

07/03/2022

Central Hawke's Bay District Council
C/- Lowe Environmental Impact Limited
PO Box 4667
Palmerston North 4442

Our Ref: APP-126770

For the attention of: Hamish Lowe

Dear Sir

Request for Further Information

Our team of experts have reviewed your quantitative microbial risk assessment (QMRA) and further information responses for resource consent application APP-126770 for the proposed Pōrangahau and Te Paerahi Wastewater Treatment Plant Combined Scheme which includes the current, transitional / staged discharges from the existing Te Paerahi Township Wastewater Treatment Plant and the Pōrangahau Township Wastewater Treatment Plant. There are outstanding matters that we recommend are closed out prior to public notification. Details of further info being requested including reasons why it is important are provided in the appended review memos. In accordance with Section 92 of the Resource Management Act (1991) (RMA) we request the following information.

New further information requests

QMRA

The QMRA conducted to assess the risks of human illness due to the Pōrangahau WWTP discharge uses currently accepted methodology for assessments of this sort. However, there are several aspects of the QMRA that require further elaboration to justify the decisions made in the formulation of the model. These are:

- a) The derivation of log removal values for the application of UV treatment
- b) The derivation of dilution estimates for sites 2-4
- c) The use of marine microbiological guidelines, rather than the freshwater NPS for assessment of the risks.

Please provide clarification on the above.

Land irrigation matters

- I. During the site visit it was explained that all areas of the property would be available for irrigation to provide flexibility to the landowner. Section 4 of the Land Application AEE (Appendix H of the original application) only describes irrigation on LMU1 and LMU3 with no mention of irrigation within LMU2 or on the forestry block at the north end of the section. **Please confirm** which, if any, areas will be excluded from irrigation.
- II. In addition, the Overseer modelling described in *P:C.14a – Existing/Future Farming System and OverseerFM Analysis* (Supporting Information to original application) appears to be based on only irrigation to LMU 1 and LMU 3. This Overseer modelling forms the basis for nutrient mass balance calculations and has been relied on as accurate within the application. **Please provide** Overseer modelling for irrigation of LMU2 and the forestry block (if irrigation is to occur in these areas) including a summary of changes to the total nutrient loss calculations.

Outstanding matters from S92 (RMA) Request

Question 19 – Irrigation Area Maps

The buffer map shows buffers to waterways (20 m) and to property boundaries (5 m). This figure does not exclude the forest area identified in Figure 2 of PC.14a, does not include a 100 m buffer to Wetland 1 as confirmed in the applicant's response to Question 45, does not exclude any area for the proposed WWTP and storage pond and includes LMU2, where no irrigation has been proposed. The applicant should provide a figure including all proposed buffers and non-irrigable areas. The Low Flood Risk Irrigation Area Figure also does not include the above buffers/non-irrigable areas. These buffers should be included to accurately assess the available land outside of the flood risk zone. **Please provide** an updated map.

Question 42 - Pasture Test Methodology and Results / Question 45 – NES-F Discharge Rules Assessment

You've confirmed that the pasture species cover was 15% for site 1 and 46% for the vegetation plot at site 2 and therefore meets the NPS-FM improved pasture exclusion criteria. The applicant further provided a table with the details of the species present and the percentage ground cover. Based on this it can be concluded that Wetland 1 meets the definition of a natural wetland in terms of NPS-FM. The proposed irrigation therefore is located within 100 m of a natural wetland in terms of the NES-F. This contradicts with the AEE (11.2.2) that interpreted that by 'failing' the pasture test, Wetland 1 is not located within 100m of 'natural' wetland and that the NES-F regulations therefore do not apply.

Please provide updated map(s) with the 100 m buffer incorporated in the layout map to the confirmed natural wetland: Wetland 1.

Question 46 – Ecological Assessment of Sites 3 to 11

You've provided details on the steps followed to identify potential wetlands. These potential wetlands were investigated in accordance with the Vegetation Tool: Rapid test. An assessment of the status of these potential wetlands in terms of the Defining 'natural wetlands' and 'natural inland wetlands' guideline (MfE, 2021) and flow diagram however indicate additional steps to be followed. The dominance and the prevalence tests should be completed when the rapid test fail and if it fails both, then it is likely not a wetland, however if one of those is passed or there are some uncertainty the hydric soils tool and the wetland hydrology tool should also be completed. It is also important to note that under this assessment a wetland may be excluded from the 'natural wetland' definition but may still be defined as a wetland and be protected under the Resource Management Act (RMA).

Please provide the results of these tests including assumptions made in terms of lack of wetland characteristics such as hydrology in accordance with the New Zealand Wetland Delineation data form.

Based on the location of probable overland flow paths (OLFPS), Land Information New Zealand (LINZ) aerial imagery and Sentinel 2 satellite imagery dated between 2010 and 2021 there may be potential wetland areas that have not been screened. A rapid screening of these imagery revealed four potential wetland locations. One location is just the north of site 4 and another to the south and two at site 8 in terms of the ecological study (Beca 2021:P:D.66). The two areas identified near site 4 may present ephemeral and seasonal wetland characteristics based on the signatures visible in the imagery over different years. It is noted in the ecological study that site 8 was not further assessed as a wetland due presence of dune vegetation. The aerial imagery suggests the presence of moist depressions at site 8.

These are often associated with dune hollows a type of coastal wetland. Please refer to <https://www.landcareresearch.co.nz/publications/naturally-uncommon-ecosystems/wetlands/duneslacks/> for more information.

The ecological report references that the full list of vegetation is included in Appendix 2, although that vegetation list was only for sites 1 and 2. Figure 1 to 4 present screenshots of the image intervals and the locations of these potential wetland areas.

Please provide the results of these potential wetland areas in accordance with the New Zealand Wetland Delineation data form.

Question 47 – Assessment of Effects on Wetland Hydrology

You indicate that the water discharge to land will not shift away from existing baseline conditions and that it will be unlikely that there will be an ecological shift in the wetland community. Drainage and runoff will also be managed in accordance with a discharge regime described in LEI (2021:P:C.15). **Please complete** an assessment of wetland condition in terms of the Handbook for

monitoring wetland condition (Clarkson et al., 2003) for each identified wetland. This will ensure that the current pressures on the wetlands are identified and facilitate planning to ensure that there is no potential loss in wetland values.

Question 54 – Map of flood areas & climate change

You've stated that all properties within the flood plain of the Pōrangahau River are at risk due to increased rainfall intensity and that this risk needs to be appropriately managed. **Please quantify the risk** to the discharge property within the lifetime of the requested consent duration, lifetime of the assets and below guideline timeframes from climate change related increased rainfall intensity and rising sea levels/tidal influence on the Pōrangahau River adjacent to the discharge site. Please provide estimates on when the site would become unusable for the proposed activities due to coastal inundation and state site irrigation land and asset levels relative to river / estuary levels etc. The flooding and climate change risk assessment should be undertaken in accordance with the most current climate change projections and best practice guidelines such as:

- NIWA climate change projections report for Hawke's Bay:

https://niwa.co.nz/sites/niwa.co.nz/files/GDC-HBRC%20climate%20change%20report%202020_Final-compressed.pdf

- MFE climate change reports:

<https://environment.govt.nz/assets/Publications/Files/arotakenga-huringa-ahuarangi-framework-for-national-climate-change-risk-assessment-for-aotearoa-FINAL.pdf>

<https://environment.govt.nz/assets/Publications/Files/national-climate-change-risk-assessment-method-report.pdf>

And:

- ISO 14091:2021 Adaptation to climate change — Guidelines on vulnerability, impacts and risk assessment

Wastewater

Question 24 Wastewater Staging & UV at Pōrangahau WWTP

Additional information is still required to demonstrate how the UV system(s) will be protected from fouling prior to the installation of the new treatment plant at the Discharge Location (i.e. while pond effluent from Te Paerahi and Pōrangahau is discharged to the existing discharge points, and at the new site), and at Pōrangahau WWTP (as per the letter received accompanying the QMRA).

Question 26 – Future Flows

You've noted that reliable CHBDC flow data from between 2008 and 2019 was adjusted by future population growth projection factors as a proxy to estimate future flows. Further information is required:

- Does this include allowances for I&I reductions, when calculating the future All Flows 2057 ADF.
- This data set can be used to calculate and include conditions that limit the median and peak flow to the treatment plant, as a means to ensure that I&I in the network is managed for the term of the consent, rather than being used to dilute wastewater concentrations. Please provide the All Flow 2057 Peak Month ADF, and Annual ADF, or justification for other values with workings that could be used as average daily and peak instantaneous consent conditions for flow.

Next steps

You must respond in writing to this request, before **30 March 2022** and do one of the following:

- a) Provide the information.
- b) Tell us that you agree to provide the information, but propose an alternative reasonable date (suggest a date).
- c) Tell us that you refuse to provide the information.

It is important that you respond to this request. If you fail to respond within the time limit, or refuse to provide the information requested, Council must:

- Process the application on a publicly notified basis pursuant to s95C(1) and (2) of the RMA; and
- Consider the application under s104 of the RMA.

We have put processing of your application on hold until we receive your response. Please contact Sven Exeter on 0273037354 if you have any questions.

Yours faithfully



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