

BEFORE THE HEARING PANEL

IN THE MATTER of the Resource Management
Act 1991

AND

IN THE MATTER of **APP-2005011178.01** and
APP-2018201909.00 for resource consents
associated with the operation of the Eketāhuna
Wastewater Treatment Plant, including
construction of a wetland, diversion of water,
construction of a bund, a discharge into the
Makakahi River, a discharge to air (principally
odour), a discharge to land via pond and wetland
seepage, Bridge Street, Eketāhuna

REPORT TO THE COMMISSIONERS

DR BRENT COWIE (CHAIR), MR REGINALD PROFFIT AND MR PETER CALLANDER

**SECTION 42A ADDENDUM TO SUPPLEMENTARY REPORT 2 OF LOGAN ARTHUR
BROWN – FRESHWATER AND PARTNERSHIPS MANAGER**

26 November 2018

A. INTRODUCTION

1. My name is Logan Arthur Brown and I am giving evidence in these proceedings on behalf of the Manawatū-Wanganui Regional Council (Horizons Regional Council - HRC). My qualifications are stated in my previous s42A evidence to the commissioners dated 7th March 2017.
2. This evidence has been prepared to provide an assessment of the further application that has been received for the construction of a wetland and also to provide an update on further water quality information that has continued to be collected and analysis of this monitoring data during the adjournment.
3. As per my previous evidence I confirm that I have read the Environment Court's Code of Conduct for expert witnesses contained in the Environment Court Practice Note (2014) and I agree to comply with it.
4. Further to my evidence dated 5 November 2018. I have extracted the information from Figure 1 through to Figure 6 relating to trends and the direction of travel for water quality improvement (or degradation). This information has been pulled out specifically for the Makakahi and Mangatainoka catchment until upstream of the discharge from the Pahiatua WWTP monitoring location.
5. The information presented below follows the same convention as the Figures 1 through to Figure 6 and is explained further in paragraph 20 and Table 1 of my evidence dated 5 November 2018.

	SIN		DRP		Ammoniacal-N		MCI		Chlorophyll a		E. coli	
	Trend	Direction of travel	Trend	Direction of travel	Trend	Direction of travel	Trend	Direction of travel	Trend	Direction of travel	Trend	Direction of travel
Makakahi at u/s WWTP	Improving	Extremely likely	Insufficient data	As likely as not	Insufficient data	As likely as not					Insufficient data	Unlikely
Eketāhuna WWTP	Degrading	Exceptionally unlikely	Insufficient data	As likely as not	Degrading	Exceptionally unlikely					Insufficient data	As likely as not
Makakahi at d/s WWTP	Insufficient data	As likely as not	Insufficient data	Likely	Improving ¹	Extremely likely ²					Insufficient data	As likely as not
Makakahi at Hamua	Insufficient data	As likely as not ³	Improving	Extremely likely	Insufficient data	As likely as not ⁴	Insufficient data	As likely as not	Insufficient data	Unlikely	Insufficient data	Very likely
Mangatainoka at Putara	Insufficient data	As likely as not	Degrading	Extremely unlikely	Insufficient data	As likely as not	Degrading	Extremely unlikely	Degrading	Extremely unlikely	Degrading	Extremely unlikely
Mangatainoka at Larsons Rd	Insufficient data	Very likely	Degrading	Extremely unlikely	Insufficient data	Unlikely					Degrading	Extremely unlikely
Mangatainoka at u/s Pahiatua WWTP	Insufficient data	As likely as not	Insufficient	Likely	Improving	Extremely likely ⁵			Insufficient data	Unlikely ⁶	Insufficient data	Unlikely

¹ Changes to insufficient with flow adjusted data

² Changes to very likely with flow adjusted data

³ Changes to very likely with flow adjusted data

⁴ Changes to unlikely with flow adjusted data

⁵ Changes to likely with flow adjusted data

⁶ Changes to very unlikely with flow adjusted data

	Clarity		G260		G540		POM		TSS	
	Trend	Direction of travel	Trend	Direction of travel	Trend	Direction of travel	Trend	Direction of travel	Trend	Direction of travel
Makakahi at u/s WWTP	Insufficient	Likely	Insufficient	Unlikely	Insufficient	Unlikely	Insufficient	Likely	Improving ⁷	Extremely likely ⁸
Eketāhuna WWTP	n/a	n/a	Insufficient	As likely as not	Insufficient	As likely as not	Improving	Extremely likely	Improving	Extremely likely
Makakahi at d/s WWTP	Insufficient	As likely as not	Insufficient	Unlikely	Insufficient	Very unlikely	Insufficient	As likely as not	Improving ⁹	Extremely likely ¹⁰
Makakahi at Hamua	Insufficient	Very unlikely	Insufficient	As likely as not	Insufficient	Likely	n/a	n/a	Insufficient	Very likely ¹¹
Mangatainoka at Putara	Degrading	Exceptionally unlikely ¹²	Insufficient	As likely as not	Not analysed	Not analysed	n/a	n/a	Degrading	Exceptionally unlikely
Mangatainoka at Larsons Rd	Degrading	Exceptionally unlikely ¹³	Insufficient	Unlikely	Insufficient	As likely as not	n/a	n/a	Insufficient	Unlikely
Mangatainoka at u/s Pahiatua WWTP	Insufficient	Likely	Insufficient	Unlikely	Insufficient	Unlikely	Improving	Extremely likely	Insufficient	Very likely

	Exceptional unlikely
	Extremely unlikely
	Very unlikely
	Unlikely
	As likely as not
	Likely
	Very likely
	Extremely likely
	Virtually certain

⁷ Changes to insufficient with flow adjusted data

⁸ Changes to very likely with flow adjusted data

⁹ Changes to insufficient with flow adjusted data

¹⁰ Changes to likely with flow adjusted data

¹¹ Changes to as likely as not with flow adjusted data

¹² Changes to extremely unlikely with flow adjusted data

¹³ Changes to extremely unlikely with flow adjusted data