

**IN THE ENVIRONMENT COURT
WELLINGTON REGISTRY**

**I TE KŌTI TAIAO O AOTEAROA
TE WHANGANUI-A-TARA ROHE**

ENV-2023-WLG-000005

UNDER the Resource Management Act 1991


IN THE MATTER the direct referral of applications for resource consents and notices of requirement under sections 87G and 198E of the Act for the Ōtaki to North of Levin Project

BY **WAKA KOTAHI NEW ZEALAND TRANSPORT AGENCY**
Applicant

**STATEMENT OF EVIDENCE OF MICHAEL ANDREW THOMPSON ON BEHALF OF THE
GREATER WELLINGTON REGIONAL COUNCIL**

WATER TAKE AND ALLOCATION

Dated: 26 September 2023


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STATEMENT OF EVIDENCE OF MICHAEL ANDREW THOMPSON

A. INTRODUCTION

[1] My name is Michael Andrew Thompson. I am a Senior Scientist - Hydrology at GWRC. I have been in that position since 2011.

[2] I prepared a report on the application required by section 87F of the Resource Management Act 1991 on behalf of Manawatū-Whanganui Regional Council (**Horizons**) and Greater Wellington Regional Council (**GWRC**) (the **Regional Councils**), dated 28 April 2023 (**s87F Report**).

[3] In the s87F Report, I reviewed the application from Waka Kotahi for resource consent applications lodged with Horizons and the GWRC relating to the Ōtaki to North of Levin Highway Project (the **Ō2NL Project** or **Project**). My s87F Report provided recommendations to improve or further clarify aspects of the resource consent application addressing water take and allocation.

[4] I confirm I have the qualifications and experience set out at paragraphs 7-11 of my s87F Report.

[5] I participated in the following expert conferencing on water abstraction:

(a) Water allocation on 26 July 2023, resulting in a joint witness statement dated 26 July 2023 (the **Water Abstraction JWS**); and

(b) Water allocation and planning on 16 August 2023, resulting in a joint witness statement dated 16 August 2023 (the **Water Abstraction and Planning JWS**).

[6] I confirm the contents of the Water Abstraction JWS and Water Abstraction and Planning JWS.

[7] I discuss any remaining issues and/or related conditions below.

B. CODE OF CONDUCT

[8] I repeat the confirmation provided in my s87F Report that I have read and agree to comply with the Code of Conduct for Expert Witnesses contained in

the Environment Court Practice Note 2023. This evidence has been prepared in accordance with that Code. Statements expressed in this evidence are within my area of expertise, except where I state I am relying on the opinion or evidence of other witnesses.

C. SCOPE OF EVIDENCE

[9] My report will cover the following:

- (a) The extent to which issues identified in my s87F Report have been resolved through Waka Kotahi evidence, expert conferencing and mediation;
- (b) A response to section 274 party evidence; and
- (c) Consent conditions.

[10] In addition to the reports I reviewed for my s87F Report, I have reviewed the following information in preparing this evidence:

- (a) The evidence of Dr John (Jack) Allen McConchie on behalf of Waka Kotahi dated 4 July 2023.
- (b) The evidence of Ms Michaela Stout for Horizons dated 26 September 2023.
- (c) The Planning Joint Witness Statement dated 10, 11 and 14 August 2023.
- (d) The Freshwater Ecology Joint Witness Statement dated 7 August 2023 (**Freshwater Ecology JWS**).
- (e) The conditions filed by Waka Kotahi on 4 September 2023 (**Waka Kotahi conditions**).

D. OUTSTANDING ISSUES

[11] On review of the issues in dispute arising from my s87F Report, the Water Abstraction JWS, Water Abstraction and Planning JWS and the Waka Kotahi

conditions, I am of the view that the following issues remain outstanding for water take and allocation:

- (a) Consent conditions for installation, monitoring and compliance for proposed water takes;
- (b) Expiry of water take consents on completion of construction (if earlier than the 10 year consent term sought); and
- (c) Efficiency of water use.

[12] I address these issues in turn below.

Water take consent conditions

[13] In my s87F Report, I noted that the draft water take conditions originally included in the AEE filed with the consent application, had insufficient detail and specificity to appropriately manage the activity.¹ I recommended:²

Addition of further detail to RWT1 to specify minimum water meter installation and reporting requirements, including the need to measure and report instantaneous rate water meter data (i.e., 15 minute) as well as daily volumes.

[14] The July Water Abstraction JWS recorded:

All agree to amend RWT1(f) to say “for each water take a flow meter must be installed and maintained, and the provision for the transfer of data by telemetry, provided in accordance with standard conditions of the consenting authorities”.

[15] Ms Michaela Stout and I have combined the Horizons and GWRC standard conditions. These combined standard conditions are intended to reflect both the minimum requirements of the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 (**Regulations**) and requirements considered necessary by the Regional Councils.

¹ Section 87F Report, at paragraph [85].

² Section 87F Report, at paragraph [91](g).

[16] In my view, supported by Ms Stout, these conditions will ensure that measurement (metering) is carried out in accordance with industry best practice and that reporting allows for robust compliance monitoring.

[17] The Waka Kotahi conditions limits the metering and monitoring conditions to the following clauses within RWT1:³

(g) Prior to the taking of water authorised by these resource consents, for each water take:

- i. a flow meter must be installed to measure and report water takes in real time;
- ii. an automatic backflow prevention device must be installed within the pump outlet plumbing or within the mainline;
- iii. an intake screen must be installed with a mesh size not exceeding three (3) millimetres in diameter.

(h) For each water take, the intake velocity through the intake screen required by clause (g)(iii) must not exceed 0.3m/s.

[18] My understanding is that Waka Kotahi considered the standard suite of conditions proposed by the Regional Councils to be largely duplicating the requirements of the Regulations. Therefore, in its view, only additional matters that are not covered by the Regulations need to be included in the conditions. As a result, the Waka Kotahi conditions set out (under RWT1(g) and (h)) additional matters it considers to not be covered by the Regulations.⁴

[19] In my view, this does not create sufficient certainty from a monitoring and enforcement perspective. My preference would be for all monitoring and measurement requirements to be provided within the conditions. This includes requirements relating to timing of measurements and reporting. Mr St Clair has reflected the standard suite of conditions in the conditions

³ Pages 64-67 of Waka Kotahi Conditions (Tracked Changes Version).

⁴ Page 67 of Waka Kotahi Conditions (Tracked Changes Version).

attached to his evidence (with some minor drafting changes which I support).

[20] I also understand that reference to the Regulations within the conditions is necessary for compliance reasons. Mr St Clair discusses this in evidence.

[21] Further, the requirements of the Regulations, do not address matters such as telemetry, which is important for the Regional Councils. In particular, there is no specific commitment to installation of telemetry systems (except for the Koputaroa River site) that report data continuously to consenting authorities. The requirement to “measure and report in real time” within the Waka Kotahi conditions (should this be the intent) does not provide sufficient clarity as to what is required, and when. The Regulations require data to be provided to Regional Councils in an electronic format no later than a day after the abstraction has occurred. In my opinion the most reasonable method for how this should occur in practice would be via telemetry.

Expiry of water take

[22] In my s87F Report, I noted my agreement with Fish and Game that the proposed take of water from the Waitohu Stream (and others) should only occur during the construction phase of the Project.⁵ I recommended that Waka Kotahi be required, by way of consent condition, to demonstrate that construction is occurring and that water is being used for the intended purpose.

[23] The proposed take will account for two thirds of the surface water core allocation remaining in the Waitohu Stream catchment and all of the supplementary allocation. In my opinion, it would not be reasonable for that water to be held in a resource consent for longer than it is needed. I do not consider this to be consistent with the concept of efficient allocation.

[24] I appreciate the need for operational flexibility for Waka Kotahi but also consider that they should be able to demonstrate the ongoing need for construction water as part of their annual planning and compliance

⁵ Section 87F Report, at paragraph [99].

reporting. Further, if there was a way to limit the term to reflect the construction period, as per the consent application, then I am of the opinion that this should occur. Mr St Clair addresses this matter in his evidence.

Efficiency of allocation

- [25] In my s87F Report, I sought further clarification from Waka Kotahi with regard to other potential sources of water that could be acquired/used in order to minimise the rates and volumes sought from streams. In the Water Abstraction JWS, it was confirmed by Waka Kotahi that no existing bore water take consents have been, or are likely to be, acquired to provide an alternative source of construction water.
- [26] It has also been agreed in the Water Abstraction and Planning JWS that the maximum instant rate of take (core allocation) from the Waitohu Stream will be reduced from 37.5 L/sec originally sought to 26 L/sec. I support this change.
- [27] In my view, both of these clarifications assist with maximising allocation efficiency. As I note above, allocation efficiency may also be assisted by limiting the term of the water abstraction to the construction period.

E. RESOLVED MATTERS

- [28] In my s87F Report, my primary concern related to the potential for adverse effects immediately downstream of the point of take at flows at or just above minimum flow. In particular, I was concerned that the abstraction could amount to a higher stream flow loss than characterised by Waka Kotahi due to natural bed losses to groundwater downstream of the GWRC flow recorder ("Waitohu Stream at WSI") and the SH1 abstraction point.
- [29] I considered that this risk should be dealt with by adjusting the proposed take management regime at these flows rather than by undertaking further investigation or analysis. This issue has been resolved through expert conferencing and the Waka Kotahi conditions.
- [30] In my s87F Report, I also recommended the adoption of a further adjustment/reduction to account for additional downstream losses below

the point of abstraction. Upon further consideration of the available flow information and expert conferencing, I am satisfied that this additional adjustment is not necessary to appropriately manage instream risks and comply with the NRP policies and rules.

- [31] On balance, I am satisfied that the adjusted flow rate at the point of take, when combined with the proposed scaling of the abstraction, is sufficient to address the concerns I raised in my s87F Report about downstream effects. I note that no further concerns about the Waitohu Stream abstraction regime were raised in the Freshwater Ecology JWS.

F. RESPONSE TO SECTION 274 PARTY EVIDENCE

- [32] My s87F Report commented on submissions received on the application. Having reviewed the evidence filed by section 274 parties, there are no new issues that need to be addressed regarding water abstraction for GWRC.

G. CONDITIONS

- [33] I have reviewed the Waka Kotahi conditions. I am largely satisfied with the conditions. In particular, I note the following amendments to conditions that address issues raised in my s87F Report:

- (a) Table RWT 1.2:⁶ Reduction of the Waitohu Stream maximum instantaneous rate for core allocation to better align with the stated 'two thirds of available allocation' premise set out by Waka Kotahi;
- (b) Table RWT 1.2: Improved detail about the GWRC flow site used to measure and adjust flow and the calculation of daily core abstraction rate settings;
- (c) Table RWT 1.4:⁷ Improved detail about the GWRC flow site which will be used to measure flow and the calculation of sub-daily supplementary abstraction rate settings, including addition of clause (d) to preserve flows below median at the point of take. These amendments should, in my view, create an abstraction regime that

⁶ Pages 64-65 of Waka Kotahi Conditions (Tracked Changes Version).

⁷ Pages 65-66 of Waka Kotahi Conditions (Tracked Changes Version).

is consistent with the policies and rules of the NRP, including Schedule U;

- (d) Table RWT 1.5:⁸ Improved clarity about the circumstances in which abstraction should cease (i.e. in response to the NRP minimum flow being reached). However, I also recommend the following additional wording be added to the table row relating to the Waitohu Stream abstraction:

Note: The stream flow data for the Waitohu Stream at WSI gauging site can be accessed at Wellington Regional Council's website (www.gw.govt.nz). It is the consent holder's responsibility to regularly check the website to ensure compliance with this condition.

Daily published flow values on the GWRC website are the official source of information for consent holders and the wording I have suggested here is included as standard practice on water take consents granted by GWRC.

- [34] Notwithstanding the minor addition proposed above, my only outstanding issue, as I have discussed above, relates to the conditions for metering and monitoring. Mr St Clair has provided amended conditions with his evidence which reflect the changes I have proposed, along with Ms Stout.

26 September 2023

Michael Andrew Thompson

⁸ Page 66 of Waka Kotahi Conditions (Tracked Changes Version).