

**IN THE MATTER OF** the Resource Management Act 1991  
**AND**  
**IN THE MATTER OF** 24 applications by the Aupouri Aquifer  
Water User Group to the Northland  
Regional Council to take groundwater  
from the deep shell bed aquifer of the  
Aupouri Peninsula (REQ.596300).

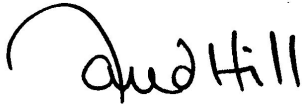
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**SECTION 41C RESOURCE MANAGEMENT ACT 1991**  
**MINUTE & DIRECTION #2**  
**HEARINGS COMMISSIONERS**

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1. The hearing on the above applications commenced on Tuesday, 1 September 2020 at the Te Ahu Centre, Matthews Avenue, Kaitaia, and was adjourned on Thursday, 3 September 2020.
2. At the adjournment the Commissioners indicated that they wished further information on a number of matters as follows:
  - (a) Potential wetland risk due to the coming into operative effect of the National Policy Statement on Freshwater Management 2020 on 3 September 2020;
  - (b) Further consultation with Waiora Marae in light of its submission to the hearing;
  - (c) Further refinement of the consent conditions and respective Groundwater Monitoring and Contingency Plans and, in particular:
    - (i) If the “new” consent applications within the Motutangi-Waiharara Water Users Group FMU are to be included without priority being “saved” for existing consent holders, as is proposed, confirmation from those existing consent holders that they accept that proposition and its implications in the event that abstraction reductions are required; and
    - (ii) Mitigation for any adverse effect on existing bore users should the water level or pressure in their existing bore change materially.
3. By Memorandum dated 4 September 2020, attached, Mr Williamson and Ms Letica provided a summary of tasks requested, a proposed methodology for the assessment of potential unmapped wetlands, and a timeline for review.
4. To that Memorandum we add the following:
  - (a) For Task 2, General Head Boundary, the time series of the flux across the boundary should ideally be shown at a selection of high risk points (i.e. closest to major abstractions as well as places where saline intrusion is already occurring) in addition to the Waterfront bore location that is currently proposed;
  - (b) Updated information should be provided on the Valic and Wataview water requirements based on the information in the Stanisich and Fulton submission; and
  - (c) With respect to Policy H.5 of the pRPN, an assessment of each application in terms of their “Hydraulic Connection Category”.

5. We note that the Memorandum suggests that any responses to the paragraph 3 wetland methodology should be provided within 5 working days – i.e. by Monday, 14 September 2020. We agree with that timeframe.
6. Once responses are received and considered we expect the applicant, in consultation with the Department of Conservation and the Northland Regional Council to prepare and submit a jointly agreed schedule of tasks and a timeline for that work for our agreement by no later than Monday, 28 September 2020. We also invite those persons to advise and identify whether all or some of that work could be completed as part of an adaptive management set of conditions.
7. Any correspondence relating to this Direction is to be sent through Ms Alissa Sluys, Hearing Administrator, Northland Regional Council, [alissas@nrc.govt.nz](mailto:alissas@nrc.govt.nz) .

A handwritten signature in black ink that reads "David Hill". The signature is written in a cursive, slightly slanted style.

David Hill  
Chair, Hearings Panel  
7 September 2020

**Before the Independent Commissioners of the Northland Regional  
Council (NRC)**

In the Matter of            the Resource Management Act 1991

And

In the Matter of            24 Water Permit Applicants (the Applicants) seeking  
to take and use groundwater from the Aupōuri sub-  
aquifer zones: Other, Waihopo, Houhora, Motutangi,  
Waiparera, Paparore, Sweetwater, and Ahipara.

Memorandum by

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**Jon Williamson and Martell Letica on behalf of the Applicants**  
for Commissioner Hill and Commissioner Callander

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Dated: 4 September 2020

# 1. Introduction

1. The Commissioners asked the Water Permit Applicants technical expert to:
  - (a) summarise the tasks that had been requested of them during the Hearing;
  - (b) provide a methodology for the assessment of potential unmapped wetlands;
  - (c) provide a timeframe for provision of this data; and
  - (d) suggest a timeframe considered appropriate for the other experts, including the Department of Conversation’s experts, to complete their review and response to this data.
  
2. The task list and timeframe are summarised in **Table 1**.

**Table 1. Summary of the tasks and delivery timeframe.**

Task	Description	Date
1. Surface water MALF Effects	<ul style="list-style-type: none"> <li>• Effects analysis on surface water bodies for all AEE's updated to reflect 2020 model data using Naturalised Scenario as baseline for comparison. This is somewhat complicated.</li> <li>• Map showing surface water bodies in the area of proposed takes.</li> </ul>	7 Sep (4 pm)
2. General Head Boundary	<ul style="list-style-type: none"> <li>• Schematic drawing illustrating general head boundary in MODFLOW showing model layers, conductance values and average groundwater pressure.</li> <li>• Hydrographs of groundwater level and constant/general head flux for L1-L6 at model cell corresponding to Waterfront bore location.</li> </ul>	7 Sep (4 pm)
3. Basement Topography	<ul style="list-style-type: none"> <li>• Comparison of basement topography in Lincoln Agritect Report report to bore log data focused on area NW of Houhora-showing that LA analysis is &gt;100m greater depth to basement than has been documented.</li> </ul>	7 Sep (4 pm)
4. Material Compressibility for Subsidence	<ul style="list-style-type: none"> <li>• Review of compressibility values used for settlement analysis WRT peat, clay, other materials.</li> </ul>	7 Sep (4 pm)
5. Drawdown at FNDC bore	<ul style="list-style-type: none"> <li>• Compare drawdown at FNDC bore in AEE to PDP table in peer review.</li> </ul>	7 Sep (4 pm)
6. Potential Wetlands Risk Analysis	<ul style="list-style-type: none"> <li>• Preparation of maps using the LiDAR showing potential wetlands and risk defined by degree of hydrologic connection and degree of drawdown.</li> </ul>	7 Sep (4 pm)

3. The methodology for Task 6 Potential Wetland Risk Analysis is proposed as follows:
  - (a) **LiDAR** - NRC’s LiDAR 2019 will be used to generate a land depression layer (anything less than 0.5 ha in area will be excluded).
  - (b) **Depth to Groundwater** - land depressions will be categorised based on depth to groundwater underneath (<1, 1-2, 2-5, >5 m) to define likelihood from high to low of high of hydrological connectivity to the shallow groundwater system. These will be calculated using lowest elevation within the depression itself and median depth to

groundwater from AAGWM transient simulation. A map with categorised colours will be produced showing these connectivity variations. This will be overlaid with the Layer 1 maximum drawdown contours, and the FENZ wetlands.

- (c) **Potential Wetland Risk** – a map will be produced which combined the hydrological connectivity with drawdown to define potential wetland risk. For example, where the depth to groundwater is small (i.e. shallow groundwater) and the maximum drawdown in that area is high, the risk to the potential wetland will be high (and vice versa).
  - (d) This work will be issued to NRC and DOC for their comment.
4. Based on the timeframes taken for WWLA to prepare the data and the delivery dates outlined above, we consider it reasonable for the experts including DOC's to have their comments back within five working days by 4 pm Mon 14 September.

J.L. Williamson & M. Letica

4 September 2020