

**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 Stage 3 of the
Proposed District Plan

**REBUTTAL EVIDENCE OF GABRIELA GLORY
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

**PLANNING: VARIATION TO GLARE PROVISIONS LOCATED IN CHAPTERS 7, 8, 9,
12, 13, 14, 15 AND 16**

12 June 2020

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1. INTRODUCTION

1.1 My full name is Gabriela Glory. My qualifications and experience are set out in my statement of evidence in chief dated 18 March 2020.

1.2 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. The Council, as my employer, has agreed for me to give expert evidence on its behalf in accordance with my duties under the Code of Conduct.

2. SCOPE

2.1 My rebuttal evidence is provided in response to the evidence filed on behalf of the following submitter:

(a) Melissa Brook for Queenstown Airport Corporation (**QAC**) (3316).

2.2 Whilst civil aviation is not my expertise, I have looked into the Civil Aviation Authority standards to accompany this rebuttal. I have also considered the approach that the Auckland International Airport has taken in its Designation (located in the Auckland Unitary Plan, Chapter K Designations Auckland International Airport Ltd)¹, and the existing designation held by the Queenstown Airport Corporation (which is found in Chapter 37 of the PDP):

(a) Airport Approach and Land Use Controls, for Approach and Land Use Control (transitional slopes and surfaces), applying to the 'Queenstown Airport and the surrounding airspace', with legal descriptions and conditions in D3.

1 <https://unitaryplan.aucklandcouncil.govt.nz/Images/Auckland%20Unitary%20Plan%20Operative/Chapter%20K%20Designations/Auckland%20International%20Airport%20Ltd.pdf>

2.3 I have attached to this evidence the following:

- (a) **Appendix 1:** Auckland Airport Designation: Part 3 Requirements for Non-Aeronautical Ground Lights Adjacent to Extended Runway Centre Lines;
- (b) **Appendix 2:** Auckland Airport Designation: Figure 1B: Specification for Obstacle Limitation Surfaces;
- (c) **Appendix 3:** Auckland Airport Designation: Figure 4: Requirement for Non-Aeronautical Ground Lights; and
- (d) **Appendix 4:** Queenstown Airport Designation: Figure 2: Queenstown Airport Protection Inner Horizontal and Conical Surfaces.

3. MELISSA BROOK FOR QAC (3316)

3.1 Ms Brook has filed evidence in relation to the effects of glare on aircraft operations, in relation to the Queenstown Airport. I accept paragraphs 2.9, 2.11 and 3.2 of Ms Brook's evidence that inappropriate lighting can affect the safety of aircraft operation.

3.2 Having read Ms Brook's evidence, and doing further research on the Auckland International Airport designation and the Civil Aviation Authority standards ('**CAA AC 139-6**'), I agree that there is potential to manage glare on the safety of aircraft operations through the PDP.

3.3 The Auckland International Airport Ltd Designation, Part 3, contains requirements, which prohibit light for non-aeronautical ground lights². It specifically references the requirements found under CAA AC 139-6 standard 5.3.1³:

Lights which may endanger the safety of aircraft

5.3.1 *A non-aeronautical ground light near an aerodrome which may endanger the safety of aircraft should be extinguished, screened or otherwise modified so as to eliminate the source of danger.*

2 Appendix One: Part 3 Requirements for Non-Aeronautical Ground Lights Adjacent to Extended Runway Centre Lines

3 Civil Aviation Authorities Standards AC139-6 –Aerodrome Design Requirements 5.3.1
<https://www.aviation.govt.nz/rules/advisory-circulars/show/AC139-6>

- 3.4** The Auckland International Airport Designation contains two separate figures to manage obstacles,⁴ and to manage light,⁵ The Designation also specifies the measurements and the overall shape of the non-aeronautical lights restriction within Part 3 Section 2: Specification (shown in **Appendix 1** of this rebuttal).
- 3.5** Ms Brook suggested that the inner horizontal surface defined in the Queenstown Airport Designation: Figure 2⁶ is the most appropriate figure to manage the effects of glare. However, the purpose of the inner horizontal surface (as set out in the Designation) is to prohibit new objects or extensions of objects that penetrate the inner horizontal surface area.⁷ Based on this, I disagree with the figure identified by Ms Brooks suggested in paragraph 3.4, as being an appropriate area of land to address the glare issue.
- 3.6** Whilst I have no evidence or experience to dispute this point with Ms Brook, I note that the suggested area in Figure 2 is relevant to managing physical obstacles. I am not currently clear from the evidence provided by QAC about the extent of the potential for ground lights in within close proximity of aerodrome to endanger the safety of aircraft operations.
- 3.7** I also consider there are plan drafting (and potentially *vires*) issues, in referring to a designation diagram, in a plan rule. This raises potential issues if the Designation was ever to be changed under Section 181 of the RMA. In other words, any change to Figure 2 of the Designation though an alternation to the designation, could (by stealth) result in a change in regulatory effect of any PDP rules, that rely on that Figure.
- 3.8** I do not consider the evidence makes an adequate case for land use rules across a large part of Frankton being needed or appropriate in terms of the existing and proposed framework of objectives and policies for the affected zones.

4 Appendix Two: Figure 1B: Specification for Obstacle Limitation Surfaces

5 Appendix Three: Figure 4: Requirement for Non-Aeronautical Ground Lights

6 Appendix Four: PDP Decisions Map Figure 2: Queenstown Airport Protection Inner Horizontal and Conical Surfaces

7 D.3 Airport Approach and Land Use Controls: Inner Horizontal Surface

<https://www.qldc.govt.nz/media/tipfwsbx/pdp-decisions-chapter-37-designations-may-2020.pdf>

3.9 It would appear that the Designation route is more appropriate, although there would need to be analysis and further information by QAC, which determines the areas in which potential hazard to aircraft operations could arise in relation to lighting. A change to a designation would also need to happen outside this plan review process.

3.10 I note that the civil aviation authority regulations allow for the issue to be addressed. Based on the information to hand I don't support the relief sought.



Gabriela Glory

12 June 2020

APPENDIX ONE: Auckland Unitary Plan Chapter K Designations Part 3: Requirements for Non-Aeronautical Ground Lights Adjacent to Extended Runway Centre Lines

Part 3: Requirements for Non-Aeronautical Ground Lights Adjacent to Extended Runway Centre Lines

1. Overview

CAA Advisory Circular AC 139-6 requires that any non-aeronautical ground light which, by reason of its intensity, configuration or colour, might cause confusion or prevent the clear interpretation of aeronautical ground lights, should be extinguished, screened or otherwise modified so as to eliminate such a possibility.

2. Specification

The requirement applies over a rectangular area, 1500 metres wide, extending equidistant either side of the extended runway centreline for a distance of 4440 metres from the end of the runway strip (as defined in the Specification for Obstacle Limitation Surfaces) for both the Existing and Northern Runways. These areas are shown in Figure 4 to this designation.

3. Restrictions

Auckland International Airport Ltd requires that any light in the above area be prohibited from shining above the horizontal.

Attachments

APPENDIX TWO: Auckland Unitary Plan Chapter K Designations Figure 1A: Specification for Obstacle Limitation Surfaces

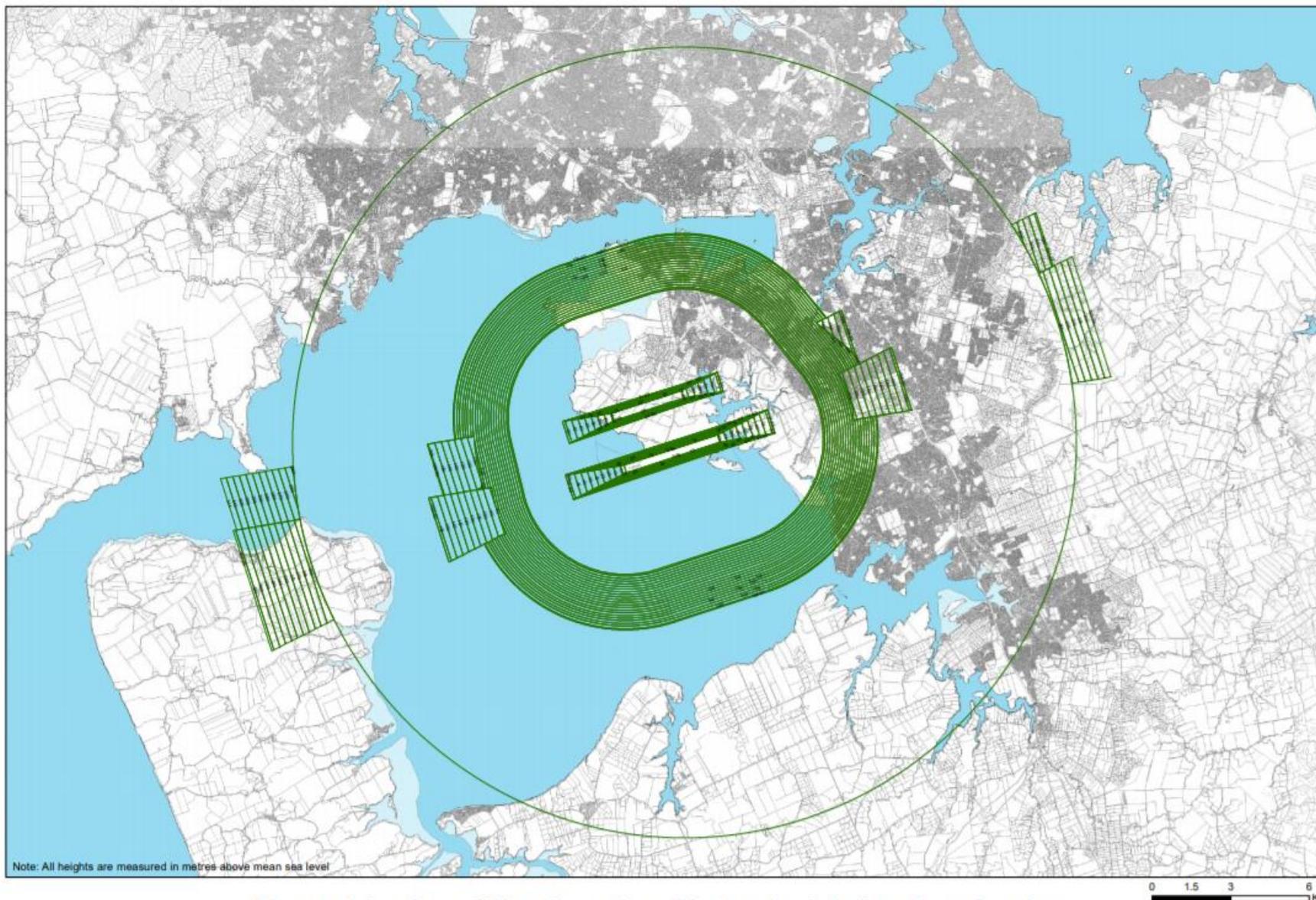


Figure1A: Specification for Obstacle Limitation Surfaces

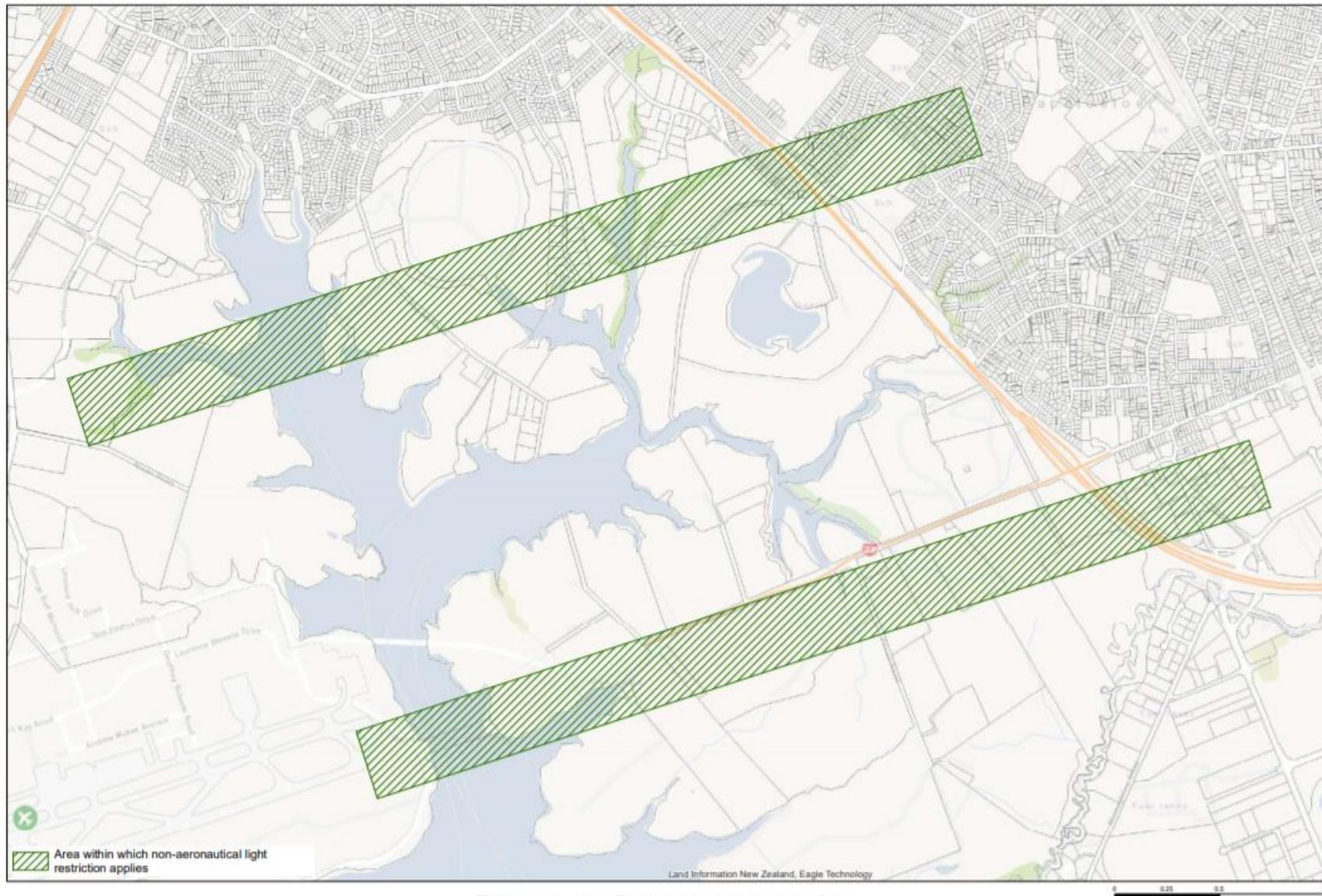


Figure 4: Requirements for Non Aeronautical Ground Lights

APPENDIX FOUR: Decisions Figure 2: Queenstown Airport: Airport Protection Inner Horizontal and Conical Surfaces

