

MEMO

To: The PPC9 Hearings Panel
From: Ellen Robotham – Policy Planner
Date: 24 September 2021
Subject: **HBRC STAFF RESPONSE TO NGATI KAHUGNUNU IWI INCORPORATED AND TE TAIWHENUA O HERETAUNGA**

Background

Dr Smith and I wrote a memo to the panel dated 9 June 2021 where we attached a revised version of Appendix 11 to the Section 42A Report and explained the reasons for reviewing that appendix.

The panel, through Minute 6, gave submitters an opportunity to respond to that memo:

We are inviting submitters (whether they have attended the hearing or not), to make further submissions on the amended Appendix 11, with some conditions (below):

- a) *The submissions must be within the scope of their original submission(s).*
- b) *The submissions must be relevant to the water quantity matters summarised in the Appendix 11 and any pertinent consequential matters.*
- c) *Any changes to submitters evidence or supplementary evidence received by the hearing panel (for week 1, 2 and 3).*
- d) *We believe it may be necessary to hear these submissions and supplementary evidence at a reconvened hearing, the date of which is yet to be determined.*

Two briefs of evidence were received from Ngāti Kahungunu Iwi Incorporated (**NKII**) and one further submission was received from Te Taiwhenua o Heretaunga (**TTOH**).

In Minute 10, the panel requested that HBRC staff respond to the evidence and further submission in writing. The panel specified that “the responses need only address whether the Council agrees, disagrees or is neutral with regard to the content of the evidence/further submission and whether the Council recommends any changes to the plan as a result of these.”

Response to evidence / further submission

I have identified four main concerns arising from the revisions made to Appendix 11 which I respond to below. These are:

1. Wanting a better understanding of why revisions were made;
2. The removal of discussion about *Out>In* as a water accounting or balancing method;

3. The removal of definitions and terms which supported or aligned with arguments made by NKII and TTOH; and
4. Changing the reference to average irrigation abstraction from 50Mm³ to 35Mm³.

Mr Tiuka and Mr Black consider a number of matters including water quality, resource consenting, modelling, and the identification of Freshwater Management Units to be consequential to water quantity and Appendix 11. Amendments made to Appendix 11 did not change modelling approaches or the plan provisions related to these concerns. I have responded to these concerns by indicating to where they have been previously considered in staff advice.

Having considered the matters raised in the additional submissions, I do not consider that any changes are needed to PPC9 provisions in response.

Matter	Submitter / expert (evidence / further submission reference)*	HBRC response
Understanding why revisions were made	<p>Ngaio Tiuka – NKII (paragraphs 6-9, 12).</p> <p>Maurice Black – TTOH (paragraphs 2-3, 10-13).</p>	<p>I disagree with the assertions made about the reasons for the changes to Appendix 11.</p> <p>Appendix 11 was intended to be a summary of the various scientific reports and presentations developed to support the TANK Group and development of PPC9.</p> <p>A common theme among submissions was what appeared to be a lack of understanding of the science behind the sinking lid approach. Therefore, I commissioned Appendix 11 to help explain, in plain language, key aspects of the relevant science. I also wrote an overview to quantify provisions to explain the sinking lid approach.</p> <p>As documented in our memo dated 9 June 2021, Dr Smith and I revised Appendix 11 because it was not subject to full technical review and was inadvertently lodged with errors and factually incorrect information. Specific reasons for revisions are discussed below in relation to the removal of <i>Out>In</i> discussion and the removal of definitions and terms. Explanations of the modelling and limit setting approach are included in the response to the panel's water quantity questions also provided on 24 September 2021.</p>
Removal of <i>Out>In</i> discussion	<p>Maurice Black – TTOH (paragraphs 15-16, 34 onwards).</p>	<p>Discussion around using <i>Out>In</i> as a method for determining groundwater limits in PPC9 was deleted from Appendix 11 because it was factually incorrect.</p> <p>Out>In was not the method used in developing PPC9 to determine groundwater limits. The TANK Group adopted an effects based approach and relied on modelling. In our memo dated 9 June 2021, Dr Jeff Smith</p>

* Paragraph references listed are for exemplar purposes only and may not be exhaustive.

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		<p>referred to Bredehoeft (2002) which documents the limitations of Out>In and why modelling is preferred.</p> <p>As Mr Shade Smith identified in paragraphs 22-26 of his evidence in chief dated 14 May 2021, the Out>In method is too simplistic. In his 14 May evidence, Mr Smith notes that Out>In fails to incorporate storage, seasonal variability, climate change, and river recharge mechanisms. These are all aspects which are better captured by models, such as those which were relied upon in the development of PPC9.</p> <p>Dr Smith explains the modelling approach further in the memo responding to the panels water quantity questions also provided on 24 September 2021.</p>
Removal of definitions and terms	<p>Ngaio Tiuka – NKII (paragraph 11).</p> <p>Maurice Black – TTOH (paragraphs 14-15, 17).</p>	<p>The definitions were removed because they are considered to be not factually correct (in their application and interpretation), policy matters outside the scope of the authors of Appendix 11, or superfluous.</p> <p>While the author's references to some sources e.g. the Brundtland Report and the NPSFM2020 may be factual, her interpretation and application of those terms was not, particularly in relation to Out>In.</p> <p>Other terms are policy matters which should not have been defined in an appendix aimed at explaining the <i>science</i> underlying PPC9. The interim allocation and sinking lid are policy tools employed by PPC9 and Actual and Reasonable is defined by PPC9.</p> <p>The remaining terms are not necessary to understand the rest of Appendix 11 and are therefore superfluous.</p> <p>The removal of certain terms from Appendix 11 does not change the proposed allocation framework or Council's obligation to avoid and phase out over-allocation. I consider the framework proposed by PPC9 helps give effect to NPSFM 2020 Policy 11 as described through the various advice and recommendations provided to the panel through this hearings process.</p>

Matter	Submitter / expert (evidence / further submission reference)*	HBRC response
Changing 50Mm ³ to 35Mm ³ on page 9 of Appendix 11	Shade Smith – NKII (paragraph 8 onwards)	Dr Smith explains the modelling approach further in the memo responding to the panel's water quantity questions on 24 September 2021.
Use of models to determine allocation 70Mm ³ v 90Mm ³	Shade Smith – NKII (evidence in general) Ngaio Tiuka – NKII (paragraph 11) Morry Black – TTOH (paragraphs 15-16, 32, 34-39)	Section 32 Report – Chapter 8.7 Water Takes, particularly pages 273-277. Section 42A Report – s15.3.1 overview, s15.3.2, and s15.3.4. Dr Smith explains the modelling approach further in the memo responding to the panel's water quantity questions.
Definition and application of Actual and Reasonable	Morry Black – TTOH (paragraphs 42)	Section 42A Report – s15.3.1 overview, s15.6.17.
Use of mātauranga Māori Consideration of cultural values and cultural effects	Ngaio Tiuka – NKII (paragraphs 10, 13-15)	Section 42A Report – s13.5.
Identification and inclusion of Freshwater Management Units in PPC9	Ngaio Tiuka – NKII (paragraphs 11, 16) Morry Black – TTOH (paragraph 17)	Section 42A Report – s12.2. Subsequent email to the panel dated 6 September 2021.
Water quality	Morry Black – TTOH (paragraphs 18, 43)	Section 42A Report – s13.8, and s14.
Consenting and re-allocation of consents	Morry Black – TTOH (paragraphs 22-33)	Response to panel's questions on 11 June 2021. Section 42A Report – s15.3.5, and s15.4.10.

Matter	Submitter / expert (evidence / further submission reference)*	HBRC response
Allocation limits and overlap with Coastal Environment / RCEP	Morry Black – TTOH (paragraphs 26-27).	Section 42A Report – paragraphs 743-745, 1322, 2437.
Surface water abstractions and minimum flows Definition of Actual and Reasonable	Morry Black – TTOH (paragraphs 40, 44-46).	Section 42A Report – s15.3.1 overview, and s15.4.