

# **SECTION 32 REPORT - PROPOSED PLAN CHANGE 22 HAZARD (FAULT LINE) AREA REALIGNMENT AND RULES**

## **1. Introduction**

Section 32 of the Act stipulates a requirement to consider alternatives and assess the benefits and costs of adopting any objective, policy, rule, or method in the District Plan. This Plan Change is promoted to ensure the District Plan Planning Maps contain accurate information on the alignment of the Hazard (Fault Line) Area and to clarify the rules in the Plan that apply to that hazard area. A range of options were canvassed in the preparation of this Proposed Plan Change and this report of those options has been prepared to address the requirements set out in section 32 of the Resource Management Act.

## **2. Context**

The purpose of the Resource Management Act 1991 (the Act) is to promote the sustainable management of natural and physical resources. Sustainable management includes managing the use and development of natural and physical resources to enable people to provide for their health and safety. The Act also contains an explicit function for Territorial Authorities to control any “*actual or potential effects of the use, development, or protection of land, including for the purpose of the avoidance or mitigation of natural hazards...*”

In the context of this Plan Change, the Council is aiming to update the Hazard (Fault Line) Area on the Planning Maps to ensure decisions made under the Plan are appropriate to ensure the effects of an earthquake, specifically a fault rupture event, on the health and safety of people and properties can be mitigated. The rules in the plan that apply in this hazard zone are amended for the same purpose.

The District Plan is the primary vehicle for achieving the purpose of the Act. It provides for the management of activities in this area through objectives, policies and rules.

A minor alteration is proposed to the explanation of a policy to develop better links between the policy and subsequent fault hazard rules. This Plan change primarily relates to the realignment of the Hazard (Fault Line) Area on the planning maps for the Wellington Fault and amendments to the rules that apply in this hazard area.

## **3. Process & Consultation**

The process which led to the development of this Plan Change has been lengthy and involved a number of investigations over the last two years. Considerable written material has been produced as a result of this process. Key documents used in the preparation of the Plan Change are outlined below, along with open days and a public meeting held with local residents.

### ***Key documents***

- € **Undated report:** *“Planning to Minimise the Impacts of Hazards – Making sense of the Science. A case study of earthquakes”* - Published by Institute of Geological and Nuclear Sciences (IGNS)
- € **March 2002:** Draft Report *“Defining the Wellington Fault within Wellington City urban areas – a data compilation”*. By N Perrin and P Wood. Published by IGNS.
- € **Dec 2002:** Second draft report following a decision to expand the data collection to include information held in WCC files. *“Defining the Wellington Fault within the urban area of Wellington City”* by N Perrin and P Wood. Published by IGNS.
- € **Jan 2003:** Draft copy of the Interim MfE Guidelines *“Planning for development of land on or close to active earthquake faults”* by Janine Kerr, Simon Nathan, David Brunson and Andrew King.
- € **March 2003:** Final Report *“Defining the Wellington Fault within the urban area of Wellington City”* by N Perrin and P Wood. Published by IGNS.

### **Key discussions/briefings**

- € **5 February 2003:** Greater Wellington Regional Council – to make them aware of draft report from GNS and its likely implications
- € **13 February 2003:** Phone conversation with Quotable Value regarding effects of fault hazard zones on property values
- € **19 February 2003:** ECBU Building control officers – to investigate alternative options for the planning rules
- € **10 March 2003:** MfE – purpose to check how progress with the draft MfE guidelines are progressing
- € **11 March 2003:** Andrew King of GNS (recently moved from BRANZ) – to discuss possible engineering standards for building across faults
- € **27 March 2003:** Senior Managers Briefing on fault hazard work
- € **27 March 2003:** Contact made with Thorndon Society Inc and Greater Kelburn Residents Association to discuss impending community information programme
- € **31 March 2003:** Councillors’ briefing on fault hazard work
- € **1 April 2003:** Discussion with the NZ Insurance Council regarding impact of fault hazard zones on insurance premiums
- € **21 May 2003:** Discussion with Ian Brown Associates to discuss engineering standards and fault hazard zones
- € **29 May 2003:** Discussion with Arthur Parks to discuss structural engineering relating to building close to faults
- € **13 June 2003:** Meeting with ECBU and DP policy staff (resource consents officer and building consents officers) with the GNS staff (Andrew King, Janine Kerr and Peter Wood) to progress changes to rules and building standards

- € **17 June 2003:** Meeting with legal advisors, building consents and DP policy staff to discuss proposed permitted activity standards.

### ***Community Information Programme***

In April 2003, letters were sent to over 700 property owners affected by the hazard zones recommended by GNS. An information centre was established on Tinakori Road, during which over 70 people visited the centre to discuss their concerns. A public meeting (attended by over 65 people) was also held on 9 April to explain the GNS report and the intention to prepare a plan change.

A summary of the issues raised in this community information programme are outlined below. While not all issues outlined are District Plan issues they have been outlined below to illustrate the breadth of concerns:

- € the arbitrary nature of the 20m buffer zone and whether or not there is scope to amend this
- € the nature of information being included on LIMs.
- € requests that no new significant buildings are built in the fault hazard area, whereas others were concerned about the level of existing regulation in the Plan.
- € the impact on house values, insurance premiums and council rates
- € expectations about compensation because the fault hazard zone now covers their property
- € whether or not property owners were now required to strengthen their homes.

### ***Legal Opinions***

During the course of policy preparation and to address concerns raised by some property owners, legal opinions were sought as outlined below:

- € **14 March 2003:** whether or not to include hazard information from the GNS report on LIMs prior to the public information programme beginning.
- € **8 April 2003:** existing use rights in the event of rebuilding homes following a fault rupture hazard event
- € **2 May 2003:** further legal advice on content of LIMs in relation to fault hazard zones.
- € **1 July 2003:** legal review of rules suggested as part of the Proposed Plan Change

### ***Consultation, in accordance with the First Schedule of the RMA 1991***

- € Ministry for the Environment
- € Greater Wellington Regional Council
- € Wellington Tenth Trust
- € Te Runanga O Toa Rangatira Inc

## 4. Options

The following tables assess the pros and cons of the key issues and options involved in the management of the Wellington Fault rupture hazard.

**Table 1: Options for the Alignment of the Hazard (Fault Line) Area on Planning Maps**

OPTION	EVALUATION
<p><b>Option 1.1</b></p> <p><b>Do Nothing</b></p>	<p>This option is <b>not recommended</b> as the Council is now aware that information in the District Plan (which has regulatory impact on property owners) is not accurate. It will impose unnecessary compliance costs on some property owners but others will not have those costs imposed even where they would be appropriate.</p>
<p><b>Option 1.2</b></p> <p><b>Re-align Hazard (Fault Line) Area to reflect GNS report recommendations</b></p>	<p>This is the <b>recommended option</b>. The Council relies on the expert advice given to it by GNS to determine these zones. The wider community benefits from having up-to-date information about the hazard risk in the District Plan. This raises awareness about the risk and allows people to make informed decisions about how to protect themselves and their homes. Some property owners are concerned that property prices will be affected and insurance premiums will rise. There is no evidence to support these fears. A fault line of some form has been on the planning maps for over 30 years and has not adversely impacted on property values in Thorndon. Real estate agents and valuers did not believe the boundary changes would impact on house prices either. Thorndon and Northland remain desirable places to live in Wellington due to the proximity to the central city and the character of these areas. People appear to balance the risk of the earthquake against other qualities of living in the area. There are rules in the District Plan to help ensure however that people will be safe from the effects of a fault rupture. Similarly, the Insurance Council have said that insurance premiums for residential properties are unlikely to rise as insurance is assessed in comparison with the global risk situation – not at a city or even suburb level. Commercial land owners are already finding it difficult to pay premiums for insurance in Wellington. Whether the re-aligned hazard zones would impact this further was unclear.</p>
<p><b>Option 1.3</b></p> <p><b>Re-align Hazard (Fault Line) Area to reflect GNS recommendations regarding the likely fault rupture hazard zone, but have a smaller buffer area.</b></p>	<p>This option is <b>not recommended</b> for the reasons highlighted in the discussion below. At the very least this option shows the correct boundaries for the <i>fault rupture hazard area</i> and in this way provides good information to the community about the risk. International and national best practice methods at planning for fault rupture recommends including a buffer zone of 20 metres as there is a zone of impact from a fault rupture where homes may be damaged due to the unpredictable nature of fault rupture events. Reducing the buffer zone will reduce compliance costs for some property owners but this will not reduce the actual risk faced by those property owners. Not showing the recommended buffer zone area may lead people to a false sense of security in that if they are not within the <i>fault rupture hazard area</i> then they will not be affected by the Fault. As noted, faults are unpredictable by nature and it is recommended in this case to flow what is standard practice elsewhere. Given this, option to allow for a reduced buffer zone is not recommended.</p>

**Table 2: Options for permitted activity conditions**

OPTION	ANALYSIS
<p><b>Option 2.1</b> <b>Do Nothing</b></p>	<p>This is <b>not recommended</b> as the Plan would continue to refer to a NZ Standard that is now considered inappropriate.</p>
<p><b>Option 2.2</b> <b>Amend Rule 5.1.3.7 to remove reference to NZS4203:1992 and replace with definitions of ‘light roof’ and ‘light wall cladding’</b></p>	<p>If NZS 4203 is removed from the Standard then a replacement provision is required. The purpose of including the standard was to place some control over the type of buildings that could be built as of right to help ensure the safety of occupants. A suitable replacement is to require buildings to have a light roof and light wall cladding.</p> <p>This is the most effective alternative to a direct reference to a Standard in the Plan. There are no standards for building across or near faults, but it is generally understood within the engineering profession that light wall cladding (eg. weatherboards) will suffer less damage (which will help to ensure the safety of people) following an earthquake. The definitions of ‘light roof’ and ‘light wall cladding’ come from NZS 3604:1999 (Timber Framed Buildings). It was not considered appropriate to refer to the entire standard therefore the relevant parts from the Standard have been put directly into the Plan.</p> <p><b>Recommended option.</b></p>
<p><b>Option 2.3</b> <b>Remove reference to NZS4203 and replace it with extensive list of building requirements</b></p>	<p>A range of things can be done in the construction process to develop safer and more durable homes when subject to fault rupture. This would include building materials (covered by Option 2.2 above), appropriate foundations (varies depending on the soil structure at the site), room size etc. As noted earlier, there are currently no engineering standards for building near faults. Developing an extensive list of building requirements is not considered justified given the small numbers of building consents that are processed that are permitted activities under the District Plan. Also, it would be <i>ultra vires</i> to include such a list as permitted activity conditions given the discretion involved in not approving a design. <b>Not recommended.</b></p>
<p><b>Option 2.4</b> <b>Increase permitted height limit to nine metres (maximum two storeys)</b></p>	<p>The main reason is that the fault hazard area traverses both the Inner Residential Area (10 metre height limit) and the Outer Residential Areas (8 metre height limit). On balance, it is not considered appropriate to use this opportunity of reviewing the hazard rules to address the tensions between the character and hazard safety objectives of the Council’s plan. Consequently, this option is <b>not recommended.</b></p>
<p><b>Option 2.5</b> <b>Amend Rule 5.1.3.1 to add in an exception so that only one residential unit is a permitted activity in the Hazard (Fault Line) Area</b></p>	<p>Building 2 or more residential units on one site is currently a discretionary activity in Thorndon (for character reasons) but assessed as a non-complying activity if located in the hazard area. In most Northland and Kelburn however, 2 units on one site is a permitted activity (in some areas it is controlled for design purposes). For hazard mitigation purposes there is no difference between these areas and Thorndon. Arguably the Council should have a similar degree of control over such developments in Northland and Kelburn to ensure safety is not compromised. A review of consents for new dwellings in Kelburn and Northland showed that the new units required resource consent on other grounds and were not permitted activities. <b>Recommended option.</b></p>

**Table 3: Options for the multi-unit provisions in the Plan**

OPTIONS	ANALYSIS
<p><b>Option 3.1</b> <b>Make no change to activity status of multi-unit developments</b></p>	<p>May continue to see varied interpretations of how the rule is to be applied leading to uncertainty for resource consent applicants. <b>Not recommended.</b></p>
<p><b>Option 3.2</b></p>	<p>This is the <b>recommended option</b> as it will help to provide more clarity and guidance to resource consent planners. However to achieve this, it is</p>

<p><b>Insert new rule with multi-unit developments being assessed as Discretionary (Unrestricted) Activities.</b></p>	<p>necessary to make the activity a Discretionary (Unrestricted) Activity rather than Non-complying so that appropriate assessment criteria can be used. The unrestricted status does mean that the Council may consider any relevant matters in processing the resource consent. There is a risk that applicants will believe this is a change of policy. This is not intended. There are few sites remaining where extensive multi-unit development can take place in the area.</p>
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**Table 4: Assessment criteria options**

OPTIONS	EXPLANATION	ANALYSIS
<p><b>Option 4.1</b> No Change</p>	<p>Retain existing assessment criteria</p>	<p>Resource consent planners will continue to limit their assessment to <i>the extent to which building height or construction type can be varied without jeopardising the safety of occupiers</i>. <b>Not recommended.</b></p>
<p><b>Option 4.2</b> Add additional assessment criteria to relevant rules</p>	<p>Proposed assessment criteria include:</p> <p><i>Whether the development site is located in the <b>fault rupture hazard area</b>, and the extent to which the siting and layout of the development will reduce the effects of fault rupture on the safety of occupiers and neighbours.</i></p> <p><i>The extent to which a geotechnical report and an engineering design report shows that the risk of building failure following a fault rupture can be reduced to minimise the effects of fault rupture on the safety of occupiers and neighbours.</i></p> <p>This also includes an additional provision in Chapter 3 of the Plan to specify the nature of information reports required.</p>	<p>This is the <b>recommend option</b> as planners will have more scope to determine the adverse effects to a specific site from a fault rupture hazard event by being able to consider geotechnical and engineering reports that the applicants may have included in the application. Also, resource consent planners will be able to make better informed decisions about the level of risk to a building built in the wider hazard area compared with the narrower fault rupture hazard zone. The cost of providing these reports will vary from site to site. Indicative costs mentioned range from \$500 (report limited to site visit and general observations) up to \$10,000 (for a significant development on a vacant site where drilling and trench investigations could be carried out). Engineering mitigation measures are estimated to cost \$2000 for additional bracing to a typical \$200000 home (1% of the cost of building the home).</p>

**Table 5: Changes in other chapters of the Plan**

Chapter requiring change	Change required	Explanation
<p>Suburban Centre</p>	<p>Insert a new rule in the Suburban Centre that matches the hazard rule for the Central Area.</p>	<p>There is currently no rule in the Suburban Centre chapter relating to buildings or structures (that are not critical facilities) built in the fault hazard zone. As it is now common for people to live and work in the Suburban Centre zone it is appropriate to include a rule for this area. A rule similar to that in the Central Area is recommended.</p> <p>The rule is limited to those buildings and structures over 30m<sup>2</sup> gross floor area. This is to avoid very small buildings and structures being triggered into the resource consent process as such structures are unlikely to have significant adverse effects in the event of a fault rupture.</p>

		As buildings start to get over 30m <sup>2</sup> they could be used for habitable purposes.
Central Area	Amend some aspects of Rule 13.3.5 to introduce some consistency with other hazard rules	<p>Change required to insert reference to geotechnical advice. This makes it consistent with one of the assessment criteria proposed for discretionary activities in the Residential Area.</p> <p>The rule is limited to those buildings and structures over 30m<sup>2</sup> gross floor area. This is to avoid very small buildings and structures being triggered into the resource consent process as such structures are unlikely to have significant adverse effects in the event of a fault rupture. As buildings start to get over 30m<sup>2</sup> they could be used for habitable purposes.</p>
Te Ara Haukawakawa Precinct	Amend some aspects of Rule 13.16.7 to introduce some consistency with other hazard rules	The fault rupture hazard rule in this precinct was intended to be a replica of the rule in the Central Area. It is timely to bring all rules into alignment now to ensure consistency across rules in the Suburban Centre and Central Area chapters. The rule is limited to those buildings and structures over 30m <sup>2</sup> gross floor area. This is to avoid very small buildings and structures being triggered into the resource consent process as such structures are unlikely to have significant adverse effects in the event of a fault rupture. As buildings start to get over 30m <sup>2</sup> they could be used for habitable purposes.
Open Space	Amend rule 17.3.2 to add an additional assessment criterion to the existing list of criteria.	The new fault rupture hazard lines now traverse through some sites zoned Open Space. While it is unlikely significant buildings will be built in these areas anyway, it is appropriate to draw the hazard to the attention of the public by inserting assessment criteria to this Discretionary (Unrestricted) Activity rule. As with the rules above, it was decided not to include a rule that would trigger buildings less than 30m <sup>2</sup> .
Conservation Area	Amend Rule 19.4.1 to add an additional assessment criterion to the existing list of criteria.	The fault hazard area continues to pass through Karori Sanctuary, which is zoned Conservation Area. There are some buildings built in the hazard area already. It is appropriate to draw the fault rupture hazard to the attention of the public by inserting assessment criteria to this Discretionary (Unrestricted) Activity rule.

*NB: consequential changes to the Rural Area fault hazard rules will be made as part of the forthcoming Rural Area proposed plan change.*

## 5. Recommended Proposed Plan Change

Each of the options outlined above has advantages and disadvantages. The recommended approach is to adopt the hazard zones recommended by GNS and to amend the rules in various places to allow for better information being used in the decision-making process and to guide the planners more in making their decisions.

- € Re-alignment of the hazard lines
  - § The hazard zones as identified by GNS in their report be shown as the revised hazard zones on the District Plan Planning Maps
- € Permitted activity conditions

- § Rule 5.1.3.7 should be amended to replace the reference to NZS 4203:1992 with a reference to light roof and light wall cladding. Definitions for these terms will be inserted into the Definitions section of the plan.
- § Amend rule 5.1.3.1 to reduce the number of permitted residential units on one site in the Hazard (Fault Line) Area to one unit.
- ∅ Multi-unit developments
  - § Insert a new rule for multi-unit developments in the Hazard (Fault Line) Area that is a Discretionary (Unrestricted) Activities.
- ∅ Additional assessment criteria
  - § Add two additional assessment criteria to rules 5.3.6 and proposed new rule 5.4.8. Add an additional provision in Chapter 3.2 (Information to be supplied with an Application for a Resource Consent) which further explains the scope for these geotechnical and engineering reports.
- ∅ Other changes
  - § Changes to Suburban Centre, Central Area, Te Ara Haukawakawa, Conservation Areas and Open Space chapters of the Plan.
  - § Amend the explanation of Policy 4.2.7.1 (and other relevant policies)
  - § Some changes required to the standards and terms for the multi-unit rules.

## 6.0 Conclusion

This Plan Change is proposed in order to update the alignment of the Wellington Fault on the planning maps. The rules that apply in that hazard area has also been reviewed and changes proposed to clarify the exiting provisions and to require that applicants provide better information about the hazard risks on site and engineering mitigation measures proposed as part of the resource consent's process.