

IN THE MATTER OF section 71 of the Canterbury Earthquake Recovery Act 2011 and the Canterbury Earthquake (Christchurch Replacement District Plan) Order 2014

AND

IN THE MATTER OF proposals notified for incorporation into a Christchurch Replacement District Plan

Date of hearing: 25 January 2016

Date of decision: 3 March 2016

Hearing Panel: Hon Sir John Hansen (Chair), Environment Judge John Hassan (Deputy Chair), Ms Sarah Dawson, Dr Philip Mitchell, Ms Jane Huria

DECISION 15

NATURAL HAZARDS (PART) — STAGE 1
Rehearing of Certification for Cliff Collapse Management Areas

Outcome: Proposal changed as per Schedule 1

COUNSEL APPEARANCES

Mr D Pedley

KI Commercial Limited

Mr J Winchester

Christchurch City Council

Mr D Randal

Crown

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INTRODUCTION

[1] KI Commercial Limited appealed a portion of our Natural Hazards Stage 1 chapter. In that decision, because of the uncertainty surrounding the Council's ability to timeously hear plan changes to remove hazard lines from the map in appropriate circumstances, we invited submissions relating to rock fall. That was because we had evidence before us that a certification process was possible.

[2] To further that process, we issued a memorandum seeking advice and, if necessary, further evidence from parties relating to a certification process for rock fall hazard areas. KI Commercial asked that in the event that the Panel decides to adopt such an approach for rock fall, that the same or similar approach be applied for cliff collapse management areas¹. This was outside of the scope of our Minute, which was solely focused on the issue of draft provisions for rock fall.²

[3] KI Commercial appealed, on a point of law, against our failure to consider certification for cliff hazard areas. Part of the appeal was based on the fact that we approved an agreement between the Council experts and some submitters to redraw or withdraw cliff hazard lines from their property.

[4] The High Court concluded there was an error of law in that, the Panel having approved those agreed outcomes, there was a possibility that there could be evidence to support a certification regime for cliff hazard areas.

[5] We include in this decision [1]–[54] of our Natural Hazards decision.

Changes to the existing district plan

[6] This makes no changes to the district plan.

¹ Memorandum of counsel on behalf of KI Commercial Limited in response to Minute of the Panel regarding rockfall certification, dated 24 June 2015

² Minute – Rockfall Certification – Natural Hazards Proposal, dated 18 June 2015

REASONS

[7] Following a pre-hearing meeting, directions were made for the filing of evidence in the usual manner. KI Commercial filed evidence, not previously available to the Panel, to support its contention that it was appropriate for a certification regime to extend to cliff hazard areas. Evidence expressing partial opposition was filed on behalf of the Christchurch City Council and the Crown. By the time of the hearing, there was a high degree of accord between the experts for all three parties regarding the potential application of a certification regime to areas at risk from cliff collapse.

[8] In the course of the hearing, various matters were raised and put to counsel for KI Commercial, who then filed a memorandum making a number of concessions. In particular, it was confirmed that the submitter no longer sought:

- (a) a certification regime in respect of land subject to Cliff Collapse Management Area ('CCMA') 1 overlay; or
- (b) the ability for certifiers to assess a variable (or reduced) occupancy rate when certifying land within CCMA2 areas.

[9] As a consequence, the expert witnesses were in complete accord. Having considered their evidence and the agreement they reached, we accept and concur in it.

[10] As a consequence of that, the parties filed an updated set of provisions that was agreed by them all.

[11] We have reviewed those provisions. We generally concur in them, except for the following matter.

[12] In Policy 5.2.4.2, the parties proposed the following changes to clause a.:

- a. Provide for site-specific assessment of risk from rockfall and/or cliff collapse, in Rockfall Management Area 1, Rockfall Management Area 2, and/or Cliff Collapse Management Area 2, **where appropriate** in accordance with the method and parameters described in Policy 5.2.4.1. (along with all relevant site-specific information) in order to allow for the issue of AIFR certificates.

[13] The insertion of the words “where appropriate”, which do not appear in Decision 6, change the meaning and intent of the policy. It could be interpreted to allow a discretion as to the method to be used for site specific assessment. We do not agree that this is appropriate given the evidence we have heard, and so amend the revised proposal from the parties by deleting the words “where appropriate”.

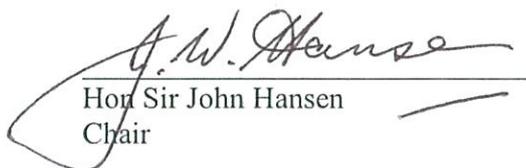
[14] The provisions, as amended, are the most appropriate for achieving the objectives of the plan. They are more effective and efficient than the drafting provided by the parties, as they provide certainty and clear guidance regarding decisions to be made on the matter of rock fall and cliff collapse.

[15] The amended provisions are set out in Schedule 1.

SECTION 32AA

[16] The accepted evidence satisfies us that the provisions accepted by the Panel properly accord with the requisite s 32 AA analysis, and all other relevant parts of the RMA.

For the Hearings Panel:



Hon Sir John Hansen
Chair



Environment Judge John Hassan
Deputy Chair



Ms Sarah Dawson
Panel Member



Dr Philip Mitchell
Panel Member



Ms Jane Huria
Panel Member

SCHEDULE 1

Changes that the decision makes to the Proposals

Change the provision text in Decision 6 Natural Hazards (Part) by amending the text as follows:

(...)

5.2.4.1 Policy – Slope instability

- a. Map areas of slope instability risk at an area-wide scale using the following fixed inputs into calculations³ that establish the Annual Individual Fatality Risk (AIFR) for a typical residential site:⁴
- b.

| Slope instability hazard management area | Inputs | | | Mapped risk (AIFR) |
|--|--|--|---|--------------------|
| | Percentage of a day the property is assumed to be occupied (%) | Year of predicted seismic activity used in modelling | Whether or not the property is evacuated immediately following a Natural Hazard Event | |
| Cliff Collapse Management Area 1 | 100 | 2012 | No | $\geq 10^{-2}$ |
| Cliff Collapse Management Area 2 | 100 | 2012 | No | $\geq 10^{-4}$ |
| Rockfall Management Area 1 | 67 | 2016 | Yes | $\geq 10^{-4}$ |
| Rockfall Management Area 2 | 100 | 2016 | No | $\geq 10^{-4}$ |
| Mass Movement Management Area 1 | 67 | 2016 | Yes | $\geq 10^{-4}$ |
| Mass Movement Management Area 2 & 3 | Refer to natural hazard maps | | | |

- e.b. In slope instability hazard management areas in the Port Hills and across Banks Peninsula:
- i. Avoid subdivision...
 - ii. Otherwise...

³ Using the method and parameters described in GNS Science Consultancy Report 2011/311 Canterbury Earthquakes Port Hills Slope Stability: Pilot study for assessing life-safety risk from rockfalls (boulder rolls); and GNS Science Consultancy Reports 2012/57 Canterbury Earthquakes Port Hills Slope Stability: Pilot study for assessing life-safety risk from cliff collapse and 2012/124 Port Hills Slope Stability: Life-safety risk from cliff collapse in the Port Hills, and any subsequent updates to ~~the~~ those reports by GNS Science. Calculations also include modelling and estimates such as probability of a rockfall/cliff collapse event, vulnerability, rockfall/debris volumes, and rockfall run-out. The mapping does not take into account of hazard mitigation works. Rocks can, and will, fall outside of the mapped hazard risk areas, however the risk of fatality is lower.

⁴ Except Mass Movement Management Areas 2&3 which are mapped based on potential effect on property, not Annual Individual Fatality Risk.

5.2.4.2 Policy – Site-specific risk assessment for AIFR Certificates in certain areas potentially affected by rockfall and/or cliff collapse

- a. Provide for site-specific assessment of risk from rockfall and/or cliff collapse, in Rockfall Management Area 1, Rockfall Management Area 2, and/or Cliff Collapse Management Area 2, where appropriate in accordance with the method and parameters described in Policy 5.2.4.1a. (along with all relevant site-specific information) in order to allow for the issue of ~~Rockfall~~ AIFR certificates.
- b. Make information from site-specific assessments of risk from rockfall and/or cliff collapse (which have been certified by the Council) readily publicly available.
- c. Regularly notify changes to the Plan, as required to change the planning maps, in order to reflect updated information from site-specific assessments of life-safety risk from rockfall and/or cliff collapse which have been certified by the Council.

(...)

5.5.1.1 Activity status for Slope Instability Management Areas excluding land within the Specified Purpose (Lyttelton Port) Zone

Table 5.5.1.1a

| Activity | Cliff Collapse Mgmt Area 1 | Cliff Collapse Mgmt Area 2. <u>For exceptions, refer to Rule 5.5.1.2</u> | Rockfall Mgmt Area 1. For exceptions, refer to Rule 5.5.1.2 | Rockfall Mgmt Area 2. For exceptions, refer to Rule 5.5.1.2 | Mass Mvmt Area 1 | Mass Mvmt Areas 2 & 3 | Remainder of Port Hills and Banks Peninsula Slope Instability Mgmt Area |
|----------|----------------------------|--|---|---|------------------|-----------------------|---|
| | | | | | | | |

5.5.1.2 Exceptions to Rule 5.5.1.1 – ~~Rockfall~~ AIFR Certificate

- a. The Council will issue an ~~Rockfall~~ AIFR Certificate (which will be valid for 2 years from the date of issue) which specifies the calculated AIFR from i. and ii. below for an identified area of land in Rockfall Management Area 1, Rockfall Management Area 2 and/or Cliff Collapse Management Area 2 only, when the following procedure is undertaken and the requirements of the procedure are satisfied:
 - i. The Council has received a report, in respect of an identified area of land, prepared by a Chartered Professional Engineer with requisite experience in geotechnical engineering or a Professional Engineering Geologist (IPENZ registered), which calculates the AIFR from rockfall and/or cliff collapse for the identified land in the following manner:

If the land is in **Rockfall Management Area 1:**

1. Apply the method for assessing the risk as set out in the *GNS Science Consultancy Report 2011/311 Port Hills Slope Stability: Pilot Study for assessing life-safety risk from rockfalls (boulder rolls)*, and any subsequent updates to this report by GNS

Science, using the parameters listed in the Table in Policy 5.2.4.1. for Rockfall Management Area 1 along with any relevant site-specific information, and other parameters in the GNS Science report (calculation 1(a)).

2. If the risk (AIFR) resulting from calculation 1(a) is less than that shown in the Table in Policy 5.2.4.1 for Rockfall Management Area 1 ($\geq 10^{-4}$), then using the same method set out in the *GNS Science Consultancy Report 2011/311 Port Hills Slope Stability: Pilot Study for assessing life-safety risk from rockfalls (boulder rolls)*, and any subsequent updates to this report by GNS Science, calculate the AIFR using the parameters listed in the Table in Policy 5.2.4.1 for Rockfall Management Area 2 along with all relevant site-specific information, and other parameters listed in the GNS Science report (calculation 1(b)).

If the land is in **Rockfall Management Area 2:**

3. Apply the method for assessing the risk as set out in the GNS Science Consultancy Report 2011/311 Port Hills Slope Stability: Pilot Study for assessing life-safety risk from rockfalls (boulder rolls), and any subsequent updates to this report by GNS Science, using the parameters listed in the Table in Policy 5.2.4.1 for Rockfall Management Area 2 along with all relevant site-specific information, and other parameters in the GNS Science report (calculation 2(a)).

If the land is in **Cliff Collapse Management Area 2:**

4. Apply the method for assessing the risk as set out in the GNS Science Consultancy Reports 2012/57 Port Hills Slope Stability: Pilot Study for assessing life-safety risk from cliff collapse and 2012/124 Port Hills Slope Stability: Life-safety risk from cliff collapse in the Port Hills, and any subsequent updates to those reports by GNS Science, using the parameters listed in the Table in Policy 5.2.4.1. for Cliff Collapse Management Area 2 along with all relevant site-specific information, and other parameters in the GNS Science Consultancy Reports (calculation 3(a)).

AND

- ii. The Council has commissioned and received a peer review report from a Chartered Professional Engineer with requisite experience in geotechnical engineering or a Professional Engineering Geologist (IPENZ registered)***, which concurs with the application of the method required in i. above, and with the calculated AIFR(s) for the identified land.

***The peer reviewer must not, at the time of undertaking the review, be employed by either: a) the same company as the company that authored the report received in i. above, or b) the Council.

- b. Where a valid ~~Rockfall~~ AIFR Certificate has been issued by the Council for an identified area of land, in accordance with the procedure described in Rule 5.5.1.2a. above, the activity status (for activities listed in Table 5.5.1.1a) that applies to that land shall be that which applies to the Slope Instability Management Area specified in Table 5.5.1.2a. below. An ~~Rockfall~~ AIFR Certificate is valid for 2 years from the date of issue. If the activity is commenced (in the case of a permitted activity) or a resource consent application is lodged within 2 years from the date of issue of the ~~Rockfall~~ AIFR Certificate, no further Certificate is required after the 2 year term expires.

Table 5.5.1.2a

| Slope instability hazard management area applying to the land on the planning maps | AIFR as specified in the site-specific Rockfall AIFR Certificate | Slope Instability Management Area for the purpose of determining activity status for activities on the land (Table 5.5.1.1a) |
|--|---|--|
| Rockfall Management Area 1 | <u>Result of Calculation 1(a)</u> | $\geq 10^{-4}$ Rockfall Management Area 1 |
| | <u>Result of Calculation 1(b) where required</u> | $\geq 10^{-4}$ Rockfall Management Area 2 |
| | | $< 10^{-4}$ Remainder of Port Hills and Banks Peninsula |
| Rockfall Management Area 2 | <u>Result of Calculation 2(a)</u> | $\geq 10^{-4}$ Rockfall Management Area 2 |
| | | $< 10^{-4}$ Remainder of Port Hills and Banks Peninsula |
| <u>Cliff Collapse Management Area 2</u> | <u>Result of calculation 3(a)</u> | $\geq 10^{-4}$ <u>Cliff Collapse Management Area 2</u> |
| | | $< 10^{-4}$ <u>Remainder of Port Hills and Banks Peninsula</u> |

Notes:

1. Calculated AIFRs specified in issued, valid ~~Rockfall~~ AIFR Certificates for identified areas of land, and valid certificates themselves, will be made freely available to the public, recorded in the Council's Geographical Information System and provided in Land Information Memoranda.
2. Changes to the District Plan will be regularly notified, as required to change the planning maps, in order to reflect updated information regarding life-safety risk from rockfall and/or cliff collapse from issued ~~Rockfall~~ AIFR Certificate