (a) Every allotment on which any habitable building is intended to be located has a building location area shown.
- (b) Subject to condition (e), a report is prepared by an appropriately competent person in geology or geotechnical engineering with specialisation in earthquake risk assessment and submitted to Council, that:
 - (i) records the survey and mapping of the land subject to the Fault Rupture Risk Area at a scale of 1:500 to identify or show as accurately as practicable the location of the surface position of the plane of any active fault; and
 - (ii) shows that any building location area that extends into the Fault Rupture Risk Area can provide for the setting back of the intended buildings in accordance with conditions (b) or (c) of rule 18.13.3.1; and
 - (iii) specifies any conditions for subdivision related to the reduction of fault rupture risk to any existing or proposed building or network utility service.
- (c) Where the fault is the Waimea-Flaxmore Fault and the report required by condition (b) certifies that the location of the surface position of the plane of any active fault cannot be identified, there is no further restriction on the location of the building or alteration in relation to the fault.
- (d) There is no limit to the age of a report that meets the requirements of condition (b), provided that it has been prepared by or certified by a person who meets the criteria of condition (b).
- (e) Subdivision by means of the relocation or adjustment of an allotment boundary need not comply with condition (b) if there is no existing or proposed habitable building site or network utility service that is located within any area of land included in any allotment as a result of the boundary relocation or adjustment.

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Alpine Fault, St Arnaud and Waimea-Flaxmore Fault System, Richmond

- (f) The land being subdivided is not on, accessed or serviced by Kerr Bay Road, Lake

Road, Robert Street, Holland Street, Borlase Avenue, or Brookvale Drive, St Arnaud.

(g) Notwithstanding condition (f), the subdivision is the relocation or adjustment of an allotment boundary on land that is on, accessed or serviced by Kerr Bay Road, Lake Road, Robert Street, Holland Street, Borlase Avenue, or Brookvale Drive, St Arnaud, provided that:

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- (i) there is no increase in the number of building location areas; and
- (ii) each building location area is able to accommodate a habitable building that complies with the relevant zone rules.

A resource consent is required. Consent may be refused, or conditions imposed, only in respect of the following matters to which the Council has restricted its discretion:

- (1) Following subdivision, the risk to land, building or network utility service, of fault rupture or other ground deformation during an earthquake.
- (2) The avoidance or reduction of the extension of allotments to contain habitable buildings, or utility network services, across the indicated position of the active fault.

18.13.2.2 Non-Complying Activities (Subdivision)

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Any subdivision that does not comply with the conditions of rule 18.13.2.1 is a non-complying activity. **A resource consent is required.** Consent may be refused or conditions imposed.

18.13.3 Building Construction or Alteration

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18.13.3.1 Permitted Activities (Building Construction or Alteration)

The construction or alteration of a building is a permitted activity that may be undertaken without a resource consent, if it complies with the following conditions:

- (a) Except as provided by condition (g), where the construction of any habitable building or external alteration to a habitable building is within the Fault Rupture Risk Area shown on the planning maps, a report is prepared by an appropriately competent person in geology or geotechnical engineering with specialisation in earthquake risk assessment and submitted to Council. The report must record the survey and mapping of the site at a scale of 1:500 to identify or show, as accurately as practicable, the location of the surface position of the plane of any active fault.
- (b) Where the report required by condition (a) identifies the location of the surface position of the plane of any active fault, then the building or alteration is set back at least:
 - (i) 20 metres from that surface position where the active fault is the Alpine Fault that is within or east of St Arnaud or 10 metres if the report contains the results of specific site investigations that support this setback; or
 - (ii) 10 metres from that surface position where the active fault is part of the Waimea-Flaxmore Fault system from north-east of St Arnaud to the District boundary east of Richmond; or any other active fault except for the Alpine Fault east of St Arnaud; or
 - (iii) 5 metres from that surface position where the active fault is part of the Waimea-Flaxmore Fault system that is north of the Wairoa River; and the report contains the results of specific site investigations that support this setback.

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(c)	Where the fault is the Alpine Fault that is within or east of St Arnaud and the report required by condition (a) does not identify the surface position of the plane of any active fault, but:	C40 4/13 Op 1/15
	(i) the report assesses the fault as being within a fault scarp, then the building or alteration is set back at least 20 metres from the top or toe of the scarp; or	
	(ii) the building or alteration is set back 10 metres from the top or toe of the scarp if the report contains the results of specific site investigations that support this setback; or	
	(iii) the report shows the inferred surface position of the plane of the fault, then the building or alteration is set back from that inferred position a distance that is recommended in the report that is at least the distance shown by a line drawn between points that are either:	
	(a) 20 metres from the identified surface position of the plane of movement of the fault (as in (b)(i)); or	
	(b) 20 metres from the top or toe of the scarp (as in (b)(ii)); and	
	(c) 30 metres from the mid-point of the inferred section of the fault.	
	If the fault changes direction within the inferred section then the 30 metres is measured from that inferred point of change in direction.	
(d)	Where the fault is the Waimea-Flaxmore Fault System and the report required by condition (a) certifies that the location of the surface position of the plane of the active fault cannot be identified, then there is no further restriction on the location of the building or alteration in relation to the fault.	C21 8/10 & C40 4/13 Op 1/15
(e)	There is no limit to the age of a report that meets the requirements of condition (a), provided that it has been prepared by or certified by a person meeting the criteria of condition (a).	C40 4/13 Op 1/15
(f)	Any external alteration does not increase the area of building coverage that may extend within the relevant setback distance as given in condition (b) or (c) by more than 20 percent.	C21 8/10 & C40 4/13 Op 1/15
(g)	Condition (a) does not apply where:	C21 8/10 Op 1/15
	(i) the construction of the habitable building is a replacement building in substantially the same location on the site; or	
	(ii) in relation to any external alteration, a report substantially complying with the requirements of condition (a) has been provided for the existing building.	
	Note 1: The report required by condition (a) should state the limits of the methods used in the investigation. Except where the fault is well defined by a scarp on the ground surface or by rupture along the fault, the methods are likely to include test pitting or trenching, or other subsurface techniques.	C40 4/13 Op 1/15
	Note 2: The provision of a report on fault rupture hazard risk as required by rule 18.13.2.1 is a means of compliance with condition (a) if the report addresses the matter of the identification or indication of the surface position of the plane of any active fault, in relation to any proposed building location.	C21 8/10 & C40 4/13 Op 1/15

18.13.3.2 Restricted Discretionary Activities (Building Construction or Alteration)

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The construction or alteration of a building that does not comply with the conditions of rule 18.13.3.1 is a restricted discretionary activity, if it complies with the following conditions:

- (a) A report is prepared by a person appropriately competent in geology or geotechnical engineering with specialisation in earthquake risk assessment and submitted to Council that states:
 - (i) the credentials of the person to report on the building or alteration;
 - (ii) the geological conditions of the site;
 - (iii) the safest practicable position for a building or alteration on the site in relation to the risk of fault rupture or other ground deformation, having regard to information provided concerning the location of the surface position of the plane of any active fault, and the likely effects of an earthquake.

- (b) There is no limit on the age of a report that meets the requirements of condition (a), provided that it has been prepared by or certified by a person who meets the criteria of condition (a).

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A resource consent is required. Consent may be refused, or conditions imposed, only in respect of the following matters to which the Council has restricted its discretion:

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- (1) The recommendations of the report referred to in (a) concerning the position of the habitable building or alteration in relation to the indicated position of the active fault.
- (2) The health and safety of the occupants of the building during the life of the building.
- (3) The effects on the building or network utility services to it, of ground rupture or other deformation and ground shaking caused by earthquakes.
- (4) The risks of erosion, falling debris, subsidence, slippage or inundation from any source, from earthquake effects.
- (5) Methods to avoid or mitigate the effects of ground rupture or other deformation and ground shaking caused by earthquakes, including by:
 - (a) building design and construction standards;
 - (b) site layout, including building setback from the indicated position of any active fault, and the position of network utility services;
 - (c) separation from structures or natural features.
- (6) The duration of the consent (Section 123 of the Act) and the timing of reviews of conditions and purpose of reviews (Section 128).
- (7) Financial contributions, bonds and covenants in respect of the performance of conditions, and administrative charges (Section 108).

18.13.20 Principal Reasons for Rules

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Parts of the District contain active faults that present potential threats to health and safety. In the event of an earthquake, structures that are near to or straddle the active faults may be damaged by fault rupture or other deformation of the ground on which they are founded as well as strong ground shaking. However, strong ground shaking from earthquakes will occur well beyond the extent of the active fault. A range of setbacks from the indicated surface position of the active fault will mitigate the potential for damage to a material extent. The different setbacks apply because there is a range of certainties about the position of the faultline in different geological situations.

The planning maps show the Fault Rupture Risk Area. Generally the Council does not have fault line data at sufficient accuracy to assist in the location of a building on a particular site. Therefore the rules require both subdivision and habitable buildings within the Fault Rupture Risk Area to have the surface location of the active fault surveyed and mapped more accurately in order to position any allotment or habitable building in relation to the relevant fault.

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The subdivision of land already in urban locations at St Arnaud and extending into the Fault Rupture Risk Area is non-complying, as it may add to the number of dwellings exposed to high fault rupture risk from the Alpine Fault as an extremely active system. The Waimea Fault system in the Fault Rupture Risk Area at Richmond, while classed as active, has significantly less risk of rupture than the Alpine Fault.

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