

BEFORE THE OTAGO REGIONAL COUNCIL

(4 November 2019)

IN THE MATTER

of the Resource Management Act 1991

AND IN THE MATTER

of an application to discharge wastewater overflows from its network to freshwater or onto land where it may enter freshwater by Queenstown Lakes District Council
(File No: RM19.051)

**STATEMENT OF EVIDENCE OF SONYA NICOL
ON BEHALF OF CENTRAL OTAGO DISTRICT COUNCIL**

1. Introduction

- 1.1 My full name is Sonya Jane Nicol. I am a resource management consultant and Director of Southern Land and Water Planning Limited. I have 16 years' experience in planning and resource management roles in local government and as a private consultant. Over this time, I have prepared and processed resource consent applications, and have worked with a range of district and regional plans.
- 1.2 I hold the qualifications of a Bachelor of Resource Studies and a Postgraduate Diploma in Resource Studies. I am an Associate Member of the New Zealand Planning Institute.
- 1.3 I have been engaged by the Central Otago District Council to prepare evidence to support their submission to the Otago Regional Council (**Consent Authority**), on the application by Queenstown Lakes District Council (QLDC) (**Applicant**) to discharge wastewater to water or onto land in a manner that may enter water at various locations throughout the Queenstown Lakes District (**proposal**).
- 1.4 I confirm that I have read the Code of Conduct for expert witnesses as contained in the Environment Court Practice Note 2014. I have complied with the Code of Conduct when preparing my written statement of evidence.
- 1.5 Other than where I state I am relying on the evidence of another person; my evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

2.0 Scope

- 2.1 I can confirm that the Central Otago District Council (CODC) support the intention of the applicant to improve the quality of water in the region through improved management of wastewater discharges, and that QLDC wants to achieve this through improved response, network improvements, and public education.
- 2.2 However, the CODC submitted in opposition to this application. The reasons for the submission were that CODC consider that authorisation of unlimited, untreated discharge to water for a prolonged period is not environmentally or culturally sustainable and will have adverse effects on the environment and the communities downstream. I have been asked by the CODC to provide evidence specifically relating to the consent duration sought, impact on drinking water locations and proposed draft conditions as per the scope of their original submission. I will discuss these submission points below.
- 2.3 In preparing this evidence, I have read and considered the following documents:
- A. Queenstown Lakes District Council – RM19.051 – Consent application, with specific points provided on:
 - i. Section 1.1. – Overview
 - ii. Section 1.2 – Philosophy for the Network Consent
 - iii. Section 1.5 - Consent Duration Sought
 - iv. Section 3.4 - Drinking Water Take Locations
 - v. Section 7 - Proposed Draft Conditions
 - B. Further Information Response s91(1) response – Response 5 June 2019 and QLDC Overflow Data 2015-2018;
 - C. Section 1.2 of the Drinking Water Standards for New Zealand 2005 (Revised 2018);
 - D. National Policy Statement for Freshwater Management 2017 (**NPSFM**);

- E. The Regional Plan: Water for Otago;
- F. Section 42A Staff Recommending Report (RM19.051.01); and
- G. Evidence prepared in support of the application.

2.4 I have also considered the requirements of the relevant sections of the Resource Management Act (**RMA**), including s104, s105, s107 and Part 2.

2.5 Where I have referred to other sources of information I have referenced accordingly.

3.0 Consent Duration and Capacity Exceedance

3.1 The network consent sought by the application is for a consent duration of 35 years. It is acknowledged that the applicant (QLDC) have set aside resources¹ within their 30 Year Infrastructure Strategy and their Long-Term Plan.

3.2 The proposal identifies in section 1.1. that the overflows may enter freshwater as a result of blockages, system failures, extreme storm events, and capacity exceedance in the network. It is considered that unplanned overflows may include blockages, system failures and extreme storm events as they are not predictable and are therefore accidental. However, it is considered that capacity exceedance, being overflows due to insufficient design capacity, are not accidental and occur as a direct result of demand exceeding network capacity.

3.3 Section 1.2 of the proposal sets out the philosophy for the network consent, including that proposed operational and maintenance improvements to the network aim to *“reduce, over time, the likelihood of overflows occurring and therefore reducing the likelihood of adverse effects occurring.”*

3.4 The proposal provides very limited data as to the frequency or volume of historic overflows, with brief information on cause and overflow to water only being provided from July 2015 to November 2018. The proposal does not put any limitations on frequency or volume of future overflows permitted under the proposed consent. Without this, I consider that water quality will degrade in the future, and this would not meet the requirements of Part 2 (Purpose and Principles) nor address the requirements of s107 of the RMA, due to adverse effects to the receiving environment. Furthermore, it would not safeguard freshwater as required under Objective A1 of the NPSFM. In my experience, the discharge of wastewater to freshwater is also considered culturally offensive. A threshold for frequency and volume based on historical occurrences would assist to address this concern should robust monitoring data be available from the applicant.

3.5 CODC consider that overflows due to capacity exceedance can be understood through network modelling, planned upgrades, management and requirements placed on development. Allowing potentially unlimited overflows for a duration of 35 years due to capacity limitations in an area of high growth such as Queenstown will result in adverse effects including a deterioration of water quality. I acknowledge the Applicant’s proposed conditions to set out circumstances when overflows would not be authorised (proposed condition 11). Network modelling, planned upgrades and ongoing adaptive management will enable the Applicant to avoid overflows due to capacity constraints. Removing overflows due to capacity constraints from the proposal would address this concern.

¹ Section 2.3 of the application indicates that addressing the issues identified in the 10 Year Plan, QLDC expects to spend around \$816M on service improvements, increased capacity and extension. Specifically, QLDC plan to spend \$105M between 2018 and 2028 on to the wastewater network including pump stations, pipes and treatment plants.

4.0 Drinking Water Locations

4.1 CODC operate several drinking-water supplies in the downstream catchment. These include Pisa, Cromwell, Clyde, Alexandra and Roxburgh.

4.2 Section 1.1 of the proposal states: “wastewater networks are critical for protecting communities from unnecessary exposure to wastewater. Exposure can result in an adverse impact to human health.” I concur with this statement. However, by allowing unlimited overflows there is a potential for increased risk to both surface and groundwater quality within the region which in turn can result in adverse effects on human health as well as the environment.

4.3 I do not consider the proposal is consistent with the requirements of the Drinking Water Standards for New Zealand 2005 (Revised 2018) which states in section 1.2 that:

The public health safety of drinking-water is best protected if multiple barriers to contamination are in place. These barriers include:

- *minimising the extent of contaminants in the source water that the treatment process must deal with*
- *removing undesirable soluble and particulate matter*
- *disinfecting to inactivate any pathogenic organisms that may be present*
- *protecting the treated water from subsequent contamination.*

4.4 Furthermore, a reduction in water quality is also not in accordance with the direction of the NPSFM.² The NPSFM requires regional councils to set limits for water quality and quantity. The preamble of the NPSFM states that “setting enforceable quality and quantity limits is a key purpose of the NPSFM”.³

4.5 Also, under the NPSFM, the management of freshwater must consider and recognise Te Mana o te Wai an integral part of freshwater management and the preamble of the NPSFM states:⁴

“Upholding Te Mana o te Wai acknowledges and protects the mauri of the water. This requires that in using water you must also provide for Te Hauora o te Taiao (the health of the environment), Te Hauora o te Wai (the health of the waterbody) and Te Hauora o te Tangata (the health of the people).”

4.6 In 2017 central government set a national target of making 90 per cent of New Zealand’s large rivers and lakes swimmable⁵ by 2040, with an interim target of 80 per cent swimmable by 2030. The NPSFM includes specific provision for human health risk of ingesting water for example swimming. Primary contact is where there is a higher risk of ingesting water, than with secondary contact for example wading. The primary contact targets are based on the level of *E. coli* in rivers and lakes.

² It is acknowledged that Action for healthy waterways: A discussion document of national direction for our essential freshwater was released in September 2019 and includes a proposal for a full replacement of the National Policy Statement for Freshwater Management and a Proposed National Environmental Standards for Freshwater. Submissions close on 31 October 2019.

³ Ministry for the Environment. 2018. A Draft Guide to Limits under the National Policy Statement for Freshwater Management 2014 (as amended in 2017). Wellington: Ministry for the Environment.

⁴ Page 7, New Zealand Government (2014). National Policy Statement for Freshwater Management. New Zealand Government, Wellington, New Zealand.

⁵ Ministry for the Environment. 2017. A Draft Guide to Swimming, *E. Coli*, and the National Targets under the National Policy Statement for Freshwater Management 2014. Wellington: Ministry for the Environment

4.6 I confirm that CODC agree with the Applicant that wastewater networks are critical for protecting communities from unnecessary exposure to wastewater, as exposure can result in an adverse impact to human health. I consider that water quality will degrade over the proposed term of the consent, being 35 years, and that this length of term without a reducing frequency and volume of discharges is contrary to sustainable management and would likely result in adverse effects. CODC seek a reduction in consent term as well as a condition addressing frequency and volumetric limits in order to ensure security for drinking water as well as swimming within the region.

5.0 Proposed Draft conditions

5.1 Network overflows will result in adverse effects on water quality. I acknowledge that draft conditions are proposed, but as per the CODC submission, the proposal does not put in place any limitations on frequency and volume of future overflows permitted under the proposed consent. Rather as set out in section 1.5 of the application that *“the proposed conditions of consent will avoid, where possible, and manage the adverse effects through a physical response and operational and maintenance improvements over time, so that any temporary or resultant effects is minimised as much as practical and towards the avoid end of the effects scale”*.

5.2 As outlined in the sections above, the establishment of a threshold for the frequency and volume of these events based on historical data to ensure that water quality is not able to degrade further. I would support an ongoing education campaign by the Applicant to educate the community about the wastewater network.

6.0 Conclusion

6.1 I agree with the Applicant that wastewater networks are critical for protecting communities from unnecessary exposure to wastewater, and that exposure can result in an adverse impact to human health.

6.2 To summarise the details above, I conclude that the following relief is sought:

1. Overflow due to capacity exceedances are not allowed;
2. Frequency and volumetric limits are included, based on historic data; and
3. Reduce the consent term from 35 years.

6.3 Without amendments to the application, ongoing adverse effects to water quality including drinking water and swimming areas will occur within the region. The changes are sought for the following reasons:

- a) Ongoing network modelling and capacity upgrades will ensure that demand due to development and growth does not exceed network capacity;
- b) The inclusion of a frequency and volumetric limit will ensure that water quality does not degrade over a long timeframe due to overflows.

DATED 29 OF OCTOBER 2019



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Sonya Nicol