

**BEFORE THE**

Waikato Regional Council Hearing  
Commissioners

**IN THE MATTER**

of the Resource Management Act 1991

**AND**

**IN THE MATTER**

of Waikato Regional Proposed Plan Change 1 –  
Waikato and Waipā River Catchments

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**STATEMENT OF OLIVIER MICHEL NICOLAS AUSSEIL  
ON BEHALF OF THE WAIKATO AND WAIPĀ RIVER IWI  
IN RESPONSE TO THE QUESTIONS IN THE PANEL'S 24 JULY MINUTE  
(Submitter No. 74035)**

**9 AUGUST 2019**

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**KAHUI**  
LEGAL

PO Box 1654

Telephone: (04) 495 9999

Facsimile: (04) 495 9990

Counsel: J P Ferguson / M Wikaira

Email: [jamie@kahuilegal.co.nz](mailto:jamie@kahuilegal.co.nz) / [maia@whaialegal.co.nz](mailto:maia@whaialegal.co.nz)

**WELLINGTON**

## INTRODUCTION

1. My name is Olivier Michel Nicolas Ausseil.
2. I am Principal Scientist – Water Quality at Aquanet Consulting Ltd. My qualifications and experience are set out in my primary statement of evidence, dated 15 February 2019 at paragraphs 14 to 27.
3. This Statement has been prepared in response to questions from the Panel following the Hearing on Table 3.11.1 and the Joint Witness Statement, held on the 18 July 2019. Three questions were posed to me, as follows:
  - (a) Question 1: In your Block 1 evidence in chief, you expressed concern about the way NPSFM “GRADING” had been undertaken and presented in Table 3.11-1. You cite the Whatawhiriwhiri Stream at Edgecumbe Street (Sub-catchment 28) as an example (paragraph 79). In paragraph 81, you identified what you considered as another issue in Table 3.11-1 relating to the freshwater objectives for chlorophyll-a, TN and TP, which you stated appeared to have been determined individually, without regard for their interconnection. Following expert conferencing, are you satisfied that these issues have now been addressed, and if so in what respect, or do you consider they are no longer relevant given the recommended changes to Table 3.11-1 that the majority of the experts, including yourself, have agreed to at conferencing? In particular, the experts' recommendation for nitrate and ammonia toxicity thresholds in the mainstream and tributaries (page 20 of the Joint Witness Statement) and Approach Option 1C for TN and Approach 2C for TP in the Waikato River mainstem?
  - (b) Question 2: In relation to *E.coli*, at page 124 of the Joint Witness Statement, you supported a limit that, among other things, excluded flows greater than 3 times median in Tukituki PC6. Please explain the reasons for your shift in position?
  - (c) Question 3: In relation to temperature, at page 131 of the Joint Witness Statement in relation to the Daniel paper, your response implies support for the Operative Waikato Regional

standards related to temperature change. Please confirm, or otherwise?

#### **QUESTION 1**

4. I am satisfied that the concerns I raised in my evidence in chief are, to the extent possible, addressed by the recommendations contained in pp 20-21 and 30-34 of the Joint Witness Statement. Whilst the work undertaken to prepare the JWS was based on best available information at the time, its technical limitations and the limited time available to prepare it must be acknowledged. The notes in paragraphs 6 and 7 (pp 35-36 of the JWS) are, in my opinion, particularly important.

#### **QUESTION 2**

5. These aspects are discussed in paragraphs 47 and 48 of my evidence (15 February 2019). In summary, whilst there are good technical reasons to exclude *E.coli* data collected during high river flows, one must also consider that recreational use of the Waikato hydro lakes is less likely to be dependent on river flow than in a typical river, and the NPSFM explicitly requires the incorporation of samples collected “*regardless of weather and flow conditions*”. Beyond the fact that PC1 must give effect to the latest version of the NPSFM, there is, in my view, value in striving for national consistency in the methodologies used to assess suitability for recreational use of freshwaters. The pros and cons of both approaches were discussed at length during caucusing, and on balance, I recommended adopting the NPSFM Attribute for *E.coli*.

#### **QUESTION 3**

6. My comments on the Temperature attribute (p131 of the JWS) were not specifically made in reference to the Operative Waikato Regional Plan standards. However, I provide below a short review of, and comments on, temperature standards contained in the operative plan.
7. Section 3.2.4 of the Operative Regional Plan (“Implementation Methods – Water Management Classes and Standards”) contains the following standards relative to temperature:

- (a) Surface Water Class Standards (applicable to all surface water):  
*“As a result of added heat, the water temperature shall not be changed by more than three degrees Celsius”*
  - (b) Significant Indigenous Fisheries and Fish Habitat (applicable to waters identified in Water Management Class maps): *“As a result of added heat, the temperature of the water shall not be changed by more than 3 degrees Celsius. The temperature of the water shall not be caused to exceed 25 degrees Celsius as a result of added heat and shall not adversely affect the passage or spawning of fish.”*
  - (c) Significant Trout Fisheries and Trout Habitat (applicable to waters identified in Water Management Class maps): *“As a result of added heat, the temperature of the water shall not be changed by more than 3 degrees Celsius, and shall not exceed 20 degrees Celsius at any time. Where spawning occurs the temperature shall not be caused to exceed 12 degrees Celsius between May and September.”*
8. As indicated in my “run sheet” (p 131 of the JWS), temperature change standards are, in my experience, a useful and practical way to manage the effects of activities. On that basis I am comfortable with the elements of the above existing standards that relate to temperature change, although I note that a 3 degree Celsius change can be quite significant and could be reduced to one or two degree change in waters with significant indigenous or trout fishery values.
9. As also indicated in my run sheet, I have found that maximum temperature standards (as exist in other regional plans) can be difficult to interpret or apply, particularly when the standard may be breached under “natural” conditions. It is in my view, difficult to recommend a maximum temperature attribute in the absence of information on the “natural” temperature characteristics of the rivers and streams under consideration. On that basis, I am not able to support the elements of the Operative Regional Plan standards that relate to maximum temperature.