

**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 PETER WARWICK STACEY ON BEHALF OF THE
MANAWATŪ-WHANGANUI REGIONAL COUNCIL, THE GREATER WELLINGTON
REGIONAL COUNCIL, HOROWHENUA DISTRICT COUNCIL AND KĀPITI COAST
DISTRICT COUNCIL**

AIR QUALITY

Dated: 26 September 2023


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STATEMENT OF EVIDENCE OF PETER WARWICK STACEY**A. INTRODUCTION**

- [1] My name is Peter Warwick Stacey. I am the Managing Director at Air Quality Consulting NZ Limited. I have been in that position since December 2021.
- [2] I prepared a report on the air quality aspects of the application for resource consents and the notice of a requirement (**NoR**) for a designation for the Ōtaki to North of Levin Highway Project (the **Ō2NL Project** or **Project**) as required by sections 87F and 198D of the Resource Management Act 1991. My report was prepared on behalf of Manawatū-Whanganui Regional Council (**Horizons**), the Greater Wellington Regional Council (**GWRC**), Horowhenua District Council and the Kāpiti Coast District Council (**District Councils**) and was dated 28 April 2023 (**s87F and 198D Report**).
- [3] I confirm I have the qualifications and experience set out at paragraphs 5-12 of my s87F and 198D Report.
- [4] On 28 July 2023, I participated in expert conferencing on air quality, which resulted in a joint witness statement dated 27 July 2023 (the **Air Quality JWS**). I confirm the contents of the Air Quality JWS.

B. CODE OF CONDUCT

- [5] I repeat the confirmation provided in my s87F and 198D 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

- [6] My evidence addresses the following:
- (a) The extent to which issues identified in my s87F and 198D Report have been resolved through Waka Kotahi evidence, expert conferencing and mediation;

(b) Response to section 274 party evidence; and

(c) Conditions.

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

(a) Technical Assessment C: Air Quality lodged with the application for resource consents and NoR, undated (**Air Quality Assessment**);

(b) Statement of evidence of Andrew Curtis on behalf of Waka Kotahi, dated 4 July 2023;

(c) Joint witness statement of planning experts, dated 10, 11 and 14 August 2023; and

(d) The version of the draft conditions proposed by Waka Kotahi following mediation, as lodged with the Court and provided to the parties on 4 September 2023 (referred to in my evidence as the **Waka Kotahi Conditions**).

D. OUTSTANDING ISSUES

[8] Most of the issues arising from my s87F and 198D Report have been resolved through the Air Quality JWS, or the Waka Kotahi Conditions. There is one unresolved issue relating to potential dust deposition effects on roof collected water systems, which I address in further detail below.

[9] In terms of the issues on which agreement has been achieved, I note conditions RAQ1,¹ RAQ1A,² and Schedule 2³ have been amended in the Waka Kotahi Conditions to address the issues I had raised. These changes include amendments to the compliance standard for dust effects (RAQ1), more frequent reporting of the results of dust inspections (RAQ1A) and the inclusion of a “stop work” contingency measure in the Construction Air Quality Management Plan (**CAQMP**) (Schedule 2). In addition, I note that

¹ Page 59 of Waka Kotahi Conditions (Track Changes Version).

² Pages 59-60 of Waka Kotahi Conditions (Track Changes Version).

³ Pages 75-82 of Waka Kotahi Conditions (Track Changes Version).

Waka Kotahi has amended condition RAQ1B⁴ to include additional dust monitoring at Manukau to address submitters' concerns.

[10] I comment on these changes further below:

Drafting of Condition RAQ1A

[11] Mr Curtis and I identified that the wording of Condition RAQ1A was not in complete alignment with the condition set out in the Ministry for the Environment Good Practice Guide for Managing and Assessing Dust (2016). We both agreed that the word 'adverse' should be placed before 'effects'.

[12] This change is needed because while dust may be detected beyond the boundary of the Site, it must be sufficient to create an adverse effect and be objectionable or offensive in the opinion of an 'ordinary reasonable person'. This change has been incorporated into the Waka Kotahi Conditions.

[13] In addition to this minor amendment, I note that the definition and terminology used to describe Project areas have been revised to better describe the compliance boundary. I support this change.

Communication of Dust Monitoring Results

[14] In the Air Quality JWS, I stated that the annual communication of dust inspections initially proposed by Waka Kotahi was too infrequent and recommended the planning experts review this frequency during expert conferencing.⁵ Consequently, the planning experts have amended condition RAQ1A(f) to require monthly reporting. I also support this change.

Trigger to Stop Work

[15] As set out in my s87F and 198D Report, I recommended various triggers that, if exceeded, would require works to be suspended until measured values dropped below these trigger values.⁶ I made this recommendation to reflect that during extreme weather conditions (namely dry, windy periods) where

⁴ Page 60 of Waka Kotahi Conditions (Track Changes Version).

⁵ Joint Witness Statement - Air Quality, 27 July 2023 at Annexure A.

⁶ Section 87F and 198D Report, at paragraphs [97] – [99].

high-risk dust-generating activities are close to receptors, it may be challenging to manage dust discharges and prevent dust nuisance effects.

- [16] While I recommended specific triggers, I am now comfortable with the change made to Schedule 2(e) regarding contingency measures to include temporarily ceasing activities, should the proposed mitigation measures not be sufficient to control effects. I consider this change, in conjunction with the performance standard for dust effects (as set out in Condition RAQ1 of the Waka Kotahi Conditions⁷) to be sufficient to manage dust nuisance effects during extreme conditions.

Additional Dust Monitoring

- [17] As an outcome of mediation, I note there is now a requirement for a fixed monitor to be installed at 46 Tame Porati Street, which is located between the Project alignment and Manukau. It is proposed that the monitor will operate for the duration of construction activities.
- [18] I understand that this monitor will be in the same location (or at least on the same property) as the monitoring undertaken by Mr Curtis and used to inform the Air Quality Assessment. This will provide a continuation of this dataset and allow comparisons with baseline (before the Project) measurements to assess the effectiveness of dust mitigation in this area of the Project. The data can also be shared with the residents of Manukau (if requested of the Regional Councils) to provide comfort that dust is not adversely affecting their properties.
- [19] I support the inclusion of this additional monitoring and consider that it will benefit the Project.

Triggers for dust effects on roof-collected water systems

- [20] In my s87F and 198D Report, I recommended that roof-collected water systems associated with properties within 200 m of the designation be upgraded to minimise the impact of dust deposition effects.⁸ However, upon

⁷ Page 59 of Waka Kotahi Conditions (Track Changes Version).

⁸ Section 87F and 198D Report, at paragraphs [100] – [101].

obtaining a better understanding of the potential for dust deposition effects through further information, as assisted by Mr Curtis' evidence and related discussions, I consider that it is only likely to be properties within 50 m of haul roads or areas of land disturbance or earthwork activities that have the potential for roof water collection systems to be impacted by dust.

- [21] In most circumstances, I expect that the mitigation measures proposed will be sufficient to manage dust nuisance effects on nearby properties (including on roof-collected water systems). However, as Mr Curtis notes in his Air Quality Assessment, there is still some potential for residual emissions to cause effects.
- [22] The main issue with dust deposition on roof-collected water systems is sediment accumulating in water tanks or blocking filters. Given that there are no appropriate standards in New Zealand that provide information on acceptable amounts of sediment/particulate in drinking water, Mr Curtis and I agreed that there should be a requirement, as part of monthly dust inspections, for the tank water to be tested to determine if the drinking water system had been affected.
- [23] In the absence of an appropriate standard that covers particulate levels in drinking water; Mr Curtis and I agreed that a 20% increase in turbidity above baseline measurements (measurements taken before construction) would likely represent a noticeable increase in the level of sedimentation that could result in an adverse effect. As a result, this value was recommended as a trigger for implementing additional mitigation to manage this effect (for example, implementation of upgrades to the roof-collected water system).
- [24] Mr Curtis and I agreed in the Air Quality JWS that this turbidity monitoring requirement would be required on a monthly basis and undertaken in conjunction with visual dust inspections.⁹ While this requirement was reflected in the conditions attached to the Planning JWS, the Waka Kotahi Conditions have removed the monthly testing requirement and instead only

⁹ Joint Witness Statement – Air Quality, 27 July 2023, at Annexure A.

require this monitoring if 1-hour average PM₁₀ concentrations exceed the trigger limit of 150 µg/m³, as a rolling 1-hour average.

- [25] I am concerned that reliance on the trigger limit on its own may result in situations where sustained levels of moderately elevated PM₁₀ concentrations, which may not necessarily exceed the PM₁₀ trigger, are not identified despite the risk of increased dust loading on roof-collected water systems having adverse effects.
- [26] I do not consider this monthly testing requirement to be particularly onerous or difficult to undertake, especially given that monthly visual inspections are still required, requiring visits to each property that meet the requirements of RAQ1A(c). In particular, I note:
- (a) I understand that a portable handheld turbidity meter would likely be used to undertake these measurements. This means the costs of sampling is limited to the capital cost of purchasing the equipment, maintaining and calibrating it.
 - (b) I anticipate that the sampling process would be a simple exercise of asking the resident for a sample to be collected from one of their external taps. I note that there would be no need for more intrusive testing that would require access to the roof or water tanks.
- [27] Given that the additional task of checking the turbidity of the tank water is (as I understand it) a relatively simple exercise, in my opinion, the additional level of assurance that the testing provides in terms of potential effects on residents' drinking water should be provided through the requirement for monitoring. I see no reason why this should only be required if there is an exceedance of the PM₁₀ monitoring trigger. This is particularly the case given that there is the potential in some instances of sustained levels of moderately elevated PM₁₀ concentrations, which might not necessarily exceed the PM₁₀ trigger, as I identify above.

E. RESPONSE TO SECTION 274 PARTY EVIDENCE

[28] My s87F and 198D Report commented on submissions received on the application and NoRs. Having reviewed the evidence filed by section 274 parties, there are no new issues that need to be addressed in relation to air quality.

F. CONDITIONS

[29] I have reviewed the Waka Kotahi Conditions. With the exception of the amendments made to condition RAQ1A, regarding turbidity testing of roof water collection systems, I am otherwise comfortable with those conditions.

[30] To address my concern regarding turbidity monitoring, I recommend that Condition RAQ1A(d) be deleted and RAQ1A(c) be amended to reflect the drafting provided in Planning JWS version of the conditions, along with the additional requirement for visual inspections as part of monthly inspections. I understand that Mr St Clair and Ms Anderson will address these amendments in updated conditions to be filed with their evidence.

G. CONCLUSION

[31] With the adoption of my recommended change to Condition RAQ1A(c) and deletion of RAQ1A(d), I am satisfied that the Waka Kotahi Conditions otherwise include appropriate measures and standards to control the effects of air discharges associated with the Project and minimise the potential for adverse effects.

26 September 2023

Peter Warwick Stacey