

19/05/2021

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

**Our Ref:** APP-126522 (quote this number when discussing application with HBRC staff)

For the attention of: Lowe Environmental Impact Limited

Dear Sir/Madam

### Request for Further Information

HBRC have reviewed your resource consent application APP-126522 the activities and discharges associated with the receipt, treatment, storage and general management of wastewater received at the Takapau Wastewater Treatment Plant (WWTP). As discussed, Pattle Delamore Partners (PDP) have reviewed and provided technical input on the application.

Following the above review and HBRC's visit to the site on 21/05/2021 accompanied by the applicant's representatives, it is considered that the application provides a good level of detail in many areas, however some key information is considered necessary to better understand the potential effects of the proposed activities.

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

#### Cultural Impact

1. Please provide the cultural impact assessment for the proposed activity, documenting Māori cultural values, interests and associations with the area surrounding the proposed activity and downstream of the discharge.
2. Please provide an assessment of the proposed activity in regard to the archaeological site identified in the operative Central Hawke's Bay District Plan, reference '246', description: urupa. The draft CHBDC Plan (at the date of writing, not yet notified as the proposed plan) provides more information at Appendix C – *'1994 Scattered pits recorded from aerial 2008: A Single pit identified during visit - 3 x 3 m and 0.5 m deep. Several other depressions in area.'*

NB, given the identification of the 'Area of Cultural Significance to Tangata Whenua' on the site, in accordance with Regulation 10 of the Resource Management (Forms, Fees, and Procedure) Regulations 2003, HBRC are required to serve notice of the application for resource consent to Heritage New Zealand Pouhere Taonga.

## Land Management

3. Please provide the following reports that have been relied upon but not attached to the application:
  - a. Evaluation of Soils to Receive Takapau Wastewater (LEI, 2020: T:B.15)
  - b. Best Practicable Option Report (LEI, 2021: T:C.12)
  - c. Current Farming System (LEI, 2021: T:B.13)
  - d. Existing / Future Farming System and OverseerFM Analysis (LEI, 2021: T.C14a)
  - e. Drummond Overseer and Planning Assessment (LEI, 2021: T.C.14b)

4. Please provide a Farm Environmental Management Plan (FEMP) for the proposed discharge to land and farming activities proposed on the land, in accordance with Schedule 22 of the RRMP.

It is noted on the site visit undertaken 21/05/2021, CHBDC and their consultant identified the desire of not requiring a FEMP until the decision has been made on the current application and noted that the requirement for a FEMP has been offered as a condition of consent (see condition 52, version 1). On review of the objectives and policies of the Tukituki Plan Change (Plan Change 6), in particular [POL TT6](#) regarding the decision making criteria of production land use consents, the FEMP is a key requirement in the assessment of these activities. Without a FEMP, or at least the information required by Schedule 22 of the RRMP, the production land use aspect of the consent cannot be processed.

5. In regard to the best practicable option discussed in the Assessment of Environmental Effects (AEE):
  - a. Please provide a summary and comparison of the cut and carry regime mentioned in LEI, 2021:T.C.14a including the leaching potential versus the proposed cropping and grazing 'business as usual' regime.
  - b. Please provide an explanation of why the system has not been designed to irrigate 100% of the wastewater to land.
6. The land owner / farm manager (Drummond) currently holds water permit AUTH-125346-01 which allows irrigation of the whole of the proposed land application area, among the other farm enterprise area. Section 4.6 of the report LEI, 2021:T:D.10 references the use of a lower leaching rate from the 4292 State Highway 2 block owned by Dalby (legal description Lot 1 Deposited Plan 16445) which reduces the average leaching from 95 kg N/ha/year from the irrigated area to 60 Kg N/ha/year for the combined 45 Burnside Road block and 4292 State Highway 2 block. How will AUTH-125345-01 be managed to exclude the areas being irrigated or is there potential for future increases in leaching to occur as a result of irrigation across the land.

Any areas proposed to be irrigated should be reflected in the FEMP and comment should be made on the potential for increases in total and average areal leaching as a result of irrigation with freshwater on the remaining land area.

## Management of Farm Activities

7. Please provide a description of the arrangement between CHBDC and the landowners (Drummond and Dalby) including any legal obligations for wastewater irrigation to continue if farm management changes or the land is sold.
8. It is noted a condition has been offered for production of an Operational and Management Plan (Condition 47). This specifies several methodologies required for the operation of the discharge infrastructure. To understand the potential effects of the activity, some further information is required on how the site will be operated between the lessee / lessor (Drummond), lessor (Dalby) and Central Hawke's Bay District Council.
  - a. Please describe the relationship between the lessee's, lessor and Council regarding who will control the application of wastewater to land?
  - b. Describe how the interaction between the land holder / farm manager and the council be managed in terms of procedures to ensure the discharge of effluent to minimise environmental effects.
  - c. Identification of potential process failures that could result in odour and the contingency actions or procedures that will be followed to minimise an adverse odour effect, please include measures to avoid ponding and wastewater dissolved oxygen monitoring and management.
  - d. Please clarify how/when the need to flush irrigation lines to manage odour will be undertaken and what constitutes a 'long period' as referred to in Appendix G.
  - e. Please also provide information and/or an explanation to support how the parameters for proposed Condition 18 were derived.
  - f. LEI 2021, T:D.10 discusses the risk from stock ingesting pathogens and identifies that this will be managed by stand down periods. Please identify how the stock and cropping activities will be managed to ensure any risk, if present, to the human food chain is minimised. What guidelines should be used for stock holding periods and if no guidelines are available, what best practise should be implemented?

## Effluent Treatment and Discharge

9. Please provide information on whether the High-Rate Land Passage System (HRLP) described in the application is the same as the existing discharge, or whether upgrades to the land passage system are proposed. Please provide a description and concept plans of the HRLP including current / potential treatment capacity, if any.
10. Please provide evidence of the feasibility of installing the centre pivot irrigator over the area of the site, given the 4 – 6m topography change between terraces and given the ephemeral stream located at the toe of the terraces. (Note Report LEI 2021:T.D.10 states recontouring may need to occur while LEI 2021:T.C.15 states no recontouring will be required).

11. Please provide an assessment of the existing WWTP's capacity to treat current and predicted 2048 flows to the effluent quality requirements. This should include details of the volume, aeration capacity, design flow rate etc.
12. During the site visit, discussion was had about assessment undertaken to identify the functioning of the current pond, including leakage. Please provide details of this assessment to identify current leakage from the pond, including the current pond design, condition of the liner (if present), seepage rate and conclusions of a drop test.
13. Please provide information on the causes of the high ammoniacal nitrogen and total suspended solids (TSS) effluent concentrations reported (e.g. where these caused by high influent flowrate, high BOD load, septage receipt).
14. Please provide an explanation of the staggered approach to the irrigation area. Will the pivot only operate over a limited arc to cover 5ha in Stage 1. Will the remaining 25ha remain unirrigated or will the remaining 25ha be irrigated as per existing water take consent AUTH-125345-01.
15. The application states that in 2048, 90% of the wastewater will be irrigated. Please provide the estimated percentage of wastewater that will be irrigated at the beginning of Stage 2.
16. Please provide comment on how the soil capacity to receive wastewater in different rainfall conditions has been used to formulate the proposed regime and rate of irrigation of wastewater to provide the minimal overall environmental impact on surface and groundwater.
17. It is stated that throughout the application that UV disinfection will be installed for flows from the treatment pond and that additional filtration is proposed. During the 21/05/2021 site visit, the applicant's consultant, LEI, discussed that the proposed location of the UV was still being worked through to provide for the most practical and cost-efficient location in the system. Please provide information on the following:
  - a. Preliminary details of the proposed position of the treatment system in relation to the existing oxidation pond, the proposed storage pond, the HRLP discharge and the irrigation discharge.
  - b. Which stage of the consent this additional treatment will be installed.
  - c. A preliminary process flow diagram of the system.
18. Please provide comment on the expected E.Coli and faecal coliform concentrations in the effluent applied to land and discharged to the HRLP. Consider the high levels of TSS, E.Coli and faecal coliforms recorded in the effluent monitoring data and proposed UV disinfection.
19. Provide comment on the high Total Phosphorus (TP) groundwater concentrations recorded in the monitoring bores. This should include:
  - a. Comment on the high solid concentrations reported in some samples

- b. Comparison of the dissolved reactive phosphorus (DRP) concentrations measured.

## Surface Water

20. At Section 9.5, the AEE (TD.1\_Takapau-Application\_and\_AEE-210428) states that the '*diffuse discharge to surface water due to land application is expected to enter the surface water much lower in the catchment. The Tukituki River is considered to be the receiving environment for the diffuse discharge from land*'. The groundwater review indicates that groundwater beneath the proposed irrigation areas is likely to travel in an east-southeast direction and resurface within the gaining reaches of the Porangahau Stream. As such please provide an assessment of effects regarding the Porangahau Stream water quality.
21. Please provide evidence that Tukituki at Tapairu Road and the Makaretu River at the location of the WWTP are strongly correlated as per Table 1 of Beca, 2020, T:D.25.
22. Please justify why surface water quality is only proposed for the months of November, March and July is considered suitable when compared to monthly monitoring.
23. An irrigation buffer distance of 20m from any watercourse, whether flowing continuously or intermittently, including any open drain is offered at Condition 9, however this is not specific to the Makaretu River and the proposed setback is not discussed in the surface water report. Please provide an assessment that a 20m setback is suitable for the discharge from the Makaretu River.
24. As identified on the site visit, a drainage channel / waterway bisects the site along the toe of the upper terrace and is within the proposed irrigation area. Please provide an assessment of the potential effects of the irrigation to land on this channel and surrounding area. In addition, please provide comment whether the 20m setback proposed at Condition 9 will be suitable for this channel.

## Ground Water

25. Given the uncertainty in the groundwater flow direction, please provide an assessment of the effect of the proposed activity on the bores in the rural residential area to the south of the State Highway and proposed land application area.
26. Please provide an assessment of the effects of the proposed activity on down-gradient drinking water supply bores with respect to nitrate-nitrogen. This should include a comparison of the groundwater impacts with the limits in Table 5.9.2 of [Plan Change 6](#) and pathogens and allowing for a degree of uncertainty and variability around groundwater flow.

## Ecology

27. Please include an assessment of the effect of the diffuse discharge in the Porangahau Stream on ecological values.
28. Please provide an assessment of the ecological values of the overland flow path of the existing discharge (proposed HRLP) with comment on the effect on staged reduction in direct discharge to this overflow path that is proposed.
29. Please provide an assessment of the ecological value of the existing drainage channels located within the proposed area of irrigation (including the ephemeral overland flow channel identified in point 23, above).

## Natural Hazards

30. Please provide some detail for the location of the two additional storage areas (2,000m<sup>3</sup> during stage 1 and 18,000m<sup>3</sup> in stage 2).
31. Please provide some detail of how flooding of the irrigation area (particularly at Stage 1) will be managed and mitigated.
32. Please provide details of what control measures will be employed to protect the storage pond from flood flows and protect the river from failure of the storage pond / release of effluent.
33. Please provide an assessment of the effects if flood waters inundate the HRLP.

You must respond in writing to this request, before 17/06/2021 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.

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.

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

Please contact me if you have any questions.

Yours sincerely,



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