

1/10/2021

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

**Our Ref:** APP-126770 (quote this number when discussing application with HBRC staff)

For the attention of: Hamish Lowe

Dear Sir

### Request for Further Information

Our team of experts have reviewed your resource consent application APP-126770 for the following activities;

| Authorisation Number: | Activity Description:   | Activity Location   |
|-----------------------|---|---|
| AUTH-127515-01        | to discharge contaminants (aerosols and odour) to air associated with the operation of the combined Pōrangahau and Te Paerahi Wastewater Treatment Plant and land application system.         | 475 Beach Road, Pōrangahau  |
| AUTH-127516-01        | to discharge treated domestic effluent to land via a low rate land application system   | 475 Beach Road, Pōrangahau  |
| AUTH-127517-01        | to discharge treated domestic effluent to land in circumstances where that contaminant may enter water  | 475 Beach Road, Pōrangahau  |
| AUTH-127520-01        | to discharge treated domestic effluent into the Pōrangahau River  | Jones Street Oxidation Pond<br>Pōrangahau Township,<br>Pōrangahau |
| AUTH-127522-01        | to discharge contaminants (odour) to air associated with the operation of the Pōrangahau Township Oxidation Pond  | Jones Street Oxidation Pond<br>Pōrangahau Township,<br>Pōrangahau |
| AUTH-127518-01        | to discharge treated domestic effluent into or onto land (via soakage) from the existing Te Paerahi (Porangahau Beach) Oxidation Pond in circumstances where that contaminant may enter water | Pōrangahau Te Paerahi Oxidation<br>Pond, Pōrangahau Beach         |
| AUTH-12759-01         | to discharge contaminants (odour) to air associated with the operation of the Porangahau Te Paerahi Township (Porangahau Beach) Oxidation Pond  | Pōrangahau Te Paerahi Oxidation<br>Pond, Pōrangahau Beach         |

More information is needed so that we can better understand your proposal and its potential effects.

In accordance with Section 92 of the Resource Management Act (1991) (RMA) I request the following information:

### **Cultural impacts**

1. Please provide a cultural impact assessment for proposed discharges from the Pōrangahau and Te Paerahi WWTPs for stages 0, 1 and 2 and proposed new combined discharge scheme for stage 3 including commentary on the staging and timing.

### **Affected party approvals**

2. Appendix C of the Consent Application & AEE (PD1) provides an "Affected Party Approval". The document states "*Treatment improvements to existing ponds (UV, filtration, screens)*" however it is unclear if the existing ponds will indeed have 'UV, filtration, screens' added during stages 0, 1 and 2. Please confirm if and when UV, filtration and screens will be installed at the existing ponds.
3. On 25th February an email was received by CHBDC on behalf of the landowners approving the application for the 'transitional consent'. The email approval was conditional on CHBDC demonstrating progress towards a long-term solution. Consent conditions have been proposed to address these requirements. Do the proposed consent conditions meet Puketauhinu Trust's expectations? We note that this can be dealt with via a submission.
4. A number of consent application documents appear to be prepared after the date of the signing of the written approvals. Please confirm that the Stoddart's understand all changes made to the proposal since the date they signed the written approval. For example, are they comfortable with the proposed buffers on the farm? Does the planning assessment that was prepared after they signed the written approval align with their understanding?

### **Proposed consent conditions**

5. Please provide the percentile limits for Table 3, condition 41 and Table 4 condition 48.
6. Table 4 condition 58 sets a 20 m riparian margin of the Pōrangahau River - there does not appear to be any reasoning for the 20m riparian margin in the consent application suite, please provide details.

### **Water quality**

7. The basis of the staged mass balance and load estimates assessment (Section 6 of Pōrangahau and Te Paerahi Wastewater – Water Quality Assessment, Beca, 2021:P:D.25) needs to be checked, and that a clearer description of its purpose, methods, assumptions, results, and limitations of that assessment be provided.
8. Please provide a quantitative microbial risk assessment (QMRA), in accordance with the Ministry of Health's microbial guidelines and/or the relevant best practice guidelines, on the potential health risks to users of Pōrangahau River. Technically robust information must be provided as part of the assessment including appropriately detailed approaches to how the risks will be mitigated.

### Land irrigation matters

9. Appendix A Figure A2 appears to show the discharge area crossing the property boundary. If there is a mapping error or for clarity, please amend Figure A2 so that the discharge area and irrigable areas are not shown to be crossing the property boundary.
10. When will the purchase of the land for the wastewater storage pond happen?
11. Will land be purchased for the WWTP too?
12. What protection or mechanism ensures that the land discharge site will be able to be used by CHBDC for the discharge for the requested 35-year consent duration given that it does not appear to be covered under a land purchase or designation?
13. It is assumed that CHBDC or a suitable operator will operate the WWTP. Will the landowner operate the irrigation scheme, or will this also be operated by CHBDC?
14. The applicant indicates the minimum area used for irrigation for each stage and that they have used this for the Overseer modelling. Does the actual proposed irrigation area differ from this and, if so, how does it affect the nutrient loss?
15. Please provide additional information about how the irrigation is proposed to be managed, specifically regarding application event frequency, application event depth and monitored to minimise drainage resulting in leaching and/or overland flow or surface ponding.
16. Please provide further assessment of an appropriate application depth per event within LMU 3 including an assessment of the change in nutrient leaching at a maximum of 20 mm/event and a maximum of 25% of the PAW.
17. Please provide an assessment of the risk of overland flow from the irrigation site (LMU 1 and LMU 3) and the effect of any potential overland flow on the receiving environment.
18. Please provide information on the length of the proposed suitable standdown periods and the expected residual pathogen level based on the concentration of pathogens in the irrigated wastewater and the length of the standdown periods.
19. Please provide a map of the site where all areas proposed not to be irrigated (due to buffer distance, soil type, land use or any other reason) are clearly shown. The map should show the area of each excluded zone and the total available area for irrigation within LMU 1 and LMU 3.

### Wastewater management & timing

20. Please provide the timeframes proposed for the commencement and completion of each stage.
21. Evidence why partial irrigation under Stage 2 is preferable to non-deficit irrigation of the highly permeable sandy soils.
22. Explain how the decision-making regarding storage volumes and deficit/non-deficit irrigation will be made.
23. We note that the 4 and 9 years are proposed to remove the existing discharges from Te Paerahi and Poranghau respectively. Please explain the reasoning for this extended period, when almost no new treatment or storage infrastructure is planned in this period.

24. For the duration of Stage 1 and Stage 2, treated wastewater from the existing Te Paerahi WWTP will be pumped to the new Discharge Property. There are no proposed changes to the Te Paerahi wastewater quality, other than the addition of UV treatment (at the Discharge Property to manage pathogen concentrations prior to wastewater being applied to the discharge property).

#### **Appendix M - Pōrangahau and Te Paerahi Community Wastewater – Discharge Conceptual Design (LEI, 2021:P:C.15)**

Table 4.2 notes that the future flows assume a reduction in I&I at some point between now and 2057. Because no population growth is expected in the catchment the result of this is a design flow which is over 60m<sup>3</sup>/d less than the current known flows. This does not appear to be sufficiently conservative, for the following reasons:

1. The draft CHBDC Inflow and Infiltration Management Strategy (Beca, 20 April 2021) provides no certainty that this community will receive I&I reductions in the near future,
2. I&I issues can be very difficult to find and remove,
3. I&I issues will continue to be added to the network over time as infrastructure ages and illegal connections are made,
4. Climate change can be expected to have an increasing impact on I&I peak flows (noting that LEI, 2021:P:D.10 in Section 3.10.2 highlights an increase in summer and autumn rainfall of 2-13% by 2090).

25. Please confirm how this will affect flows to the treatment plant(s) if no I&I improvements are realised.

26. Please confirm how the future flow curves in Figure 4.1 were derived.

Section 4.3 Wastewater Quality, notes that the expected effluent quality following the installation of a new WWTP at Stage 3, is as follows: average quality not exceeding

- 20 g O/m<sup>3</sup> carbonaceous biochemical oxygen demand;
- 30 g/m<sup>3</sup> total suspended solids;
- 20 g/m<sup>3</sup> total nitrogen;
- 5 g/m<sup>3</sup> total phosphorus;
- 500 MPN/100 mL E.coli (following UV disinfection).

In the Beca report Outline of Proposed New Combined Treatment Plant Options (P:C.16), the proposed total suspended solids target is lower at 20 g/m<sup>3</sup>, and a much lower value of 20 g/m<sup>3</sup> BOD (rather than the above cBOD) is proposed.

27. Please clarify which target values are proposed.

We note the proposed staging and timing of activities presented in Table 8.1. It is not clear whether the proposed timeframes are consecutive or intended to occur in parallel. In either case, they appear to be extremely conservative, and cannot be easily aligned with the proposed consent Stages.

28. Please confirm which of the activities occur in sequence, and which occur in parallel to show alignment with the consent Stages.

### **BPO & Options Report**

29. The ability to implement change is primarily limited by funding. Council has through their 2021-31 Long Term Plan allocated \$17.6 M over the next 9 years, with the full system to be commissioned by 2030. Where is it described that this is the expected cost of the BPO, and how was this compared with alternatives?
30. Please confirm how financial aspects were addressed in the selection of a BPO.
31. The BPO Report includes an Appendix A, "P:C.34 – Porangahau/Te Paerahi Consultation Summary". This in turn includes a list of 3 Annexes of minutes of the stakeholder engagement meetings. The Annexes are not provided. Section 3.3 of the BPO report describes how a BPO selection committee was used to determine the BPO. At present the link between the community consultation / BPO selection committee and the BPO is not clear. Please provide the above 3 Annexes to present what was discussed at these meetings and how the BPO was arrived at?
32. Te Paerahi and Porangahau Options Report (Beca, 2020:P:C.10). This Beca Options report does not select a preferred option, but rather identifies three vastly different solutions and notes that these will be considered through the LTP process. Figure 31 on page 67 is a strawman which portrays all three options together. The key notes that [C] = Conveyance, but we wonder whether this should be Combined Plant? Please confirm the definition of C.
33. The appendices for this report are not included, please provide them as they are referred to throughout the Beca 2020:P:C.10 report.

### **Odour and Spray Drift**

34. The applicant indicates that WWTP process failures can result in odours but that these can be remedied before there is a risk of offensive or objectionable odours beyond the plant boundaries. What monitoring is done by operators and or what indicators of process failures are used to identify increased potential for odour and what contingency measures are implemented in these events?
35. Please provide a wind rose showing wind strength and direction to help inform the assessment of the potential for odours from the various activities to result in exposure and/or adverse effects from odours. At a minimum, please provide a description of the local prevailing wind conditions.
36. How are biosolids proposed to be handled, dewatered, stabilised, and disposed of? Is CHBDC aware of this requirement? Will solids screening be included with the new WWTP and/or how will waste solids/sludge be managed to minimise odour? How will sludge be managed during decommissioning of the existing ponds?
37. Please provide evidence of the suitability of the proposed buffer distances, particularly to boundaries. This assessment should consider that the land between the estuary and the

discharge property is publicly owned and easily accessible from the boat launching area at the Beach Road bridge. We also note the World Health Organisation guidelines for Safe Use of Wastewater suggest a buffer of 50 – 100 m may be required from roads and dwellings to protect public health.

### **Groundwater**

38. Please confirm the expected E. coli concentrations in the discharge after UV treatment given the two different concentrations provided (500 and 5,000 MPN/100 mL).
39. We recommend monitoring should begin as soon as the consent is granted rather than waiting for the disposal field to be operational in order to build a database of existing groundwater quality. Please provide comment on background monitoring.
40. The future use of the unmapped stock water bore on the disposal field property.

### **Wetland Ecology and Freshwater NES**

41. The ecological report indicates in section 4.1.1 that Site 1 was assessed as a natural wetland; however, Table 2 (section 4.1.2) in the ecological report indicates that Site 1 failed the pasture test. This is contradicting since for a wetland to be considered a natural wetland in terms of NES-F (2020) it should pass the pasture test. Analysis of the NES Freshwater regulations needs to be re-assessed in light of wetland 1 potentially being a natural wetland and any potential offsite wetlands with regard to the 100m setback clauses of the Freshwater NES.
42. No reference is made in the AEE and Discharge Property Ecological Report (Beca 2021:P:D.66) of the details of the pasture test (methodology and results) such as the exotic pasture species present and details of the percentage ground cover as described in the interpretation guidance in the Interpretation guidance on the wetlands definition in the NPS-FM and Freshwater NES (Exposure draft 7 April 2021). Please provide details of the pasture tests for Sites 1 and 2.
43. In terms of Table 2 (section 4.1.2) wetland hydrology indicators were present in both Site 1 and Site 2. Please provide details on how hydrology was determined.
44. Table 2 (section 4.1.2) indicates 'Yes' under soils and the soils have been described in section 4.1.1. Were the soils assessed if they meet the criteria of hydric soils in terms of the Hydric soils – field identification guide/Hydric Soils tool (Fraser et al, 2018)? Please provide details of this assessment.
45. In terms of the NES-F (2020), the regulations apply to the discharge of water within, or within a 100 m setback from a natural wetland. Did the applicant identify wetlands and include plans of any wetland, with surveyed boundaries within 100 m of the subject site? If not, please provide this information.
46. The ecological study (Beca 2021:P:D.66) screened several potential wetlands (sites 3 to 11) although very limited information is provided on the assessment of these sites. Please provide details about the criteria used for the assessments of these sites.
47. No specific reference was made in the Discharge Property ecological report on how the hydrological regime of the wetland could be affected and how the hydrology of the wetland may need to be managed. Could the applicant provide details on the effects on the wetland hydrology and how the wetland hydrology could be managed?

48. Future activities for constructing the wastewater storage pond, rising main, irrigation system and WWTP will involve earthworks, structures and buildings that also would require assessment of the Freshwater NES. Please provide commentary on how this will be dealt with.

**Ancillary structures, other possible consents & potential contamination**

49. Where will the new pump stations likely be located? Is this on land owned by CHBDC? Would they require odour treatment?
50. Will the new wastewater rising main from Te Paerahi to the new land discharge site be attached to the Beach Road Pōrangahau River bridge, a new pipe bridge or run under the Pōrangahau River? Depending on the solution additional consents may be required including new structures over water bodies and dewatering.
51. Please provide a preliminary site investigation (PSI) to cover the project where any earthworks will occur on HAIL sites or further commentary or evidence for why a PSI is not required. Alternatively, a PSI could be deferred to a later date providing it does not cause delays to the committed programme.

**Natural hazards & climate change**

52. What remediation measures will be taken post-flood to allow the irrigation site to be quickly remediated.
53. Provide a map clearly showing which areas will be irrigated that are within the low flood risk zone including the area in hectares.
54. Comment on the impacts of climate change on flood risk to the site.
55. Taking a best practice approach and to mitigate transition risk, please provide a GHG footprint assessment for the whole of life GHG emissions including embodied/capital and operational carbon (i.e. over a 50 year time frame or another suitable time frame) for all options assessed, or as a minimum for the WWTP options for the new land irrigation scheme site. The assessment should be undertaken in accordance with the IPCC Guidelines for National Greenhouse Gas Inventories and relevant best practice guidelines which considers carbon dioxide equivalents (i.e. including methane and nitrous oxide) and all relevant Scope 1, 2 and 3 GHG emissions.

Our technical experts memos are attached which support the above questions for your reference being the following documents;

- Pattle Delamore Partners Ltd, “Pōrangahau and Te Paerahi Wastewater Discharge Consent Technical Review” memorandum dated 30 September 2021;
- Coast & Catchment Rnvironmental Consultant, “Consent to shift discharges from the Pōrangahau and Te Paerahi Wastewater treatment plants” memo dated 30 September 2021, and;
- Mott MacDonald “Pōrangahau and Te Paerahi Wastewater Consent Applications” review dated 1 October 2021.

You must respond in writing to this request, before **22 October 2021** 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, otherwise your application can be declined for a lack of information. We may also decline your application if you refuse to provide the information.

Please use the attached form to respond to this information request. If you prefer you can email your response to [Sven.Exeter@mottmac.com](mailto:Sven.Exeter@mottmac.com) and [tania.diack@hbrc.govt.nz](mailto:tania.diack@hbrc.govt.nz) .

I have put processing of your application on hold until we receive your response.

Please contact either Sven on 027 303 7354 or Tania on 027 318 9762 if you have any questions.

Yours faithfully



Tania Diack  
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**Policy and Regulation Group**  
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