

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

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

**AND**

**IN THE MATTER** of the Resumed  
Hearing Stream 14

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**REBUTTAL EVIDENCE OF STEPHEN GORDON CHILES  
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

**NOISE: CHAPTER 24 WAKATIPU BASIN VARIATION ON TABLE 24.2**

**4 February 2019**

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## CONTENTS

1. INTRODUCTION.....	1
2. SCOPE.....	2
3. GEORGE VAN HOUT .....	2
4. ROBIN VANCE BOYD .....	3

## 1. INTRODUCTION

- 1.1 My name is Dr Stephen Gordon Chiles. I am an acoustics engineer and independent commissioner, self-employed by my company Chiles Limited since 2012.
- 1.2 I have a Doctorate of Philosophy in Acoustics from the University of Bath, and a Bachelor of Engineering in Electroacoustics from the University of Salford, UK. I am a Chartered Professional Engineer, Fellow of the UK Institute of Acoustics and Member of the Resource Management Law Association.
- 1.3 I have been practising in acoustics since 1996, as a research officer at the University of Bath, as an acoustics specialist at the NZ Transport Agency, and as a consultant for the international firms Arup, WSP, and URS and for the specialist firms Marshall Day Acoustics and Fleming & Barron. I have been responsible for acoustics assessments and design for numerous different activities including infrastructure, industrial, commercial, recreational and residential developments. I am contracted to provide the Environmental Noise Analysis and Advice Service to the Ministry of Health and regional public health services.
- 1.4 I have worked extensively on acoustics issues in the Queenstown Lakes District (**District**) over many years. This has included providing advice to the Queenstown Lakes District Council (**QLDC**) relating to noise effects from numerous helicopter landing areas.
- 1.5 This is the first statement of evidence I have prepared on behalf of QLDC for Stage 2 of the Proposed District Plan (**PDP**). I previously prepared six statements of evidence on behalf of QLDC in relation to different chapters in Stage 1 of the PDP. That included evidence in relation to informal airports in Rural Zones, dated 6 April 2016.<sup>1</sup>
- 1.6 I have now been engaged by the QLDC to prepare rebuttal evidence in response to evidence provided by the Aircraft Owners and Pilots

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1 <http://www.qldc.govt.nz/assets/Uploads/Planning/District-Plan/Hearings-Page/Hearing-Stream-2/Section-42-A-Reports/Expert-Evidence/QLDC-02-Rural-Stephen-Chiles-Evidence.pdf>

Association (**AOPA**), relating to informal airports in the Wakatipu Basin.

**1.7** 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** My rebuttal evidence is provided in response to the following letter and statement filed on behalf of AOPA (submitter #2663):

- (a) Letter by George van Hout dated 28 January 2019; and
- (b) Further submission by Robin Vance Boyd on behalf of AOPA dated 28 January 2019.

## **3. GEORGE VAN HOUT**

**3.1** Mr van Hout's letter is primarily a review of earlier advice I provided to QLDC in my letter dated 13 September 2012. From his letter I understand that Mr Van Hout has not raised any areas of disagreement on technical matters. Likewise, I generally agree with the commentary set out by Mr van Hout in his letter.

**3.2** I agree with Mr van Hout that when considering average sound levels, the 500 metre separation distance specified in Rule 24.5.14.b of the notified PDP is a cautious and stringent control for typical helicopters when coupled with the additional limitation in Rule 24.5.14.a of 2 flights per day. I also agree with Mr van Hout that insufficient information has been analysed to allow optimisation of this distance to reduce the conservatism so it is less cautious, but still result in compliance with the noise limit in Rule 36.5.10 of the PDP decisions version.

**3.3** Mr van Hout's letter is focussed on average sound levels. For helicopter landing areas with two flights a day the sound level of an individual helicopter movement is also relevant for noise effects. The PDP does not include a noise limit for individual aircraft movements, but the 500 metre distance provides a proxy control that limits sound from individual movements at affected houses. While this is again conservative, insufficient information has been analysed to optimise this distance.

#### **4. ROBIN VANCE BOYD**

**4.1** Mr Boyd refers to resource consent applications being granted for helicopter landing areas much closer than 500 metres to nearby houses. I agree and am aware of various examples in the District where this is the case. In the situations that I can recall, flight paths have not passed over nearby houses.

**4.2** With respect to my 2012 letter, Mr Boyd discusses relationships between average sound levels, distances and numbers of flights. I agree that in terms of average sound levels, if there are fewer flights then generally separation distances can be reduced.

**4.3** Mr Boyd proposes alternative controls that would include fewer flights and a lesser separation distance. As set out in my 2012 letter, there is not a simple standard or formula that is appropriate to calculate values for these parameters. While I consider the parameters in rule 24.5.14 as notified to be appropriate for controlling noise effects, I agree with Mr Boyd that an alternative formulation could also control noise effects for some types of informal airport.

**4.4** I agree with Mr Boyd that if alternative controls were applied to typical helicopters only and not fixed wing aircraft, with no more than 1 flight per day and say 3 flights per week, then the separation distance could be reduced.

- 4.5 Any reduction in separation distance would need to be accompanied by a limitation on helicopter types. The nature of such a limitation would require further consideration.
- 4.6 Assuming it is practical to limit helicopter types then with the restricted movement numbers set out above it may be appropriate to reduce the separation distance to in the order of 150 metres as suggested by Mr Boyd. However, in this instance I would recommend maintaining a 500 metre separation distance in the direction(s) of the flight paths in lieu of any other control on sound from individual movements. Defining the direction of flight paths would require further consideration.
- 4.7 For individual resource consents previously granted in the District it is common for the above parameters to be subject to conditions and monitoring controls. For example, in the resource consent decision attached to Mr Boyd's evidence (RM180396) there are conditions defining the flight path, limiting the helicopter type, requiring a flight log and GPS records. I would recommend similar controls be added to Rule 24.5.14 if separation distances are reduced.



**Dr Stephen Gordon Chiles**  
**4 February 2019**