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To: [Plan Hearings](#)
Cc: [Gerard Cleary](#); [Kalley Simpson](#)
Subject: Evidence in chief of Kalley Simpson for Plan Change 7 LWRP
Date: Tuesday, 21 July 2020 3:12:29 pm
Attachments: [image002.png](#)
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[Plan Change 7 LWRP Evidence of Kalley Simpson July 2020.pdf](#)

Kia ora,

Please find attached the evidence in chief of Kalley Simpson, on behalf of the Waimakariri District Council (submitter ID PC7-3).

Regards,

Sophie

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In The Matter of the Resource Management Act 1991

And

In The Matter Plan Change 7 of the Canterbury Land and Water
Regional Plan

BRIEF OF EVIDENCE OF KALLEY SIMPSON

Evidence submitted on behalf on the Waimakariri District Council
Submitter ID PC7-3
21 July 2020

INTRODUCTION

1. My name is Kalley Simpson and I am the 3 Waters Manager for the Waimakariri District Council (WDC). In this position I have responsibility for the water supply, wastewater and drainage assets for the Council.
2. I hold a Degree in Natural Resources Engineering from the University of Canterbury and have 20+ years of experience in civil engineering. This experience includes the overseeing the application for resource consents on behalf of Waimakariri District Council.
3. Although this is not an Environment Court hearing, and my evidence predominantly covers factual and background matters, I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it in providing this evidence. My qualifications are set out above. I confirm that any opinions I offer in this brief of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.
4. In my evidence, I will cover and provide context on the following matters relating to policies 8.4.36 and 8.4.37 (Consent Expiry and Duration) and 8.4.38 (Consent Review) of Plan Change 7 of the Canterbury Land and Water Regional Plan:
 - a) The need for an exemption for Territorial Authorities to Policies 8.4.36, 8.4.37 and 8.4.38, particularly for community water supply and wastewater discharge consent expiry and duration.
 - b) The impact on the community if these policies are not altered as recommended by Waimakariri District Council.

NEED FOR CONSENT DURATION UP TO 35 YEARS

5. The Waimakariri Zone Implementation Programme Addendum (ZIPA) states on page 30 *'The zone committee supports land use consents with common expiry dates and durations that shortly follow the anticipated date when the next plan review will be made operative. This will facilitate better management of nitrate losses within the zone and allow for new information to inform the setting of future stages of nitrogen reductions.'* WDC worked with the Waimakariri Water Zone Committee as well as other parties to develop the ZIPA, and supports that it is used as the basis for the policies and rules of Plan Change 7, Part C. The Waimakariri District Council approved the ZIPA on the 4 December 2018, and supports these steps to facilitate better management of nitrate losses. However, the Waimakariri District Council does not support the setting of a common expiry date for

community water supply water take consents or discharge consents for purposes where nitrate management is not an applicable outcome that is able to be achieved.

6. The consents sought by Waimakariri District Council for the purpose of community water supplies are different in purpose to those sought for farming land use. The intention of policies 8.4.36 and 8.4.37 is for management of nitrate losses, which does not apply to community water take consents or discharge consents held by Waimakariri District Council as the Territorial Authority. The intention of policy 8.4.38 is for mitigation of stream depletion effects. The purposes of the consents sought by Waimakariri District Council are first order priorities in the Canterbury Water Management Strategy (community supplies and stockwater), whereas consents for water take for irrigation are a second order priority in the Canterbury Water Management Strategy. It is my opinion that policies should be enabling to allow first order priorities to take place.
7. In all cases of water takes for community supply and discharge consent, there is a significant amount of investment in infrastructure required, all of which is entirely reliant on the resource consents that Waimakariri District Council holds. Approximately 80% of the Waimakariri District population is supplied with water through schemes operated by WDC, and approximately 66% of the population is connected to a WDC wastewater scheme.
8. For some context of the value of infrastructure, data from the 2018-48 WDC Infrastructure Strategy estimates a replacement value of \$142.6 million for water supply assets, \$236.6 million for wastewater assets, and \$90.6 million for stormwater and drainage assets.
9. A 10 year consent expiry period, as proposed by policy 8.4.37, would not give a degree of confidence that the value of the assets could be fully realised over their intended life. The key issue is that strategic planning for infrastructure such as water supply and wastewater is in the order of 30 years to 100 years. This means that only having certainty that a consent will be able to be used to take water over a 10 year time period would be incompatible with these other planning timeframes. The basis for these timeframes is given below:
 - a) **Funding Timeframes:** When a new project is undertaken (for example a source upgrade to achieve compliance with Drinking-water Standards), this is funded through Development Contributions for the growth element, and rates via a loan for the Level of Service and renewals element. A loan is typically raised over a 25 year period to pay off the new infrastructure. A 10 year consent duration associated with the water take consent would still be being paid off after the consent expired and the infrastructure potentially becomes redundant if the consent was not able to be renewed.

- b) **Asset Lives:** Key assets associated with source upgrades (such as new wells, or pipelines) have assets lives typically of 100 years. This means that assets are installed to transmit water from the source (which is reliant on a water take consent) that will last for 100 years. If a consent lasted for only 10 years, then it would need to be renewed 10 times over the life of the asset, as opposed to twice with a 35 year consent duration. This adds significant cost and uncertainty to the investment in infrastructure.
- c) **Planning and Consultation Timeframes:** There have been a number of source upgrade projects undertaken across the District in which a significant number of years are spent in investigation work, and consultation before the physical solution is constructed. Again, this length and extent of planning required warrants greater certainty over the length of time that a consent is able to be used for. Some examples are below, however it is noted that there are similar examples for almost all of the public supply schemes.

10. Case studies:

- a) **Rangiora Water Source Upgrade:** A \$24 million project was undertaken to replace a water take from the Ashley River with new deep and secure groundwater wells in Kaiapoi, to upgrade the Rangiora water supply to meet the Drinking Water Standards for New Zealand. Prior to the physical works being undertaken, cost-effective alternative options such as shallow wells with treatment were considered, and bores drilled in other locations with the aim of finding a closer suitable source. Community consultation was undertaken as well, and there was a preference for a more secure long-term option. The vast majority of this costly infrastructure would be redundant without a consent to take water from this new source in the future. Future decisions could favour investment options that are lower cost in the short term due to reduced consent duration, however that would be more expensive in the long-term with higher operating expenditure.
- b) **Oxford Rural No.1 Water Source Upgrade:** A project was undertaken from 2013 to 2018 to find a new source for the Oxford Rural No.1 water supply scheme. Two wells were drilled unsuccessfully, and several rounds of community consultation undertaken before finally a suitable new source was found. The total of expenditure attributed to this project is \$1.7 million from the Level of Service budget, as well as approximately \$0.5 million of renewals expenditure that would not have otherwise been spent (to upgrade a main to transmit water from the new source). Again, the majority of this expenditure would become redundant without the consent to take water from this source, and similar decisions in the future may opt for a lower upfront cost but less secure option, or more flexible solution that has higher ongoing costs.

c) **WDC Ocean Outfall:** On 17 June 2002, the WDC adopted as its long term solution for sewage treatment and disposal in the eastern part of the Waimakariri District. The project involved upgrading the treatment systems at Rangiora, Kaiapoi, Woodend and Waikuku Wastewater Treatment Plants, connecting the plants through a series of pumps and pipelines and discharging the higher quality treated effluent to the ocean through a pipeline laid under the sea floor through diffusers approximately 1.5 km off shore. Community consultation and investigations for the WDC ocean outfall commenced in 2003, with preparatory work carried out in the years prior. The WDC ocean outfall was completed in 2006 with a 35-year duration for the consents. The ocean outfall structure, and associated infrastructure to pipe treated effluent to the outfall has an estimated replacement value of \$38.5 Million (Activity Management Plan 2018, Eastern Districts Wastewater Scheme). Although the ocean discharge itself was consented with a coastal permit under the Regional Coastal Environmental Plan, not the Land and Water Regional Plan, it is an example of how a discharge consent can have significant cost and lengthy project timeframes. A greater level of certainty than a 10 year consent is required to give confidence that the assets, for future WDC infrastructure projects requiring discharge consents, can be financed by rates or loans, and can continue to be utilised.

11. Based on the above case studies, a 35 year consent duration should be the available to community projects with a large capital investment in long term solutions, such as required for a public supply water take or wastewater discharge consent. However, even 35-year duration presents a risk to a large amount of Council's infrastructure if consents are not able to be renewed within this timeframe. Any changes to reduce this timeframe would be at complete odds with the direction of the government to encourage investment for increased water safety and to minimise environmental effects. For example, the Taumata Arowai - Water Services Regulator Bill gives drinking-water protection greater weight in legislation, rather than reducing it.

12. The recommended relief sought is:

8.4.36 Provide for the regular review and adjustments in progress towards achieving the freshwater outcomes and limits for the Waimakariri Sub-region by applying the following common expiry dates to resource consents:

- a) 1 July 2037 for resource consents granted for the use of land for a farming activity;
- b) 1 July 2037 for resource consents granted for the discharge of nutrients by an irrigation scheme, or principal water supplier for irrigation purposes;
- c) 1 July 2037 for resource consents granted for the take and use of water (with the exception of a Territorial Authority and community water suppliers as the applicant);
- d) 1 July 2047 for any resource consent that replaces an existing water permit that expires after 1 July 2030 and that is affected by the provisions of section 124-124C of the RMA.

8.4.37 Apply the following durations to any resource consent granted after the relevant common expiry date in Policy 8.4.36:

- a) 10 years for resource consents for the use of land for a farming activity; and
- b) 10 years for resource consents for the discharge of nutrients by an irrigation scheme, or principal water supplier *for irrigation purposes*; and
- c) 10 years for resource consents for take and use of water *(with the exception of a Territorial Authority and community water suppliers as the applicant)*.

8.4.38 Assist with achieving the freshwater outcomes for the Waimakariri Sub-region by:

- a) reviewing, by 31 December 2027, all surface water or stream depleting groundwater permits *(with the exception of community water supply consents)* within the Ashley River/Rakahuri Freshwater Management Unit that have a direct or high stream depletion effect, and by implementing the environmental flow and allocation regimes in Tables 8-1 and 8-3 on all reviewed permits and any new permits granted; and
- b) reviewing, by 31 December 2029, all surface water or stream depleting groundwater permits *(with the exception of community water supply consents)* within the Northern Waimakariri Tributaries Freshwater Management Unit that have a direct or high stream depletion effect, and by implementing the environmental flow and allocation regimes in Tables 8-2 and 8-3 on all reviewed permits and any new permits granted.

IMPACT ON COMMUNITY AND ENVIRONMENT

Infrastructure underinvestment – human health trade-off

13. The Oxford Rural No.1 scheme was at risk of contamination from both bacteria and protozoa. On 26 January 2018 a positive *E. coli* test was detected in the reticulation of the Oxford Rural No. 1 scheme, and a Boil Water Notice was issued.
14. Due to the ability to secure a water take consent with a long 35-year duration, this small water scheme was able to be upgraded to a secure supply. This was despite high costs of initial installation, including the drilling of two wells that failed to provide the required water supply, before a third well was successful (a total of \$1.7 million+ investment for 330 properties).
15. It can be speculated that an upgrade to a more secure source would not have been financially viable for the small number of properties with a consent duration and expiry reduced to 10 years. Therefore there is a trade-off of reduced infrastructure capital spending with decreased consent duration.
16. The Havelock North Drinking-water Inquiry Stage Two report recommends that the 'protection and management of drinking water sources be recognised as a matter of national importance'. Any moves to reduce the duration that consents for community water supplies can be issued has the opposite effect, and makes the security and reliability of drinking-water sources more vulnerable to change. In addition, one of the six principles that is recommended from the Inquiry Report, is that

'Protection of Source Water is of Paramount Importance', again without certainty that a consent to take water for public supply can be renewed and maintained in the long term, there is less protection given to the source water, as the rights to use that water would be at risk of being lost. This would be a disincentive to investment to protect the source, if there is no certainty that the source can be retained long term.

Infrastructure underinvestment – Negative environmental outcomes

17. With the construction of the WDC Ocean Outfall the Woodend Waikuku Beach, Rangiora and Kaiapoi wastewater treatment plants ceased to discharge on-shore, with environmental benefits to groundwater, the South Brook and Jockey Baker Creek/Waimakariri River. UV treatment before discharge via the Ocean Outfall greatly reduces bacterial numbers. Studies by NIWA in 2012 and 2017 have found that there is no significant impact on benthic fauna or elevation in nutrient levels beyond 200m from the outfall. With a duration of consents restricted to 10 years, it can be speculated that this upgrade would not have been approved by the Council, due to the high capital expenditure. Therefore there is a potential trade-off with negative environmental outcomes if there is under-investment in infrastructure.

Opportunity cost for ratepayers

18. With decreased consent duration, there would be an increased cost for consent application preparation and processing by WDC. This cost would be borne by ratepayers of the District, however would be more effectively spent on operational and capital expenditure to maintain and upgrade infrastructure.

SUMMARY

19. In summary, it is my evidence that:
 - (a) There is a need to exempt Territorial Authorities and community water suppliers from Policies 8.4.36, 8.4.37 and 8.4.38.
 - (b) The intention of policies 8.4.36 and 8.4.37 are for management of nitrate losses, which does not apply to community water take consents, or discharge consents held by Waimakariri District Council as the Territorial Authority.

- (c) The Waimakariri Zone Implementation Programme Addendum (ZIPA) states an intention to set common expiry dates and durations for land use consents to facilitate management of nitrate losses, not to set common expiry dates for community water takes or nutrient discharges for wastewater management. WDC worked with multiple parties and the Waimakariri Water Zone Committee to develop the ZIPA, and supports that it is used as the basis for the policies and rules of Plan Change 7, Part C.
 - (d) The intention of policy 8.4.38 is for mitigation of stream depletion effects. Community supplies and stockwater are first order priorities under the Canterbury Water Management Strategy, whereas irrigation is a second-order priority. Policies should be enabling for first order priorities to be able to take place, above second order priorities.
 - (e) These exemptions will ensure that consent expiry and duration enables capital investment in critical infrastructure such as the community water supply wells and the WDC wastewater discharges.
 - (f) The impacts of granting consents of reduced duration and expiry could create under-investment or inability to fund critical infrastructure, resulting in an elevated drinking water safety risk or negative environmental outcomes from wastewater disposal, for example.
20. I therefore do not support the findings of Section 42A Officer's Report for policies 8.4.36, 8.4.37 (proposed to be amalgamated into 8.4.36), and 8.4.38, and seek the relief set out in the paragraph 12 of this evidence.



KALLEY SIMPSON

Dated 21 July 2020