

From: [Matt Bubb](#)
To: [Plan Hearings](#)
Subject: PC7 Evidence from Matt Bubb
Date: Thursday, 16 July 2020 5:14:18 pm
Attachments: [PC7 Statement of Evidence of Matt Bubb.pdf](#)

Hi

Please find attached PC7 evidence from Matt Bubb.

Cheers.

Matt

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**BEFORE INDEPENDENT HEARING COMMISSIONERS APPOINTED BY THE
CANTERBURY REGIONAL COUNCIL**

IN THE MATTER OF The Resource Management Act 1991

AND

IN THE MATTER OF Submissions by Matt Bubb of Aqualinc Research
 Limited on Proposed Plan Change 7 to the
 Canterbury Land and Water Regional Plan

STATEMENT OF EVIDENCE OF MATT BUBB

17 JULY 2020

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STATEMENT OF EVIDENCE OF MATT BUBB

1. Introduction

2. My name is Matt Bubb. I am a Senior Water Resource Engineer and Business Manager for Consents and Compliance at Aqualinc Research Limited (**Aqualinc**).
3. The following evidence is provided in support of submissions made relating to Plan Change 7 (**PC7**) to the Canterbury Land and Water Regional Plan (**LWRP**) by submitter PC7-527 & PC7-544.
4. My evidence relates only to specific parts of Section 13 (Ashburton) of the LWRP.

5. Qualifications and Experience

6. I have the following qualifications/experience:
7. I have over twenty years' experience in water resource management, engineering and development. I am the business manager for consents and compliance at Aqualinc and am a member of the senior management team. I have been part of the Aqualinc team since 2007. The primary focus of my work is associated with resource management, consents and consent compliance.
8. I get involved with a large number of resource consent processes, although am most commonly involved in the activities of taking groundwater, surface water, contaminant storage and discharges and land use changes.
9. Qualifications I hold include an Honours Degree in Construction Management and a post graduate diploma in marketing from the Chartered Institute of Marketing. I am a member of the New Zealand Institute of Primary Industry Management.
- 10.** I have read the code of conduct for expert witnesses in the Environment Court Practice Note 2014, and confirm that I have complied with the code in the preparation of my evidence. I will comply with that code when giving this evidence. I also confirm that the matters addressed my evidence are within my area of expertise.

11. Scope of Evidence

12. My evidence relates only to Policy 13.4.24 and Rules 13.5.30 and 13.5.30A.

13. Policy 13.4.24

14. My submission did not specifically mention this policy, although comments I made relating to Rule 13.5.30 have been used in the ECan Officers' recommendations as a basis to alter this policy.

15. The Officers' report dated 10 July 2020 has the current drafting for this policy:

Recognise the potential difficulties for existing surface water and hydraulically connected groundwater permit holders in the Hinds Coastal Strip Zone to obtain reliable groundwater that does not have a ~~direct, high or moderate~~²⁷³ stream depletion effect when considering resource consent applications to take deep groundwater by:

- a. providing for a portion of the existing water take to be retained provided the ~~proposed combined~~ take will have an equal or lesser stream depletion effect than the existing water permit; and²⁷⁴
- b. providing for a transition period for the consent holder to demonstrate the reliability and volume of the ~~non-stream-depleting~~ groundwater take.²⁷⁵

16. This policy restricts its influence only to consent applications to take deep groundwater (see highlighted text). Deep groundwater is defined in Section 13 as groundwater that is abstracted from a depth of at least 80 m below ground level. The policy should be broader in scope to also encompass shallower takes, subject to those not having a direct, high or moderate stream depletion effect.

17. By way of example of the issue, the current drafting would not apply to a 75m deep bore that may have either no or a low stream depletion effect because it would not meet the definition of "deep groundwater" i.e. the consent application would not be to take "deep groundwater".

18. To overcome this the following is suggested (note yellow shows remove and green show add):

Recognise the potential difficulties for existing surface water and hydraulically connected groundwater permit holders in the Hinds Coastal Strip Zone to obtain reliable groundwater ~~that does not have a~~²⁷³ ~~direct, high or moderate~~ stream depletion effect when considering resource consent applications to take deep groundwater ~~or to take groundwater that has no more than a low stream depletion effect~~ by:

- a. providing for a portion of the existing water take to be retained provided the ~~proposed combined~~ take will have an equal or lesser stream depletion effect than the existing water permit; and²⁷⁴
- b. providing for a transition period for the consent holder to demonstrate the reliability and volume of the ~~non-stream depleting~~ groundwater take.²⁷⁵

19. Rule 13.5.30

20. Condition 5 of this rule within the Officers' report is drafted as:

The take is from deep groundwater or the application for resource consent demonstrates that the take ~~is not from stream depleting groundwater will have a low stream depletion effect.~~

21. I support this proposed drafting but I am keen to emphasise the reason why and how important it is that the proposed changes are adopted. This is because it is often not possible to determine that there will be absolutely no stream depleting effects from taking groundwater. By stating that the take must have a low stream depletion effect puts a sensible boundary around this and will help to ensure that the intent of this aspect of the plan i.e. to reduce the effects on surface water features by enabling the taking of deep groundwater, is achieved.

22. Condition 6 of this rule within the Officers' report is drafted as:

Where the proposed point of take is within the Hinds Coastal Strip Zone ~~and a portion of the existing surface water or groundwater take will be retained, and it is demonstrated, at the time of application for resource consent, that the yield of the new bore will not achieve the annual volume required for reasonable use determined in accordance with Schedule 10,~~ then within 36 months of commencement of the proposed take:

- a. the combined rate of take and annual volume of the proposed take and the retained portion of take will be the same or lesser than the existing water permit; and
- b. the proposed take and the retained portion of the take will have an equal or lesser stream depletion effect than the existing water permit.

23. I support the majority of the changes to this condition that are outlined in the Officers' report. However, there is one aspect of the proposed drafting that I do not support. This relates to the reference to "will not achieve the annual volume required for reasonable use determined in accordance with Schedule 10" (highlighted above). I'm not clear why there would be a need to specifically relate this to delivery of the seasonal volume or to Schedule 10.

24. For example, assume a surface water consent is for 30l/s with a seasonal volume of 250,000m³/year. A deep bore is drilled and it initially produces 20l/s, although with careful development over time it is hoped that this may increase to 30l/s. In this example a case could be put that 20l/s is adequate to deliver the seasonal volume. This equates to 145 days of irrigation and so it's feasible to argue that the bore is

capable. However, if the consent holder cannot seek to use a portion of the surface take in conjunction with their new groundwater supply, they may have insufficient water to be able to run their irrigation system effectively.

25. Given this example making any reference to seasonal volume or Schedule 10 in condition 6 is not appropriate. Condition 1 of this rule already restricts the seasonal volume and so there is no need for this to be duplicated. With the seasonal volume already 'capped' by condition 1 the most important thing to ensure is that there are no additional effects upon surface water flows as a result of the combined takes. The proposed following condition would ensure that this is achieved:

Where the proposed point of take is within the Hinds Coastal Strip Zone a portion of the existing surface water or shallow groundwater take may be retained for a maximum period of 36 months where the combined rate of take and annual volume of the proposed take and the retained portion of take will be the same or less than the existing water permit.

26. This proposal simplifies the condition. There may be concern that removing part (b) may not be appropriate. This states:

the proposed take and the retained portion of the take will have an equal or lesser stream depletion effect than the existing water permit.

27. Although there should clearly be a requirement that stream depletion effects do not increase as a result of implementing condition 6, part (b) is not necessary because the combined rates and volumes cannot be more than the existing permit anyway and so it is not possible for there to be an increase in stream depletion.

28. Rule 13.5.30A

29. The drafting of this within the Officers' report is:

The taking and use of groundwater that does not meet conditions 3 or 5 of Rule 13.5.30 is a non-complying activity, provided the following conditions are met:

~~The well interference effects calculated in accordance with the method in Schedule 12 are no greater than 25% of the total available drawdown during the period of proposed water use groundwater take will not have a direct or high stream depletion effect; and~~

The application for resource consent includes an assessment of the effects on surface water flows stream depletion effect is no greater at the new point of take than at the original point of take.

30. I support the adding of this new rule and the following example provides the reason why and gives an indication of its importance.

31. The current operative plan (via Rule 13.5.30 condition 3) requires that bore interference effects are acceptable, as determined in accordance with Schedule 12. If there is not compliance with this condition the activity defaults to rule 13.5.31, which makes the activity prohibited.
32. We have situations at the moment where people want to move away from their surface water take and so have drilled a deep bore, they have carried out a constant rate aquifer test to determine site specific aquifer parameters and then have used those parameters to run well interference assessments. Those assessments have shown that the effects upon some wells are greater than the allowances outlined in Schedule 12 of the LWRP.
33. Given this situation written approvals have been obtained from those potentially adversely affected bore owners. Despite this, ECan Officers' interpretation of the situation is that the bore interference effects are NOT acceptable, as determined in accordance with Schedule 12.
34. Given that all written approvals required were obtained and consent holders are trying to do the right thing i.e. move from surface water to deep groundwater, it seems ludicrous that this technicality makes the activity prohibited.
35. The adding of this rule helps to overcome this as it at least provides a pathway to enable the application to be made and allows, the potential at least, for sensible outcomes. Without this a large proportion of those wanting to swap from surface to deep groundwater will be frustrated by this issue. I estimate that somewhere in the region of 50% of those wanting to swap will require written approvals to overcome well interference issues. Without an appropriate change to the LWRP (or a change in ECan's interpretation of this issue) there will be far fewer swaps from surface water to deep groundwater than there could be otherwise. This issue therefore frustrates the community desire to utilise deep groundwater instead of surface water and the intent of the plan.
36. The addition of rule 13.5.30A helps this situation, although it does still make the activity non-complying. Because the bar should be set relatively high for these activities there is still potential for this process to be frustrated. Because of this perhaps condition 3 of rule 13.5.30 could be altered as follows:

The bore interference effects are acceptable, as determined in accordance with Schedule 12 or written approval has been provided by the affected bore owner; and.....

37. Or perhaps an explanatory note could be added, such as:

Note: *If written approval has been provided by the owner of a bore the effects upon that bore cannot be considered within the processing of the associated consent application and effects upon that bore are therefore considered to meet the requirements of Schedule 12.*