# 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 Mapping

## STATEMENT OF EVIDENCE OF ANTHONY CHARLES STEEL

Dated this 9th day of June 2017

#### MACALISTER TODD PHILLIPS

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## INTRODUCTION

#### Qualifications and experience

- 1. My name is Anthony Charles Steel
- 2. I am a Civil Engineer with over 30 year's experience in the infrastructure and environmental engineering fields. I graduated from the University of Canterbury in 1984 with a Bachelor of Engineering Degree Civil Engineering.
- 3. I am the Managing Director of Fluent Infrastructure Solutions Ltd. Our company specialises in infrastructure and three waters engineering design and implementation.
- I have completed multiple infrastructure reports, designs and reviews throughout New Zealand and overseas over the last 24 years. During that time I have worked on infrastructure projects in the Queenstown Lakes District including earthworks, roading, streets, water supply, wastewater and stormwater upgrades. I was the Design Team Leader for the infrastructure for the Kawarau Falls Station development (where the Hilton Hotel is located) and have just completed the infrastructure design for the new town centre development and high density residential housing areas on Frankton Flats between Countdown and Mitre 10 Mega.
- I have worked on the self-sufficient infrastructure design of developments around Lake Wakatipu including Lakeside Estates and Jacks Point. I also have considerable experience in Project Management and Contract Administration and Observation works to implement designs completed by myself and my design team.

## Expert witness code of conduct

6. I have been provided with a copy of the Code of Conduct for Expert Witnesses contained in the Environment Court's Consolidated Practice Note dated 1 December 2014. While this matter is not before the Environment Court, I have read and agree to comply with that Code. This evidence is within my area of expertise, except where I state that I am relying upon the specified evidence of another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

#### Involvement in the Project

7. In this matter I was engaged by Lowe Environmental Impact Ltd who were engaged by Scope Resources Limited et al (the Submitter) in March 2015 to provide infrastructure engineering

advice relating to water supply and site stormwater hazards. relating to this proposed zone change. This included preparation of sections of the report prepared by Lowe Environmental Impact Ltd dated March 2015 which forms part of the Submitter's request to rezone its site for Industrial based activities (Submission).

- 8. In preparing this evidence I have reviewed the following documents or reports relevant to my area of expertise:
  - (a) Coneburn Commercial Park Water Infrastructure Option Viability Report prepared by Lowe Environmental Impact Ltd in March 2015 which included sections prepared and reviewed by ourselves on the water supply and potential stormwater hazards and their mitigation which formed part of the Applicant's Submission;
  - (b) A copy of relevant sections of the Section 42A report / statement of evidence of Robert Buxton prepared on behalf of Queenstown Lakes District Council on the 24 May 2017.
- 9. I have prepared my evidence based on my:
  - (a) Expertise as a senior infrastructure engineer,
  - (b) Familiarity with the above mentioned documents; and
  - (c) Familiarity with the application site and surrounding area after completing an extensive walkover including visiting the apex of the alluvial fan above the site and inspecting the stream alignments and cross sections.

#### Scope of evidence

10. Following review of Mr Buxton's comments – particularly Clause 27.17 I am confident that the measures required to limit external effects from the future development will be able to be mitigated during the preliminary design process when a land use consent is being sought.

Addressing specific points raised pertaining to the following comments:

(a) "For example, for stormwater it appears there may be a need for extensive earthworks above and through the zone. If required above the zone it would be useful to know the extent and effects of the earthworks and how they would be maintained."

I agree that there will be the need for earthworks to be undertaken to control and contain stormwater flows running through the development. The extent and location of the of these is something that will be able to be determined once development scheme plans have been derived. The construction and maintenance of any open channels and detention basins would be covered under subsequent consenting processes like earthworks management plans and stormwater design studies and reporting which may also include obtaining Regional Council Consents.

Our company has recently completed similar works for Hanleys Farm (Hanley Downs) to the south west of this site.

# (b) "Regarding Water Supply, it is not clear where water storage would be provided and what visual effects of a water storage tank would be."

I am confident that a water supply scheme can be designed to service development relating to the proposed zoning application as noted in the Coneburn Commercial Park - Water Infrastructure Option Viability Report prepared by Lowe Environmental Impact Ltd in March 2015. Reservoir storage would be located preferably a sufficient height above the top edge of the development to ensure that adequate pressures are able to be delivered. In regards to mitigating the appearance of a water storage tank, I was involved in the design of the water storage reservoir at Jacks Point south west of the site. The reservoir there is a reinforced concrete structure sited below ground and cannot be see even when standing on top of it.

Signed Anthony Steel 9 June 2017