

**BEFORE THE HEARINGS PANEL  
FOR THE PROPOSED QUEENSTOWN LAKES DISTRICT PLAN**

**IN THE MATTER** of the Resource  
Management Act 1991

**AND**

**IN THE MATTER** of Stage 3b of the  
Proposed District Plan  
submission related to  
notified Walter Peak  
Rural Visitor Zone

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**STATEMENT OF EVIDENCE OF ROBERT BOND  
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

**GEOTECHNICAL ENGINEERING – WAYFARE GROUP LIMITED REZONING**

**4 March 2021**

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## 1. INTRODUCTION

- 1.1 My full name is Robert Bond. I hold the qualification of Bachelor of Engineering in Industrial Geology. I am a registered and Chartered Engineer with Engineering New Zealand (formerly IPENZ) with specialist areas in geotechnical engineering and management and I have been employed as a Principal Engineer and Work Group Manager at WSP New Zealand (formerly Opus Consultants) since 1998.
- 1.2 I have worked in New Zealand for over 10 years, my recent experience in terms of natural hazard risk assessment and rockfall management includes providing site response to debris flow, rockfall events and completing natural hazard assessments on behalf of Christchurch City Council following the Christchurch Earthquake and providing, and leading, the Geotechnical response to NZ Transport Agency (**NZTA**) following the Kaikōura earthquake prior to the establishment of the North Canterbury Transport and Infrastructure Recovery (**NCTIR**).
- 1.3 I currently manage the Geotechnical team responsible for the data collection and management of natural hazard risks in Central Otago for the NZTA State Highway network and Queenstown Lakes District Council (**QLDC** or **Council**) local roading network. I have advised other councils and regulatory authorities on natural hazard risk and in determining suitable forms of mitigation, as geotechnical expert on natural hazard assessments for residential, commercial and infrastructure schemes. I have more recently provided expert evidence on behalf of QLDC, on the natural hazard aspects of Stage 3 rezonings allocated to Hearing Streams 17 and 18.
- 1.4 Although this is a Council hearing, I confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2014 and that I agree to comply with it. I confirm that I have considered all the material facts that I am aware of that might alter or detract from the opinions that I express, and that this evidence is within my area of expertise, except where I state that I am relying on the evidence of another person.

## 2. SCOPE

- 2.1 I have been asked to provide evidence in relation to a submission by Wayfare Group Limited, seeking site specific re-zoning of the Walter Peak site from Rural Visitor Zone (**RVZ**) to Walter Peak Tourism Zone (**Tourism Zone**). My evidence focuses on geotechnical and natural hazard issues only.
- 2.2 I have not completed a site walkover as part of my assessment. In assessing the geotechnical / natural hazard risks at the site, I have reviewed the QLDC and Otago Regional Council available data relating to natural hazards, including technical reports from recent resource consents, as well as WSP's (formerly Opus) available data. I have also considered the Natural Hazards Chapter (Chapter 28) of the Queenstown Lakes Proposed District Plan (**PDP**).
- 2.3 I have been advised that the proposed Tourism Zone provides a controlled activity consent route for buildings and that Council would not be able to decline the application based on risks posed by natural hazards. I have therefore taken this into consideration in assessing the site and whether or not the Tourism Zone is appropriate from a natural hazards perspective.

## 3. EXECUTIVE SUMMARY

- 3.1 I **oppose** the rezoning request because the submitter has not provided any technical assessment of geotechnical matters for the site and on the basis I have assessed the qualitative level of risk posed to the site from natural hazards as Moderate to High.

## 4. WALTER PEAK REZONING

- 4.1 The submitter has sought that the Walter Peak site be rezoned from RVZ to Tourism Zone, and that this zone be extended to include the Beach Bay Reserve to the immediate north-east of the existing notified RVZ area.

- 4.2** The submitter has provided a Tourism Zone layout plan identifying the extent of a proposed Building Restriction Area (**BRA**), a Homestead Area and the Walter Peak Transport Overlay. No supporting information as to the justification for the extent of the BRA has been supplied. It is therefore assumed, however this will need to be confirmed by the submitter, that the BRA boundary is based on existing property boundaries or existing site boundary conditions rather than the extent of natural hazard risk or topographical features.
- 4.3** In consideration of the PDP Chapter 28 Natural Hazards, the submission notes that natural hazards affect part of the site. A controlled activity status for all new buildings located on that part of the site identified (in the Otago Regional Council (**ORC**) database) as being subject to a natural hazard risk, is considered appropriate by the submitter.
- 4.4** The submitter considers that a discretionary regime is not required to implement the objectives and policies set out in Chapter 28, given their opinion that there is a “thorough understanding” and “tolerable level” of natural hazard risks at the site (refer the s32AA provided by the submitter). As set out above, no assessment of that understanding or tolerable level has been provided by the submitter.
- 4.5** My assessment of the site has identified various sources of information in relation to natural hazard risk. The site has previously been subject to multiple assessments – these have all concluded that the site is at Moderate to High risk from debris flow hazards and Low to Moderate risk of liquefaction. Alluvial fan hazards (debris flow) are considered to pose the highest risk to the site.
- 4.6** Mitigation and management of debris flows at the site has previously been undertaken with the development of earth bunds to control and direct any debris flows from identified stream lines. Minimum floor levels have also previously been imposed (through a consent application for development of accommodation units) for specific areas of the site in order to mitigate debris flow flooding and to safeguard development of worker and visitor accommodation units.

- 4.7** My review of the natural hazard condition of the site and assessment of the submission site zones is that the site is more likely than not affected by natural hazards associated with active alluvial fans and known debris flow channels (stream lines).
- 4.8** As part of my assessment I have completed a qualitative risk assessment in terms of risks posed to property in general accordance with the methodology proposed in the Practice Note Guidelines for Landslide Management, (Australian geomechanics Volume 42 March 2007) with consideration of the hazard type being debris flow.
- 4.9** The preliminary qualitative risk assessment considers the risk posed to property from the identified hazards to be Moderate to High. The risk is therefore considered to be unacceptable without treatment to reduce the risks to Low. I accept that considerable work has been undertaken by the submitter to understand the nature of the hazards on the site, however the extent of the potential hazard impacts have not been sufficiently mapped to determine the extent of a BRA as an appropriate mechanism to manage natural hazard risk.
- 4.10** I am of the view that the BRA is an appropriate form of mitigation to manage the risk posed by debris flow. However it would appear that the extent of the BRA area has been defined by existing land parcels and existing boundary lines rather than the potential extent of debris flow channels, flood areas or presence of existing mitigation measures (flow bunds) located on the site area.

**4.11** It is my opinion that the identification of a high level of risk requires further investigation to adequately determine the extent of risk posed to the site and the BRA area and boundary. In my view, the BRA boundary should be aligned with mapped extents of natural hazard risk. I recommend a detailed geotechnical assessment be completed by the submitter prior to acceptance of any rezoning to identify the extent of hazard impacts and amend the boundary of the BRA to suit. Until such time as that assessment has been undertaken and I have the opportunity to consider the findings, I **oppose** the rezoning request.



**Robert Bond**  
**4 March 2021**