

**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 Hearing Stream 13 –
Queenstown
Annotations and
Rezoning Requests

**STATEMENT OF EVIDENCE OF KELVIN MICHAEL LLOYD
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

ECOLOGY – CONEBURN INDUSTRIAL ZONE (SUBMITTER 361)

24 May 2017

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1. INTRODUCTION

- 1.1 My name is Kelvin Michael Lloyd. I am a Senior Ecologist based in Dunedin, and I have been employed in that role by Wildland Consultants Ltd since 2004. Prior to this I worked for Landcare Research as a post-Doctoral Fellow for three years, and I have 15 years' experience as a practicing ecologist. I have a Ph.D and B.Sc. (Hons) from the University of Otago, where my studies were primarily undertaken in the Department of Botany. I am a member of the New Zealand Ecological Society, the New Zealand Botanical Society, the Botanical Society of Otago, the New Zealand Plant Conservation Network, the Ornithological Society of New Zealand, and the New Zealand Biosecurity Institute.
- 1.2 I have considerable ecological experience in the Otago Region and Queenstown Lakes District (**District**). I have assessed ecological values at a number of sites in the Queenstown area, including sites at Mt Dewar, Glenorchy, and in the Kawarau Gorge, and have undertaken other ecological assessments in the Cardrona Valley and at Wanaka and near Hawea. I also recently undertook ecological assessments at the Remarkables Ski Field and Coronet Peak Ski Field in relation to my Proposed District Plan (**PDP**) evidence for Hearing Stream 11, on submissions requesting rezoning of Ski Area Sub Zones at those sites.
- 1.3 I undertook a site visit to assess indigenous vegetation and habitats within the areas covered by the Coneburn industrial zoning submission (361) on 14 March 2017. My assessment was undertaken initially by vehicle to gain an overview of the site, followed by subsequent inspection of areas of indigenous habitat on foot, during which I noted the types of indigenous vegetation and habitat present, and compiled lists of plant and bird species observed. I spent approximately 3.5 hours within the site.
- 1.4 I have recently provided evidence in relation to the requested Ski Field Sub Zone extensions (Hearing Stream 11), but otherwise have had no previous involvement with the review of the PDP.
- 1.5 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.

1.6 The Queenstown Lakes District Council (**QLDC** or **Council**) has commissioned me to provide expert ecological evidence in relation to submission #361¹ that seeks a change from rural to industrial zoning for land at Coneburn (shown in **Appendix 1**), south of the Remarkables Ski field access road.

1.7 I refer to documents included in the Council's Bundle (**CB**). The key documents I have used, or referred to, in forming my view while preparing this brief of evidence are:

- (a) evidence of Mr Glenn Davis (ecologist) for QLDC for the Rural Hearing Stream 02, dated 6 April 2016 [**CB48**];
- (b) section 42A report for Indigenous Vegetation and Biodiversity Chapter 33 dated 7 April 2016 [**CB45**];
- (c) Right of Reply for Indigenous Vegetation and Biodiversity Chapter 33 dated 3 June 2016 [**CB46**];
- (d) Reply Chapter 33, Indigenous Vegetation and Biodiversity dated 3 June 2016 [**CB22**];
- (e) Reply Chapter 21, Rural dated 3 June 2016 [**CB15**];
- (f) proposed amendments to PDP Chapter 27 requested by the submitter;
- (g) Reply Chapter 27, Subdivision and Development, with subsequent recommendations in other hearings included [**CB18**];
- (h) an ecological report on the site "Coneburn submission - ecological assessment for the Coneburn Group" prepared by Davis Consulting Group, dated October 2015 (provided with the submission as Annexure H); and
- (i) a landscape report on the site "Coneburn proposed zone change. Landscape assessment report." Prepared by Michelle Snodgrass Landscape Architecture, undated (provided with the submission as Annexure G).

¹ Submission 361 was made by a group of submitters, namely Grant Hylton Hensman, Sharyn Hensman & Bruce Herbert Robertson, Scope Resources Ltd, Grant Hylton Hensman & Noel Thomas van Wichen, and Trojan Holdings Ltd.

- 1.8** **Appendix 1** shows the area sought to be zoned Industrial B. This figure was prepared by Wildland Consultants GIS staff.

2. SCOPE

- 2.1** I have evaluated, from an ecological perspective, the appropriateness of a submission that seeks that land notified as Rural at Coneburn on planning map 13 be rezoned to an Industrial B zone.
- 2.2** The site is zoned Rural General in the operative Queenstown Lakes District Plan (**ODP**). I understand that the ODP industrial zones are being reviewed through Stage 2 of the PDP.
- 2.3** In assessing the submission, I have considered the relative significance of indigenous vegetation and habitats at the site, the likely effects that industrial development could have in this area, the relevant PDP policy framework that would apply to the area, and other legal instruments that would apply.
- 2.4** All references to PDP provision numbers, are to the Council's Reply version of those provisions, unless otherwise stated.

3. EXECUTIVE SUMMARY

- 3.1** Indigenous vegetation at the Coneburn site comprises grey shrubland, which mostly occurs on the southern part of the site, generally associated with small gullies and toeslopes (**Figures 1 and 2**). These shrublands provide habitat for indigenous ferns and common insectivorous birds. They occur on land environments with little indigenous vegetation remaining (**Figure 2 and Appendix 2**) and while a common vegetation type locally at higher elevation, they would form a useful focus for restoration of more ecologically valuable indigenous forest vegetation at lower elevation within the Coneburn site.
- 3.2** I do not oppose the request to create an Industrial B - Coneburn Zone for the Coneburn site from an ecological perspective, provided that policy and rules controlling use of the land promote retention and enhancement of existing ecological values, restoration of ecologically appropriate indigenous forest, and control of exotic woody weeds. The site is important for ecological

restoration due to the extensive loss of indigenous cover from the land environments on which it sits (**Figure 2** and **Appendix 2**).

4. BACKGROUND

Relevant PDP plan provisions – Council Reply position

- 4.1** I am aware that under Rules 33.5.1-33.5.6 of the PDP, the Indigenous Vegetation and Biodiversity rules **[CB22]** apply to all zones. In addition, Chapter 33 requires consent for clearance of a threatened plant. Rules 33.5.1-33.5.3 set out the standards for permitted activities. The permitted amount of indigenous vegetation clearance varies according to the height of the indigenous vegetation - greater than or smaller than two metres in height - and depending on whether the site occurs on land environments with <20% indigenous cover remaining.
- 4.2** If these standards are not complied with, the activity would have discretionary status. If future consent applications for indigenous vegetation clearance are made, I consider that the discretionary activity status provides QLDC with the ability to consider all relevant ecological issues, and to impose robust conditions to avoid, remedy, or mitigate any potential adverse effects.

5. CONEBURN REZONING SUBMISSION (361)

- 5.1** I understand that parts of the site have been used for industrial and business purposes for a number of years, and this is discussed in more detail in the specific s42A report. Other parts of the site are covered by plantation forest, amenity trees, rough pasture, and grey shrubland. The land has been zoned Rural in the PDP, and the submitters oppose this. The requested Industrial B zoning for the Coneburn land incorporates areas where the submission indicates business, light industrial, heavy industrial, and new roading developments could be undertaken, and 'open space' areas where the submission indicates buildings and structures would be prohibited. These open space areas predominantly comprise pasture and grey shrubland in the southern part of the area, and groves and shelter belts of amenity trees and associated grassland in the northern part of the area.

5.2 The submitters seek to amend Chapter 27 (Subdivision and Development) of the PDP to provide for the Industrial B zoning, including provisions governing the open space areas. These include a suggested Policy 27.7.21.5 as follows:

Require the establishment and ongoing maintenance of the Fixed Open Space areas to:

- *Visually screen development using the planting of native species*
- *Retain existing native species unless they are wilding*

5.3 The submitters also seek to amend PDP Chapter 27 rules under 27.8. Suggested new Rule 27.8.10.8 includes the following matters of control:

- *Subdivision should provide for the appropriate management of stormwater through the use of water sensitive design principles that:*

...

b identifies and protects floodplains and overland flow paths

c identifies, maintains and enhances natural hydrology and freshwater systems

...

- *An Ecological Management Plan shall be submitted to Council detailing the retention of the areas of grey shrubland within the Open Space Areas and specific detail on the implementation of the restoration of the grey shrubland areas, native plantings (existing and proposed), the ownership structure for the Open Space Zone and responsibilities for ongoing maintenance.*

6. SITE DESCRIPTION

6.1 The Coneburn site can be divided into northern and southern areas that differ markedly in vegetation cover and land use. The northern area is largely covered by Douglas fir forest, shelter belts, and numerous amenity trees, and has contracting yards and cleared areas embedded within this vegetation. The southern area is largely covered by exotic pasture and areas of grey shrubland, as well as active and former gravel quarries, a landfill operation,

and at the time of my site visit, an engineering facility related to construction of the new bridge over the Kawarau River at Frankton.

6.2 Grey shrubland is the only indigenous vegetation type present within the requested Industrial B zone, and occurs predominantly in the southern area (**Figure 1**). The dominant indigenous shrub species are matagouri (*Discaria toumatou*) and mingimingi (*Coprosma propinqua*), with occasional porcupine shrub (*Melicytus alpinus*). Tangles of pōhuehue (*Muehlenbeckia australis*) and lawyer (*Rubus schmidelioides*) are often present among the shrubs. Where ephemeral stream channels pass through shrubland vegetation, scattered ferns are present, with shield fern (*Polystichum vestitum*), *P. neozelandicum*, *Asplenium flabellifolium*, and *Blechnum penna-marina* sometimes present. Indigenous herbs and grasses are rare, but a few species are present, including *Anthosachne solandri*, blue tussock (*Poa colensoi*), *Microtis unifolia*, *Leucopogon fraseri*, and *Muehlenbeckia axillaris*.



Figure 1: Dense grey shrubland on the sides of a gully within the proposed open space area. Planted silver tussocks are visible on the constructed mound in the foreground.

- 6.3** I recorded a greater diversity of indigenous plant species on the site, and a wider distribution of grey shrubland (it also occurs in the northern area) compared to the ecological report commissioned by the submitter.
- 6.4** Matagouri shrubs associated with ephemeral stream channels in the southern area are 2-4 metres tall, suggesting that these are 'old-growth' shrubland stands that have been present on the site for many years.
- 6.5** These grey shrubland stands are associated with varying degrees of invasion by exotic trees and shrubs such as elder (*Sambucus nigra*), hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*), sweet brier (*Rosa rubiginosa*), and buddleia (*Buddleia davidii*). In general, the shrubland stands in the 'open space' areas are in better condition than those within areas in which development activities are requested to be undertaken, and the southern shrublands are in better condition than the small amount of grey shrubland in the lower part of the northern area.
- 6.6** There has been some planting of indigenous plant species within the southern area, including species such as mountain beech (*Fuscospora cliffortioides*), silver tussock (*Poa cita*) (**Figure 1**), and species of *Olearia*.
- 6.7** I observed a surprising diversity of indigenous forest bird species within the site during my site visit, given the limited amount of indigenous vegetation available as habitat (**Figure 2**). Silvereye (*Zosterops lateralis*) were commonly observed in grey shrubland vegetation, with occasional grey warbler/riroriro (*Gerygone igata*) and fantail/pīwakawaka (*Rhipidura fuliginosa*). Tūī/kōkō (*Prosthemadera novaeseelandiae*) and bellbird/kōparapara (*Anthornis melanura*) were only observed in eucalypt trees in the lower part of the western area, indicating that these eucalypt trees provide a useful seasonal nectar source for these species.



Figure 2: Grey shrubland within the site extending onto gently sloping land east of State Highway 6. Indigenous vegetation on these landforms is vulnerable to agricultural intensification, as can be seen on the western side of State Highway 6.

7. ECOLOGICAL SIGNIFICANCE

- 7.1** Most (approximately 64 hectares) of the site is within land environments that retain less than 10% of their original indigenous vegetation cover, with the remaining area (approximately four hectares) within land environments that have 10-20% of their original indigenous cover (**Appendix 2**). Grey shrubland vegetation occurs predominantly on the former land environments, and as such meets National Priority 1 of the four national priorities for the protection of rare and threatened indigenous biodiversity on private land.² The grey shrubland is of ecological value because of its status as indigenous vegetation on landforms that have otherwise been largely converted to exotic vegetation cover.
- 7.2** Grey shrubland also provides useful habitat for insectivorous indigenous bird species. There is abundant grey shrubland on nearby slopes at higher elevation, thus these insectivorous birds have abundant adjacent habitat.
- 7.3** However, the grey shrubland does not represent the original vegetation cover of the site, contains no rare species, has low diversity, and only moderate

² DOC/MfE 2007: Protecting our places. Introducing the national priorities for protecting rare and threatened native biodiversity on private land. Department of Conservation and Ministry for the Environment.

ecological context. The main value of the grey shrubland on the site – which is important - is as a 'placeholder' that would facilitate restoration of more valuable indigenous vegetation on the site. This is because the existing shrubland:

- (a) would provide shelter for newly-planted trees;
- (b) contains ground cover fern species that would ultimately colonise restored forest; and
- (c) provides existing habitat for indigenous forest birds, which would be enhanced if more complex indigenous forest was restored to these areas.

7.4 I do not oppose the request to create an Industrial B - Coneburn Zone for the Coneburn site, provided that policy and rules controlling use of the land promote retention and enhancement of existing ecological values, restoration of ecologically-appropriate indigenous forest in the 'open space' areas, and control of exotic woody weeds.

8. ASSESSMENT

8.1 Open space areas within the requested Industrial B - Coneburn Zone are important for the maintenance and enhancement of indigenous vegetation and habitats on the site.

8.2 As the indigenous vegetation on the site occurs within land environments with less than 20% of their original indigenous cover remaining, under Rule 33.5.3 clearance of more than 50 m² of this indigenous vegetation in any continuous period of five years would require a discretionary consent.

8.3 If land within the Coneburn site was to be rezoned as Industrial B, in my opinion some changes to the provisions and rules suggested by the submitters would be required.

8.4 The objectives, policies and rules (including subdivision) that relate to the proposed zone should include reference to:

- (a) visually screening development using the planting of ecologically appropriate indigenous plant species (rather than 'native species' or 'native planting');
- (b) retaining existing indigenous plant species (rather than 'native species unless they are wilding');
- (c) restoring ecologically appropriate indigenous forest in areas currently vegetated in grey scrub; and
- (d) controlling exotic woody weeds, particularly sycamore, elder, and hawthorn.

8.5 These changes are required to ensure that any planting is of ecologically appropriate indigenous plant species, that restoration of more ecologically valuable indigenous forest is promoted, and that woody exotic weeds are controlled. If PDP objectives, policies and rules reference these changes, a better outcome for indigenous vegetation and habitats on the site would in my view be provided, compared with PDP Rural zoning.

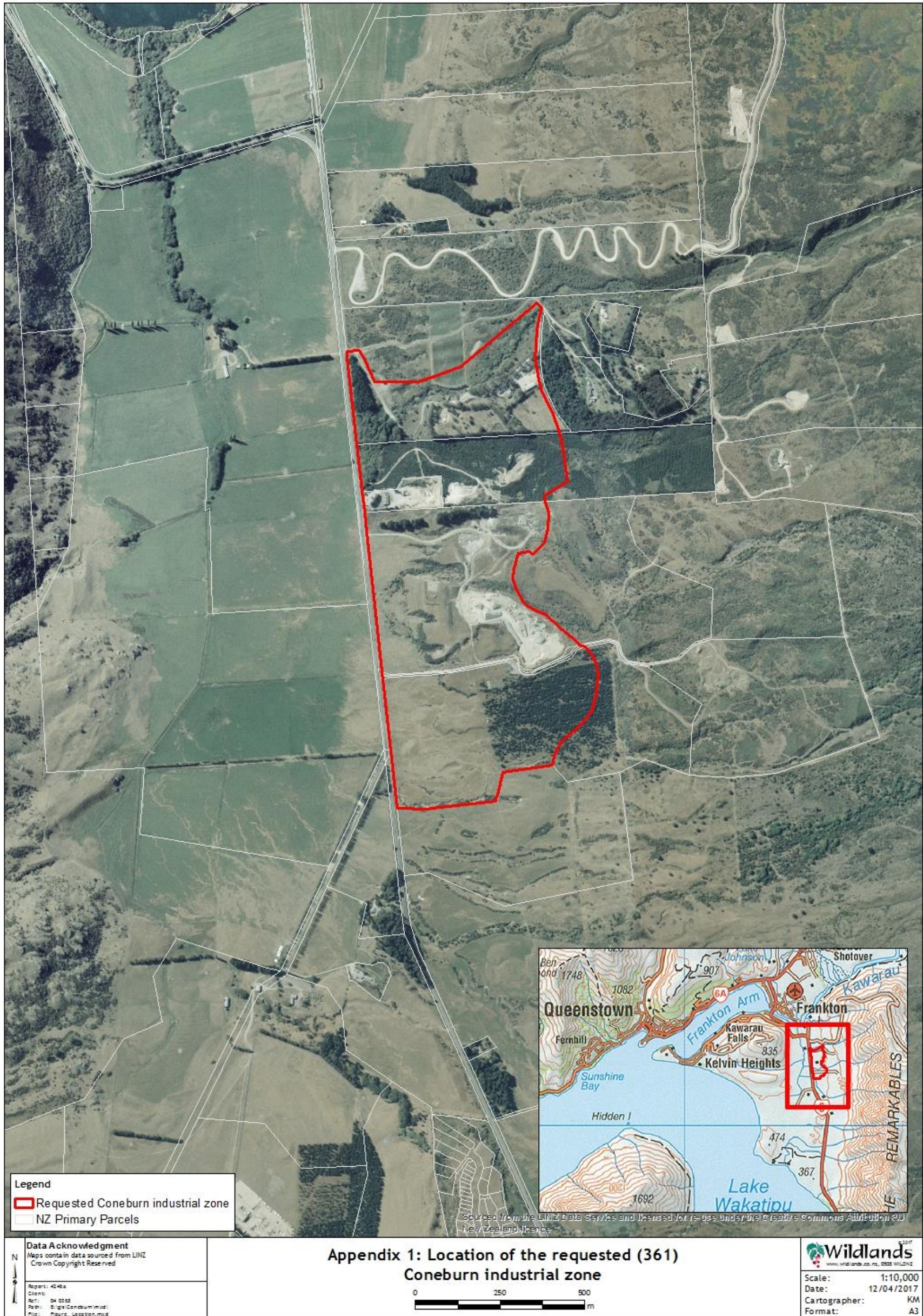
8.6 Without these additional measures being added to the submitter's proposed framework, I would oppose the rezoning request.



Kelvin Lloyd
24 May 2017

APPENDIX 1

Location of the requested (361) Coneburn industrial zone



APPENDIX 2

Threatened Environment Classification of the requested (361) Coneburn industrial zone

