

**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 Subdivision and
Development chapter
(Hearing Stream 3)

**STATEMENT OF EVIDENCE OF ULRICH WILHELM GLASNER
ON BEHALF OF QUEENSTOWN LAKES DISTRICT COUNCIL**

INFRASTRUCTURE

29 June 2016

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1. INTRODUCTION

- 1.1** My full name is Ulrich Wilhelm Glasner. I hold the position of Chief Engineer at Queenstown Lakes District Council (**QLDC**). I have been in this position since July 2013. I was previously employed at Western Bay of Plenty District Council as the Utilities Asset Manager from 2008 and before that in a number of consultant and management roles in New Zealand and Germany.
- 1.2** I hold an Engineering degree (Diplom Ingenieur) from University of Applied Sciences – Wiesbaden. I have 28 years' experience in Civil Engineering. I am a member of IPENZ, IPWEA and Water NZ. I am a Chartered Professional Engineer (CPEng).
- 1.3** My experience includes investigations, issues and options studies, and the design and construction of several wastewater and stormwater pump stations, reticulation and collection systems. I have managed the design of stormwater and wastewater systems in Germany and New Zealand.
- 1.4** My current role at QLDC involves asset management (three waters and solid waste), contract management, procurement, strategic planning, and management of road works. As Chief Engineer I have the responsibility of delivering the Approved Annual Plan of infrastructure work for QLDC, including three waters, transport, solid waste and other capital works. As Engineer to the Contract I also have responsibility for the ongoing operation and maintenance of infrastructure assets. This involves co-ordination of the high level work programme for the infrastructure team, and managing staff and contractors to deliver projects and services within approved timeframe and cost limits.
- 1.5** As part of my role at the QLDC I have been asked to provide evidence in relation to infrastructure matters for the Subdivision and Development Chapter of the Proposed District Plan (**PDP**). I have provided on statement of evidence on the PDP, in the Strategic Directions hearing, dated 19 February 2016.
- 1.6** 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 QLDC, as my employer, has agreed to me giving expert evidence on its behalf in accordance with my duties under the Code of Conduct.

1.7 The key documents I have used, or referred to, in forming my view while preparing this brief of evidence are:

- (a) Operative District Plan (ODP) Subdivision Section (Section 15);
- (b) the PDP Subdivision and Development Chapter;
- (c) the section 32 evaluation report for the subdivision chapter;
- (d) QLDC Land Development and Subdivision Code of Practice (**Code of Practice**) (this is attached to my evidence as **Appendix 1**); and
- (e) QLDC Subdivision Design Guidelines (**Subdivision Guideline**) (this is Appendix 2 to Mr Garth Falconer's evidence).

1.8 My evidence will cover the following:

- (a) background to subdivision and infrastructure matters;
- (b) that the Code of Practice is fit for purpose;
- (c) that the subdivision chapter achieves appropriate infrastructure outcomes from both a substantive and mechanical perspective;
- (d) suggested officer amendments to chapter 27 provisions; and
- (e) specific submission points.

2. EXECUTIVE SUMMARY

2.1 The key conclusions in my evidence are that:

- (a) including objectives and provisions in the Subdivision Chapter for infrastructure is important to ensure that QLDC can place appropriate conditions of consent on subdivision applications. Chapter 27 as

notified and the recommended revised chapter attached to the section 42A report achieves this;

- (b) while a controlled activity status for subdivision generally works in terms of infrastructure requirements, a restricted discretionary activity status is preferred over a controlled activity status. In particular, a restricted discretionary activity status allows QLDC discretion to decline substandard applications that have inappropriate road and vehicle access widths, among other infrastructure concerns;
- (c) the matters of control and discretion associated with the recommended controlled and restricted discretionary rules are appropriate and will ensure QLDC can impose suitable conditions of consent relating to infrastructure; and
- (d) the Code of Practice does not need to be identified in the PDP Subdivision Chapter as a standard, and by implication does not need to be incorporated by reference.

3. BACKGROUND – SUBDIVISION AND INFRASTRUCTURE MATTERS

- 3.1** From an infrastructure perspective the subdivision consent and post consent process is used to ensure subdivided parcels of land are appropriately serviced in terms of water, wastewater, stormwater (cumulatively known as **3 Waters**), roading, electricity, telecommunications and lighting.
- 3.2** Assessments are also carried out if required to resolve any issues arising from geotechnical and natural hazard issues.
- 3.3** The first phase of ensuring good infrastructure outcomes for subdivided land in the Queenstown Lakes District (**District**) is consultation between the developers and QLDC before a resource consent application is lodged. This pre application consultation takes a strategic view of what is proposed and modelling is undertaken to examine capacities of existing QLDC infrastructure. This ascertains whether upgrades may be required to facilitate subdivision and subsequent development. Agreements are commonly reached in principle regarding how a development will be serviced if QLDC infrastructure is proposed to be utilised.

- 3.4** The next stage of ensuring good infrastructure and engineering outcomes is at the resource consent stage. The PDP framework is essential to ensure infrastructure and engineering matters are considered prior to consent being granted for subdivision.
- 3.5** At this resource consent stage the question that requires consideration is whether it is feasible to appropriately service a proposed subdivision. The detail of how the required infrastructure is designed is not a key consideration at resource consent stage. This is primarily because the detailed engineering/infrastructure design process can be costly, and paying upfront costs for detailed design without certainty of consent or what form an eventual consent may take is not favoured by the development community. Neither is it required by QLDC to ensure good infrastructure outcomes.
- 3.6** If an applicant can demonstrate that it is feasible to service a site in terms of 3 Waters, roading, electricity, telecommunications and lighting, then conditions of consent (including specific engineering standards for certain matters) are imposed to ensure detailed infrastructure design in relation to the aforementioned services are submitted for review and acceptance to the QLDC Resource Management Engineering department. Conditions can also require that the design and final construction of infrastructure is carried out in accordance with the Code of Practice, where appropriate.
- 3.7** Following review and acceptance of detailed designs by QLDC, the applicant constructs the infrastructure, with ongoing QLDC inspections occurring through that process. When this is completed, land titles can be issued following the RMA s224(c) process, provided all other conditions have been met.
- 3.8** I am familiar with how subdivision consents works under the ODP, however my area of responsibility sits more with strategic infrastructure decisions, pre application consultation and capital works projects. I meet regularly with the Resource Management Engineering (**RMENG**) team who brief me on issues arising and give advice in terms of QLDC's infrastructure requirements as they relate to subdivisions being processed, and potential deviations from the Code of Practice that are proposed.

3.9 I have consulted with the RMENG team when preparing this evidence to establish if there are any operational issues with the existing ODP subdivision chapter. The RMENG team have also reviewed the proposed Subdivision and Development Chapter and relayed to me any potential issues (which are considered further below) with the proposed chapter from their perspective.

3.10 Following those discussions, and from my understanding of the current process and plan mechanics, the notified provisions, while requiring some care to navigate through, are effective in ensuring good infrastructure outcomes for subdivision in the District.

4. QLDC LAND DEVELOPMENT AND SUBDIVISION CODE OF PRACTICE – IS THE CODE OF PRACTICE FIT FOR PURPOSE?

4.1 Firstly it is important to clarify what the purpose of the Code of Practice is. The Code of Practice is a best practice guideline for subdivision and development infrastructure in the District. It is not a subdivision layout design guide and should not be referred to as such. Deviations from the standards set out in the Code of Practice are common, given that a 'one size fits all' engineering solution does not apply in all cases. This is why the Code of Practice is referred to as a guideline. If an applicant puts forward an alternative infrastructure solution to what the Code of Practice envisages, then the RMENG team will review and assess the proposed deviation from the Code of Practice at the 'Engineering Review and Acceptance' stage (post granting of the consent). If the proposed engineering solution is considered appropriate for the circumstances compared to what is outlined in the Code of Practice, then the deviation will be accepted.

4.2 It is important to note that the Code of Practice is a live, ever evolving document. The current Code of Practice was adopted by Council in June 2015. Within the next three months it is anticipated that the Code of Practice will be amended and re-adopted by Council to take into consideration learnings over the past 12 months. There will be an ongoing process of updating the Code of Practice to ensure evolving best practice is captured in the document.

4.3 As such using consistency with the Code of Practice as a condition of consent is an effective way of achieving best practice infrastructure on an ongoing

basis. As the Code of Practice changes, consents are issued, and the Code of Practice at the date of the consent decision is the one that will apply.

- 4.4** For these reasons I consider that the Code of Practice is fit for its purpose as a guideline for infrastructure best practice, which is enforced through compliance with consent conditions. I do not consider that it is appropriate for the Code of Practice to be incorporated into the PDP by reference as it will not enable the Code of Practice to evolve over time to reflect best practice.

5. DOES THE SUBDIVISION CHAPTER ACHIEVE APPROPRIATE INFRASTRUCTURE OUTCOMES FROM BOTH A SUBSTANTIVE AND MECHANICAL PERSPECTIVE?

- 5.1** The matters of control and discretion recommended by Mr Bryce and attached as Appendix 1 to his s42A report provide sufficient scope to ensure conditions can be imposed under a controlled or restricted activity status regime. While I am comfortable with a controlled activity status because the infrastructure related matters can be covered through conditions on a subdivision consent, a restricted discretionary activity is favoured over a controlled activity status. One of the core reasons for this view is the need to decline consent where the width of the road and access configuration is substandard.
- 5.2** An example of where a controlled activity may not work for subdivision is where a road of insufficient width is proposed by an applicant. If a road is proposed in a subdivision that is too narrow to meet anticipated traffic numbers, then imposing conditions to widen the road as a matter of control will result in the entire subdivision layout and lot configuration changing, making the original consent and subdivision layout assessed impossible to exercise. This situation can be overcome if QLDC were able to decline consent. At the very least it would provide QLDC with sufficient scope to recommend that an application be declined on this basis and discourage the applicant from advancing inappropriate road widths, which also raise safety concerns.
- 5.3** I support the removal of the reference of the Code of Practice from Policy 27.2.1.1 and in my view the Code of Practice should be an ever evolving document. Provided the PDP Subdivision Chapter contains appropriate objectives, policies, specific rules (if required) and matters of control and discretion to address these matters, the Code of Practice does not, in my view, need to be incorporated into the PDP.

6. SUGGESTED OFFICER AMENDMENTS TO CHAPTER 27 PROVISIONS

- 6.1** Mr Bryce in his s42A report (and recommended amendments to Chapter 27 attached as Appendix 1 to his s42A report) sets out a number of amendments that the RMENG team have provided input on.
- 6.2** Policy 27.2.5.13 sets out the provision of subdivision design that includes joint use of stormwater and flood management networks with open spaces, pedestrian/cycling transport corridors. A key issue with this policy is that the maintenance and operation of these systems need to be acceptable to QLDC. Our preference to allow this type of design should not supersede the requirement for any solution to be appropriate from a Council maintenance and operation perspective. This is because in many instances they are vested to the Council and they need to be fit for purpose. An example being the use of an open space as a park and whether it has a dual purpose for stormwater management. The Council need to ensure that the park is of a sufficient size, gradient and surface to be useful, and can be maintained at a reasonable cost to the Council. Mr Bryce has recommended changes to the location of this policy so that it sits within the District Wide infrastructure policies and refers specifically to the need for these systems to be acceptable to QLDC¹. I support this amendment for the reasons I have set out above.
- 6.3** Further, Mr Bryce has recommended changes to Policy 27.2.5.1 (as notified). In particular, the policy has been amended to delete the word 'expected'. The Code of Practice² states "*development design shall ensure connectivity to properties and roads that have been developed, or that have the potential to be developed in the future*". As a consequence, the Policy would be better aligned with the Code of Practice if the word 'expected' were deleted and replaced with 'potential'. I consider that this better aligns with the manner in which infrastructure is considered at the time of subdivision.

¹ This is now referenced as Policy 24.2.5.13 in the recommended revised chapter attached as Appendix 1 to Mr Bryce's section 42A report.

² At section 3.2.5, page 69 of the Code of Practice.

7. SPECIFIC SUBMISSION POINTS

Crescent Investments Limited (#656) - Kirimoko

- 7.1** Crescent Investments Limited seeks that a site specific standard be added into Rule 27.8.3 (as notified) for Kirimoko providing that *"any subdivision shall be designed so as to achieve, during a 1 in 100 year event, a rate of post development stormwater runoff that is no greater than the pre-development situation"*.

The Code of Practice currently requires developments to achieve, during a 1 in 20 year event, a rate of post development stormwater runoff that is no greater than the pre-development situation. It also provides for secondary flow paths for flows in a 1 in 100 year event and if secondary flow paths are blocked attenuation on site is required to achieve, during a 1 in 100 year event, a rate of post development stormwater runoff that is no greater than the pre-development situation.

- 7.2** I do not consider it appropriate to design all attenuation systems to cater for 1 in 100 year events. If one of these events takes place, flows will run on secondary flow paths (such as roads) for a brief period during the event and briefly after the event. If we did design to ensure post development stormwater runoff is no greater than the pre-development situation in a 1 in 100 year event then systems would be over designed for the vast majority of the time. This may add significantly to QLDC's maintenance costs for these over designed systems. It is considered appropriate to achieve, during a 1 in 20 year event, a rate of post development stormwater runoff that is no greater than the pre-development situation, provided overland secondary flow paths are available to cater for 1 in 100 year storm events. Therefore, I do not support the relief sought by Crescent Investments Limited.

Aurum Survey Consultants (#166) – standards relating to servicing and infrastructure

7.3 Rule 27.5.4.3 (as notified) states:

Where no communal owned and operated water supply exists, all lots other than lots for access, roads, utilities and reserves, shall be provided with a potable water supply of at least 1000 litres per day per lot.

7.4 Aurum Survey Consultants seek clarification as to whether it is the intention of Council to revert from 2100L/day back to 1000L/day, given that rule 27.5.4.3 refers to a minimum 1,000L/per day. The submitter seeks clarification on what the minimum supply will be where a communal supply does exist.³

7.5 The Code of Practice requires 2100 litres per day (700L/person x average of 3 people/dwelling) per dwelling. This covers potable and irrigation water supply. If a person provides 1000L/day potable water they will meet QLDC's requirements provided they can demonstrate what supply will be available for irrigation. The 2100L/day is the requirement for a reticulated system where use outside of potable water, such as irrigation, must be considered. Where a system is not reticulated then the uses outside of potable water use are not considered and therefore the requirement is to provide for 1000L/day of potable water per dwelling.

7.6 I hope this clarifies the issue raised by the submitter.



Ulrich Wilhelm Glasner

29 June 2016

³ Submission point 166.13.

APPENDIX 1

QLDC Land Development and Subdivision Code of Practice

Also available electronically at this link:

<http://www.qldc.govt.nz/assets/Uploads/Planning/District-Plan/Incorporation-of-Documents-by-Reference/QLDC-Land-Development-and-Subdivision-Code-of-Practice-September-2015.pdf>