

BEFORE THE HEARING PANEL

IN THE MATTER of the Resource
Management Act 1991

AND

IN THE MATTER of the applications by
Hirock Limited to the Palmerston North City
Council (LU 6962) and the Manawatū -
Whanganui Regional Council (APP-
2022203991.00) for resource consents
associated with the expansion and
operation of an existing quarry at
167-257 Kendalls Line, Palmerston North

EXPERT CONFERENCING

JOINT WITNESS STATEMENT – WATER QUALITY AND AQUATIC ECOLOGY

17 MAY 2023

A. INTRODUCTION

1. This joint witness statement relates to expert conferencing on the topic of Water Quality and Aquatic Ecology.
2. This joint witness statement relates to resource consent applications lodged by the Hirock Limited (Applicant) to Palmerston North City Council (PNCC) and Manawatu-Wanganui Regional Council (Horizons), to be processed jointly, for the for the expansion of an existing quarry at 167 - 257 Kendall's Line, Palmerston North, noting that the topics of this Statement are within the jurisdiction of Horizons and are covered in the Application for regional consents.
3. The expert conferencing was held by TEAMS on 11, 12, 16 and 17 May 2023.
4. Attendees at the conference were:
 - a. Eric Fa'anoi for Horizons/PNCC;
 - b. Anne Marieke Soeter for the Applicant.

B. EXPERTISE

5. My name is Eric Fa'anoi. I have completed a Bachelor's of Science (BSc) at Massey University double majoring in Environmental Science and Chemistry. I am employed as a Research Assistant in the Fish Passage project funded by Jobs for Nature and a Freshwater Advisor for the Central Manawatū Catchment. My involvement with this consent has been assessing it from a freshwater perspective on behalf of the Manawatū-Whanganui Regional Council (MWRC) trading as Horizons Regional Council. While this consent is not before the Environment Court, I have read the Code of Conduct for Expert Witness, Section 9 of Practice Note 2023. Accordingly, I have complied with the Code in the preparation of this joint witness statement.
6. My name is Anne Marieke Soeter, I hold a Bachelor of Science (BSc) and Master of Science (MSc) degree from the University of Amsterdam in the field of Biology (Ecology and Evolution) and Biological Sciences (Limnology and Oceanography), respectively. I am a full member of EIANZ and have a professional affiliation with the NZ Rivers Group (Engineering NZ) and Water NZ. I have 10 years of experience in academics, government, and consultancy in the field of Ecotoxicology and Environmental Fate and related fields. I am employed as a Senior Water Professional at Good Earth Matters Consulting Ltd focussing on water quality and environmental matters. My involvement with this consent has been as an advisor to the applicant in regard to monitoring options and water quality impacts. While this consent is

not before the Environment Court, I have read the Code of Conduct for Expert Witness, Section 9 of Practice Note 2023. Accordingly, I have complied with the Code in the preparation of this joint witness statement.

C. PURPOSE AND SCOPE OF CONFERENCING

7. The purpose of conferencing was to identify, discuss and highlight points where there is agreement or disagreement on matters pertaining to water quality and aquatic ecology arising from the resource consent applications, the submissions on them and the joint (PNCC and Horizons) s42A reports.
8. The scope of the issues addressed at this conference included:
 - a. Scope, activity description and nature of the discharge
 - b. Scope of the discussion
 - c. Discharge frequency
 - d. Discharge contaminants
 - e. Farm runoff
 - f. Naming of waterways
 - g. One Plan values of waterway
 - h. Waterway definition
 - i. Monitoring parameters and frequency
 - j. Discharge Standards
 - k. Environmental standard for chloride
 - l. Iwi consultation
 - m. Review clause for discharge quality standards

D. PRIMARY DATA RELIED ON

9. The following documents, data and information have been relied on in this expert conference:
 - a. Good Earth Matters Consulting Limited – Linton Quarry Expansion: Resource Consent Application and Assessment of Environmental Effects for Joint Application to Palmerston North City Council and

Horizons Regional Council (the Application, November 2022); including all appendices.

- b. Section 42A LIVE DRAFT report by Mr Eric Fa'anoi (dated 9/5/2023).
- c. Letter from Good Earth Matters Consulting Ltd on behalf of Hirock to Natasha Adsett, Response to S92 Further Information Request, dated 22 December 2022 which includes the updated draft: Linton Quarry Monitoring Plan - Settlement Pond 1/Sediment Retention Pond – December 2022 and a memorandum regarding discharge treatment and expected standards, instream, effects and discharge volumes.
- d. A site visit undertaken by Mr Fa'anoi on the 23rd August 2022.

E. AGREED ISSUES

- 10. Refer to Annexure A and Annexure B.

F. DISAGREEMENT AND REASONS

- 11. Refer to Annexure A.


G. CHANGES FROM S42A REPORT


- 12. Refer to Annexure A.

H. RESERVATIONS

- 13. This conference has been held prior to the finalising and circulation of the S42A RMA Planner's report from the consent authority.

Date: 17 May 2023


Eric Fa'anoi


Anne Marieke Soeter

ANNEXURE A

IN THE MATTER of applications by of the applications by Hirock Limited to the Palmerston North City Council (LU 6962) and the Manawatū-Whanganui Regional Council (APP-2022203991.00) for resource consents associated with the expansion and operation of an existing quarry at 167-257 Kendalls Line, Palmerston North.

Expert conferencing – Water Quality and Aquatic Ecology

Participants: Eric Fa'anoi, Anne Marieke Soeter

No	Topic/Issue	Statements	Agreed position	Disagreements and reasons	Changes to Section 42A Report
1a	Scope, activity description and nature of the discharge	<p>The discharge to be assessed is from the proposed new sediment retention pond (SRP1) discussed in the application.</p> <p>Which will consolidate the three current discharge points into one discharge point. The discharge from this proposed sediment retention pond is captured within a catchment area of approximately 7.2 hectares which does not include the quarry pit. It is proposed that the quarry pit will store stormwater until the water storage pond or the sediment retention pond has capacity to accept water via pumping.</p> <p>SRP1 is designed, constructed and operated in accordance with best practise guidelines including a chemical treatment management plan to be certified by the consent authority¹.</p>	Both parties agree	Nil	Nil

¹ Greater Wellington Regional Council's Erosion and Sediment Control Guide for Land Disturbing Activities in the Wellington Region (February 2021)

No	Topic/Issue	Statements	Agreed position	Disagreements and reasons	Changes to Section 42A Report
1b	Scope of the discussion	The purpose of this discussion is to identify monitoring parameters as well as trigger and compliance values that adequately monitor for environmental effects.	Both parties agree	Nil	Nil
2	Discharge frequency	The discharge is intermittent and occurs during and immediately following rainfall events and when stormwater from the pit is pumped to SRP1 for operational reasons.	<p>Both parties agree that the discharge can occur during and immediately following rainfall events and can occur when stormwater from the pit is pumped to SRP1 for operational reasons.</p> <p>Both parties agree while there is a disagreement with discharge frequency the proposed monitoring conditions captures the assessment of the discharge caused when pumping occurs to SRP1.</p>	<p>Mr Fa'anoi & Mrs Soeter:</p> <p>Mr Fa'anoi and Mrs Soeter disagree on the frequency of the discharge.</p> <p>Mr Fa'anoi:</p> <p>Mr Fa'anoi is of the opinion the discharge is continuous as water is water is pumped from the quarry pit into the SRP1 at any time of the year. This could result in a discharge at any time of the year and is unrelated to rainfall events. Refer to S42A report.</p> <p>Mrs Soeter:</p> <p>Mrs Soeter understands that water is a valuable source in the quarry with no alternatives available. Particularly in summer water can be limited as a result the management would prefer to retain water as much as possible. As a result, Mrs. Soeter is of the opinion that the discharge is intermitted with dry periods, particular in summer.</p>	Nil

No	Topic/Issue	Statements	Agreed position	Disagreements and reasons	Changes to Section 42A Report
3	Discharge contaminates	<p>As the discharge is derived from a quarry operation, the contaminants of concern are:</p> <ul style="list-style-type: none"> • Sediment; • Nutrients that may be bound to sediment particles i.e. Dissolved Reactive Phosphorus (DRP) • Chloride <p>Other One Plan Water Quality parameters are not considered relevant.</p>	Both parties agree that sediment and chloride are considered the contaminants of concern.	<p>Parties do not agree on the magnitude of DRP risk to the receiving environment.</p> <p>Both parties have agreed on monitoring conditions regardless of this disagreement. Refer to S42A Report.</p>	Nil
4	Farm run-off	DRP is discharged from farmland into the unnamed tributary ("farm drain") potentially contaminating samples taken in the drain.	<p>Both parties agree that the farmland run-off contributes to the farm drain but disagree in regard to the extends it complicates the monitoring of DRP.</p> <p>During conferencing it was recommended and agreed by both parties that moving the discharge sampling to the quarry side of the bund would mitigate the concern of "farmland" DRP contamination of the sample.</p>	Nil	Nil
5	Naming of waterways	<p>The end of the culvert that is carrying the discharge: the discharge point</p> <p>Prior to discharge into the Nguturoa Stream ("Linton Drain") circa 4 km from site: unnamed tributary ("farm drain")</p> <p>Stream circa 4 km from the site: the Nguturoa Stream ("Linton Drain")</p>	<p>Agreed on naming convention.</p> <p>Mr Fa'anoi:</p> <p>Mr Fa'anoi notes that water pooling parallel to the bunding was functioning poorly as a drain and due to weather conditions resembled a pond during the site visit. This area was collecting water from the discharge points. Therefore, is also referred to as a Raupō pond in the draft S42A. Mr Fa'anoi is of the understanding that this will not occur after the proposed discharge points are consolidated as the discharge will be going directly into the farm drain and not be pooling in this area.</p>	Nil	Nil

No	Topic/Issue	Statements	Agreed position	Disagreements and reasons	Changes to Section 42A Report
6	One Plan values of waterway	<p>The One Plan recognises the following values in the unnamed tributary of the Nguturoa Stream (“farm drain”) that the discharge is proposed to enter:</p> <p>Schedule B Zone wide values for the Lower Tokomaru management sub-zone (Mana_13c) are:</p> <ul style="list-style-type: none"> • Life Supporting Capacity – Lowland Mixed; • Aesthetics; • Mauri; • Contact Recreation; • Industrial abstraction; • Irrigation abstraction; • Stock water; • Existing infrastructure; and • Capacity to assimilate pollution. <p>There are no site-specific Schedule B values that apply to this specific area or site.</p>	Both parties agree on this statement	Nil	Nil
7	Waterway definition	The unnamed tributary of the Nguturoa Stream (“farm drain”) that the discharge enters should be assessed as a modified intermittent watercourse (RMA river).	Both parties agree on this statement	Nil	Nil

No	Topic/Issue	Statements	Agreed position	Disagreements and reasons	Changes to Section 42A Report
8	Monitoring parameters and frequency	<p>The establishment of standards will be important to ensure that the values of the unnamed tributary are protected.</p> <p>Monitoring is required to ensure that these standards are complied with.</p> <p>Monitoring should include:</p> <ul style="list-style-type: none"> • Sediment (measured through NTU and clarity tube); • Phosphorus (DRP); • pH; • Chloride. 	<p>Both parties agree that the following parameters should be measured:</p> <ul style="list-style-type: none"> • Sediment (measured through NTU and clarity tube); • pH; • Chloride. • DRP <p>Monitoring should be according to condition 44.</p>	Nil	Nil
9	Discharge Standards	<ul style="list-style-type: none"> • Sediment should be monitored using NTU with a trigger value of 75 and a compliance NTU value of 150 at discharge. • Discharge clarity of greater than 100mm measured by clarity tube. • pH compliance value of 5.5 till 8.5 at discharge. 	<p>Both parties agree.</p> <p>Limits described in condition 42 should be applied.</p>	Nil	Nil
10	Environmental standard for chloride	<p>Chloride should be monitored using mg/L and a compliance value of 230 mg/L just beyond the mixing zone.</p>	<p>Both parties agree.</p> <p>Limit as described in condition 42 should be applied.</p>	Nil	Nil
11	lwi consultation	<p>lwi consultation is required in case of non-compliance (condition 42 e,f).</p>	<p>Both parties agree.</p>	Nil	Nil

No	Topic/Issue	Statements	Agreed position	Disagreements and reasons	Changes to Section 42A Report
12	Review clause for discharge quality standards	Monitoring of parameters and frequency could be reviewed and adjusted after a 24-month time frame, in agreement with HRC: <ul style="list-style-type: none"> • Chloride • NTU/Clarity • DRP 	Both parties agree on the review clause as described in condition 46.	Nil	Nil

ANNEXURE B

Discharge of Treated Washwater and Stormwater	
38.	The Consent Holder shall provide the Manawatu-Wanganui Regional Council with a Final Monitoring Plan.
39.	The final monitoring plan required by Condition 38 shall be certified in writing by the Manawatu-Wanganui Regional Council acting in a technical certification capacity prior to any activities authorised by this resource consent commencing and the Consent Holder shall undertake all monitoring authorised by this consent in accordance with the certified final monitoring plan.
40.	Any changes to the monitoring plan required by Condition 38 must be approved by the Manawatu-Wanganui Regional Council.
41.	Activities authorised by this consent shall not result in the discharge of contaminants that are toxic to aquatic ecosystems. ADVICE NOTE: This includes leakage of fuel, oil and other contaminants from machinery used for activities under this consent.
42.	<p>Sediment retention devices must be designed and operated to achieve the following performance targets:</p> <ul style="list-style-type: none"> a. the pH of any discharge from sediment retention devices to any water body must not be less than 5.5 or greater than 8.5; b. the turbidity of any discharge from sediment retention devices to any water body must not be higher than 150 NTU; with a trigger value for investigation of 75 NTU; and a discharge clarity of greater than 100mm measured by clarity tube. c. the Consent Holder must ensure that the soluble chloride concentration shall not exceed 230 mg/L just beyond the reasonable mixing zone d. Where a performance target in condition 42 a, b, c is not achieved, an investigation must be undertaken to: <ul style="list-style-type: none"> - confirm the reason why performance target has not been achieved, with reference to the relevant catchment; and - develop and implement response measures to achieve the performance targets in the future. e. Following the completion of the investigation required by condition 42 d, all recommended response measures must be implemented within with fifteen (15) working days, except where the Manawatu-Wanganui Regional Council and Whakapai Hauora agrees in writing to a longer timeframe for the implementation of response measures. f. A report that summarises the investigation and response measures required by condition 42 e. must be provided to the Manawatu-Wanganui Regional Council and Whakapai Hauora in writing within fifteen (15) working days of the performance target not being achieved. <p>ADVICE NOTE: The reasonable mixing zone is defined as being 7 times the bed width at median flow.</p>
43.	Monitoring data required by condition 44 should be recorded and made available to the Manawatu-Whanganui Regional Council on request within five (5) working days.

Discharge of Treated Washwater and Stormwater	
44.	<p>To monitor compliance with condition 43, the consent holder shall monitor the following parameters:</p> <ol style="list-style-type: none"> a. Once per Month; <ul style="list-style-type: none"> - pH; - Turbidity (NTU and clarity tube); - Chloride - DRP - The time and date, and the weather and flow conditions at the time of monitoring shall be recorded; - Observations of any conspicuous oil or grease films, scums or foams, and any emission of objectionable odour. b. During rain events and when water is pumped from the pond at the base of the quarry pit into the SRP1; <ul style="list-style-type: none"> - pH; - Turbidity (NTU and clarity tube); - DRP - The time and date, and the weather and flow conditions at the time of monitoring shall be recorded; - Observations of any conspicuous oil or grease films, scums or foams, and any emission of objectionable odour. c. When malfunctioning of the dosing equipment or malfunctioning of the sedimentation pond is suspected/confirmed; <ul style="list-style-type: none"> - pH; - Turbidity; - Chloride; - DRP - The time and date, and the weather and flow conditions at the time of monitoring shall be recorded; - Observations of any conspicuous oil or grease films, scums or foams, and any emission of objectionable odour. d. Measurements and samples should be taken at the following locations: <ul style="list-style-type: none"> - pH: the discharge point/ discharge on the quarry side of the bund - NTU and visual clarity: the discharge point/ discharge on the quarry side of the bund - Chloride: just beyond the mixing zone as specified in the certified monitoring plan. - DRP: discharge on the quarry side of the bund e. Any measuring equipment used should be manufactured for the respective purpose and calibrated according to the manufacturer's guidelines. <p>ADVICE NOTE: rainfall event is defined as being 3 millimetres of rainfall (within 24 hours) measured at a weather station agreed in the monitoring plan. Monitoring should be undertaken as soon as possible, and no later than 24 hours after each rainfall event begins.</p> <p>ADVICE NOTE: The reasonable mixing zone is defined as being 7 times the bed width at median flow.</p>
45.	<p>Monitoring of parameters according to conditions 42 and 44 should be undertaken for a period of at least 24 months, at which point the monitoring plan shall be reviewed and updated based on the results and in agreement with the Manawatu-Wanganui Regional Council's Team Leader Consents Monitoring.</p> <ol style="list-style-type: none"> a. The report shall be prepared by a suitably qualified person. b. This report shall cover; <ul style="list-style-type: none"> - The results of all monitoring undertaken in the previous 24 months; - Any non-compliances and subsequent investigations; - Discussion of any trends evident from the monitoring data; - Recommendations for a future monitoring plan;

Discharge of Treated Washwater and Stormwater

46. a. If the parameter within condition 42 a and b are met following the completion of the 24-month reporting period, monitoring of pH and turbidity shall be reduced to major rainfall events and if and when malfunctioning of the dosing equipment or malfunctioning of the sedimentation pond is suspected/confirmed, only.
- b. If the parameter with condition 42 c are met following the completion of the 24-month reporting period, monitoring of chloride shall be reduced to quarterly and if and when malfunctioning of the dosing equipment or malfunctioning of the sedimentation pond is suspected/confirmed, only.
- c. If DRP concentrations are at or below levels that can be expected in the surrounding environment after the 24-month reporting period, monitoring of DRP shall be reduced to quarterly and if and when malfunctioning of the dosing equipment or malfunctioning of the sedimentation pond is suspected/confirmed, only.

ADVICE NOTE: Major rainfall event is defined as being 25 millimetres of rainfall (within 24 hours). Monitoring should be undertaken as soon as possible, and no later than 24 hours after each rainfall event begins.