

**UNDER**

The Resource Management Act 1991

**IN THE MATTER**

of the Proposed Otago Regional Policy Statement  
2021

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**STATEMENT OF EVIDENCE OF SCOTT DAVID KELLY**

Dated 3 October 2022

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## STATEMENT OF EVIDENCE OF SCOTT DAVID KELLY

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### Qualifications and Experience

- 1 My full name is Scott David Kelly.
- 2 My qualifications comprise:
  - 2.1 A Master of Science in Hazard and Disaster Management (Hons) from the University of Canterbury, conferred in 2015.
  - 2.2 A Bachelor of Science in Geology, endorsed in Environmental Science, from the University of Canterbury, conferred in 2012.
- 3 I currently hold the position of Natural Hazards Planner at the Institute of Geological and Nuclear Sciences Limited (GNS Science). I am also the Acting Planning and Risk Management Team Leader. I have worked at GNS Science since 2019 and worked across resource management consultancy and research since 2015.
- 4 My previous work experience comprises Consultant roles at planning consultancies Mitchell Daysh Limited and Mitchell Partnerships Limited. My work at these consultancies included the preparation of due diligence and compliance reports, preparation of environmental effects assessments and review of technical reports, submissions on proposed plan changes, drafting of consent conditions and planning evidence, and providing strategic planning advice to a wide range of private sector clients.
- 5 During my time at GNS Science, I have been involved, or am involved, in the following relevant projects:
  - 5.1 A stocktake of risk tolerance frameworks for the Ministry for the Environment. This included international and domestic examples and those prepared under the Resource Management Act 1991.
  - 5.2 A review of the Southland local authorities' planning documents' natural hazards chapters, assessment against current best practise, and recommendations for improvements.

- 5.3 A report on mapping natural hazard and risk for land-use planning in district plans, which covers mapping history and practise in New Zealand's planning frameworks, international practise, mapping uncertainty, 'overlapping' hazards and the connection between maps and planning provisions.
  - 5.4 A journal article on New Zealand's progress toward implementing the Sendai Framework, the Paris Agreement and the Sustainable Development Goals in New Zealand legislation, including the Resource Management Act 1991, and practice.
  - 5.5 Several 'science to practice' workshops/seminars, presenting on risk, risk-based planning and the use of natural hazard science in planning documents.
  - 5.6 Provided advice to Taupō District and Manawatū District Councils on incorporating active-fault information within their District Plan documents.
  - 5.7 I am currently co-authoring an update of the 'Guidelines for assessing planning policy and consent requirements for landslide-prone land'<sup>1</sup>. These guidelines take a risk-based planning approach and will consider qualitative and quantitative risk assessments.
- 6 I am an Associate Member of the New Zealand Planning Institute and a Member of the Resource Management Law Association.

### **Code of Conduct**

- 7 I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2014. I have complied with the code in preparing my evidence. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

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<sup>1</sup> Saunders, W, & P. Glassey (Compilers) 2007. Guidelines for assessing planning, policy and consent requirements for landslide-prone land, GNS Science Miscellaneous Series 7.

## Scope of Evidence

- 8 This statement of evidence sets out:
- 8.1 The reports that I prepared for Otago Regional Council (ORC) and advice that I provided to ORC during the preparation of the pRPS; and
  - 8.2 Advice I provided ORC on APP6 – Methodology for natural hazard risk assessment following submissions.

## Reports and Advice

- 9 I prepared two reports entitled:
- 9.1 'Draft 2021 Otago Regional Policy Statement Natural Hazards Chapter Review', GNS Science Consultancy Report 2021/38 May 2021 (Kelly et al., 2021).
  - 9.2 'Proposed Otago Regional Policy Statement – Submissions on the Natural Hazard Topic Chapter' dated 17 March 2022 (Kelly, 2022).
- 10 Kelly et al. (2021) was co-authored with Dr Wendy Saunders<sup>2</sup>, Richard Woods<sup>3</sup> and Phil Glassey<sup>4</sup>. Dr Saunders provided assistance in reviewing the Draft 2021 Otago Regional Policy Statement (dORPS) and the advice provided to ORC. Mr Woods and Mr Glassey provided context around the 'hazardscape' of the Otago region, the challenges that the region faces in this regard and context on past and present hazard management practise within the region.
- 11 During the review process of the dORPS for Kelly et al. (2021), a quantitative risk-assessment step (Step 4 within APP6 – Methodology for natural hazard risk assessment of the Proposed Otago Regional Policy Statement 2021 (pORPS)) was developed. I co-developed this step with Dr Nick Horspool<sup>5</sup> and Dr Christina Magill<sup>6</sup> and provided it to Andrew Maclennan for inclusion within the dORPS.

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<sup>2</sup> Formerly Senior Natural Hazards & Climate Change Adaptation Planner, GNS Science, and currently Principal Advisor: Risk Reduction & Resilience, and Champion of Land Use Planning, Toka Tū Ake EQC.

<sup>3</sup> Formerly Senior Natural Hazard Risk Management Specialist, GNS Science, and currently Senior Advisor Risk Reduction and Resilience, Toka Tū Ake EQC.

<sup>4</sup> Senior Disaster Risk Reduction Scientist, GNS Science.

<sup>5</sup> Senior Risk Specialist, GNS Scientist.

<sup>6</sup> Senior Natural Hazards Risk Modeller, GNS Science.

## Advice on APP6 – Methodology for natural hazard risk assessment

- 12 In response to submitters' points and following pre-hearing discussions, I was requested to provide advice on:
- 12.1 The trigger for a quantitative assessment (Step 4 of APP6 – Methodology for natural hazard risk assessment), which was sought in response to the submission from ORC.
- 12.2 Changes to the consequence table (Table 7 at Step 2 of APP6 – Methodology for natural hazard risk assessment) to remedy drafting inconsistencies within the 'building' column of Table 7 (identified by Mr Maclennan) and change 'hazard zone' to 'impact area' in response to Queenstown Lakes District Council's (QLDC) submission.

### Trigger for a quantitative assessment

- 13 Kelly et al. (2021) recommended that the trigger for a quantitative risk assessment be where the qualitative risk assessment found that two out of three natural hazard scenarios resulted in risk that was tolerable or significant. The pORPS does not adopt this recommendation. The trigger in the pOPRS for a quantitative risk assessment is where *“one of the three natural hazard scenarios generate risk that is significant”*.
- 14 ORC's submission sought that *“if the assessment undertaken in Steps 1–3 determines that one of the three natural hazard scenarios generate risk that is significant, or if a consequence is catastrophic or major, undertake a quantitative risk assessment utilising the following methodology”*.
- 15 The quantitative risk assessment trigger sought by ORC provides a middle ground to that recommended in Kelly et al. (2021) and that within the pORPS. However, it should be noted that ORC's proposal is not entirely based on risk and, in the additions sought by ORC, would be based solely on consequence.
- 16 The pORPS risk table reflects existing practise and published public engagement on acceptable risk (Kilvington and Saunders, 2015)<sup>7</sup>. It should also be recognised that this table is intended to be an interim table ahead of local authorities undertaking a consultation process with communities, stakeholders and partners regarding risk level thresholds and developing a risk table at a district or

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<sup>7</sup> Kilvington, M.; Saunders, W.S.A. 2015. “I can live with this”. The Bay of Plenty Regional Council public engagement on acceptable risk, GNS Science Miscellaneous Series 86. 71 p.

community scale in accordance with HAZ-NH-M2(1). Therefore, the event triggering a requirement for a quantitative risk assessment could change should a consultation process result in different thresholds for significant risk.

Consequence table

- 17 I support the removal of “affected” in the description of ‘catastrophic’ and ‘insignificant’ consequence in the buildings’ column, and the change from “hazard zone” to “impact area” throughout the consequence table.
- 18 The removal of “affected” in the description of ‘catastrophic’ and ‘insignificant’ consequence in the buildings’ column fixes a drafting error within the pORPS version of Table 7 and aligns these consequence descriptions with others within the table.
- 19 Regarding the change from “hazard zone” to “impact area” throughout the consequence table, QLDC’s submission states *“Zone is a planning term, but it is not clear that it is used in its planning context in Table 7”*. I consider that the term “hazard zone” could lead to misunderstanding in relation to other zones within a plan. The term “hazard zone” implies that there is a fixed zone that the hazard occurs in, which is incorrect. When considering a natural hazard, “impact area” is a more appropriate term, as this more accurately reflects that different hazard magnitudes or scenarios will have different impact areas.

*Skelly.*

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SCOTT DAVID KELLY

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3 October 2022