

**IN THE ENVIRONMENT COURT  
WELLINGTON REGISTRY**

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

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**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


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**STATEMENT OF EVIDENCE OF JONATHAN LINDSAY WILLIAMSON ON BEHALF OF  
MANAWATŪ-WHANGANUI REGIONAL COUNCIL AND GREATER WELLINGTON  
REGIONAL COUNCIL**

**HYDROGEOLOGY AND GROUNDWATER**

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Dated: 26 September 2023

  
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## STATEMENT OF EVIDENCE OF JONATHAN LINDSAY WILLIAMSON

### A. INTRODUCTION

[1] My name is Jonathan Lindsay Williamson. I am Principal Hydrogeologist and Managing Director of Williamson Water & Land Advisory (**WWLA**). I have held these positions since 2015.

[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**), dated 28 April 2023 (**s87F Report**).

[3] In my 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 hydrogeology and groundwater.

[4] I confirm I have the qualifications and experience set out at paragraphs 6-12 of my s87F Report.

[5] On 26 July 2023, I participated in expert conferencing on hydrogeology and groundwater resulting in a joint witness statement dated 26 July 2023 (the **Hydrogeology and Groundwater JWS**). I confirm the contents of the Hydrogeology and Groundwater JWS.

### B. CODE OF CONDUCT

[6] 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.

### C. SCOPE OF EVIDENCE

[7] 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) Conditions.

[8] In preparing this evidence I have reviewed the following reports:

- (a) Statement of evidence of Dr John (Jack) McConchie for Waka Kotahi dated 4 July 2023;
- (b) Section 274 party evidence, and in particular the statement of evidence of Mr Phillip Jaggard for Kāinga Ora-Homes and Communities (**Kāinga Ora**) dated 12 September 2023; and
- (c) Conditions filed by Waka Kotahi on 4 September 2023 (**Waka Kotahi conditions**).

### D. OUTSTANDING ISSUES

[9] On review of the issues in dispute arising from my s87F Report, the Hydrogeology and Groundwater JWS, and the Waka Kotahi conditions, I am of the view that the following issues remain outstanding for hydrogeology and groundwater:

- (a) **Stormwater Management Devices** – the need for these devices to be located, designed and operated in a manner so as to not exacerbate groundwater related flooding (RSW1);<sup>1</sup>
- (b) **Borrow Sites** – groundwater effects are uncertain given the lack of design detail; and

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<sup>1</sup> Page 71 of Waka Kotahi Conditions (Tracked Changes Version).

- (c) **Groundwater Monitoring** – review and agree with the consent authority (RGW3(a)(ii)).<sup>2</sup>

[10] I address these issues in turn below.

#### **Stormwater Management Devices**

[11] In my s87F Report, I raised concerns with regard to lack of site specific hydrogeological information to confirm the appropriateness of the soakage device design.<sup>3</sup> Specifically, I am of the view that the effects of groundwater mounding and consequent flooding of adjacent properties outside the designation area has not been considered adequately.

[12] To address these concerns, it was agreed in the Hydrogeology and Groundwater JWS that consent condition RSW1 should be amended to incorporate additional wording as follows:

the dedicated stormwater management devices required by clause (a) must be designed, located and operated in a manner that will not cause or exacerbate groundwater related flooding.

[13] This approach is consistent with the evidence of Dr McConchie.<sup>4</sup>

[14] Following expert conferencing, the agreed insertion (or words to similar effect) has not been incorporated into the Waka Kotahi conditions.

[15] I note that Mr Jaggard for Kāinga Ora identified this issue in his evidence,<sup>5</sup> and supports the recommendation to include the additional wording, in accordance with the Hydrogeology and Groundwater JWS.

[16] For the reasons explained in my s87F Report, and following expert conferencing, I remain of the opinion that it is necessary for the wording agreed by the experts in the Hydrogeology and Groundwater JWS, or words with the same effect, to be incorporated into condition RSW1.

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<sup>2</sup> Page 63 of Waka Kotahi Conditions (Tracked Changes Version).

<sup>3</sup> Section 87F Report, at paragraphs [42] – [50].

<sup>4</sup> Statement of Evidence, Dr McConchie, 4 July 2023, at paragraphs [244] – [247].

<sup>5</sup> Statement of Evidence, Philip Jaggard, 4 July 2023, Section 7.

### **Spoil and Gravel Borrow Sites**

- [17] In my s87F Report, I raised concerns with the information provided on the spoil and gravel borrow sites, which was only at a conceptual level.<sup>6</sup> As a result, it was difficult to be definitive about potential groundwater and other effects.
- [18] I discussed this issue with Dr. McConchie and it was agreed in the Hydrogeology and Groundwater JWS that the consent conditions require a groundwater technical report and certification process, including description of the construction methodology and ultimate design, that addresses:
- (a) Groundwater system and dynamics;
  - (b) Extend and duration of groundwater interactions;
  - (c) Potential effects on other parties; and
  - (d) Assessment of environmental effects including both short term and long term.
- [19] These requirements have not been incorporated into the Waka Kotahi conditions.
- [20] I remain of the opinion that this information and certification process is necessary to ensure that the effects of spoil and borrow sites on groundwater are appropriately identified and managed.
- [21] This is consistent with Dr McConchie's evidence, where he agreed that further information and a detailed Council certification process are required with respect to design and proposed monitoring of these sites.<sup>7</sup>
- [22] I understand that Waka Kotahi may be of the view that the groundwater conditions may already provide for these effects. Without understanding the detail of the potential sites and any proposed monitoring, I cannot agree.

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<sup>6</sup> Section 87F Report, at paragraphs [63] – [66].

<sup>7</sup> Statement of Evidence, Dr McConchie, at paragraph [251], pg 64.

### Groundwater Monitoring

- [23] In my 87F Report, I raised concerns about additional monitoring requirements needed to alleviate any unacceptable groundwater effects.<sup>8</sup>
- [24] RGW3 relating to groundwater monitoring has been amended in the Waka Kotahi conditions, which largely addresses my concerns.<sup>9</sup>
- [25] The only remaining area of concern is in relation to the positioning of new monitoring locations that may be required if they are not already existing.
- [26] Presently condition RGW3(b)(i) provides *“at least one piezometer within 100 metres of any material supply sites or site where dewatering is occurring”*.
- [27] I would recommend that the precise location within the 100 m radius be agreed in advance with the Regional Councils. This could occur now, as part of the consenting process, or through a peer review of the locations to be provided to the Council. The important thing is to ensure the monitoring devices are positioned where the greatest potential magnitude of effect is anticipated, given upgradient and downgradient effects may be different.
- [28] In the Hydrogeology and Groundwater JWS, it was agreed that the wording *“as agreed with the consent authority”* would be included in RGW3.
- [29] I understand that there may be some planning limitations associated with this wording. Mr St Clair has proposed wording which has a similar effect, such that there is review of monitoring locations within condition RGW3.

### E. RESPONSE TO SECTION 274 PARTY EVIDENCE

- [30] I have reviewed the section 274 party evidence of Mr Phillip Jaggard for Kāinga Ora where it overlaps with my area of expertise.

I concur with his evidence (at Section 7) relating to groundwater related flooding associated with stormwater soakage devices.

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<sup>8</sup> Section 87F Report, at paragraphs [63] – [66].

<sup>9</sup> Page 63 of Waka Kotahi Conditions (Tracked Changes Version).

**F. CONDITIONS**

[31] I have reviewed the Waka Kotahi conditions. I am generally satisfied with the changes made to the conditions, with the exception of the further changes required to address the issues I have raised above and the agreements reached in the Hydrogeology and Groundwater JWS.

[32] I understand Mr St Clair has proposed amendments to the Waka Kotahi conditions to address my concerns. I support those changes.

**26 September 2023**

**Jonathan Lindsay Williamson**