

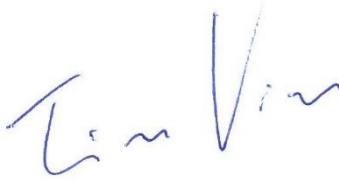


RM15.364 – Clutha District Council – Discharge treated wastewater from the Waihola Wastewater Treatment Plant to water, Joint Witness Statement

Facilitator	Ralph Henderson, Boffa Miskell
Date	11 February and 9 March 2022
Venue	On-line

Planning Witnesses	Party
Ralph Henderson (Principal Planner, Boffa Miskell)	Otago Regional Council
Rachel Vaughan (Planning Consultant, Smart Pathways)	Clutha District Council
Tim Vial (Senior Planner, Aukaha)	Te Rūnanga o Ōtākou, Te Nohoaka o Tukiauau (Sinclair Wetlands Trust), Te Rūnanga o Ngāi Tahu

Planning Witnesses	Signature
Ralph Henderson (Principal Planner, Boffa Miskell)	
Date:	14 March 2022
Rachel Vaughan (Planning Consultant, Smart Pathways)	
Date:	14 March 2022
Tim Vial (Senior Planner, Aukaha)	
Date:	11 March 2022

Conditions

Specific

- 1 This consent authorises the discharge of treated human wastewater into the outflow channel of Lake Waihola at the point shown in Map [X] attached as **Appendix 1** to this consent:
 - (a) Until the 31st of December 2024, at an annual average rate of up to 160 / 128 cubic metres per day and a maximum rate of up to 680 cubic metres per day
 - (b) From 1st of January 2025, at a maximum rate of up to 160 / 128 cubic metres per day.

2.
 - (a) Wastewater discharged from the treatment system must only be pumped into the Lake Waihola outflow channel during the latter half of the incoming tide and/ or the initial half of the outgoing tide.
 - (b) Prior to the exercise of this consent the applicant must provide tidal information for the following six-month period.
 - (c) The consent holder must keep up-to-date forecasts of tidal flows at the point of discharge into the Lake Waihola channel
 - (d) Discharge volumes, times and tidal state at the time of discharge must be recorded and the information forwarded to the Consent authority at six-monthly intervals together with the monitoring required under Condition 4.

Performance Monitoring

3.
 - (a) The Consent Holder must ensure a discharge flow meter with an accuracy range of +/- 5% and datalogger are installed and maintained to record the wastewater volumes discharged when the discharge is occurring.
 - (b) The Consent Holder must provide records from the datalogger to the Consent Authority at annual intervals by 31 March each year and at any time upon request. Data must be provided electronically giving the date, time and flow rates in no more than 15-minute increments and the datalogger downloaded annually and sent to Council by 31 March in each year.
 - (c) The Consent Holder must provide written verification to the Consent Authority that the discharge flow meter has been verified as accurate by a suitably qualified person by 31 March of the first year of the exercise of this consent and then at five-yearly intervals thereafter.

4. Surface water and discharge quality monitoring must be undertaken by a suitably qualified person throughout the duration of the consent. Samples must be collected monthly and must be undertaken at the following locations on the same day:
 - (a) From both wetland cells or from the outfall pipe prior to its discharge into the outflow channel of Lake Waihola;
 - (b) the outflow channel of Lake Waihola, no more than 50 metres upstream of the discharge point; and
 - (c) the outflow channel of Lake Waihola, no more than 50 metres downstream of the discharge.

At the time of sampling the flow rate and water depth, field measurements of pH, temperature, turbidity, electric conductivity, dissolved oxygen (DO), in-stream visual clarity (measured through black disk) and direction of flow must be

recorded. Analysis of surface water and discharge samples must be undertaken for the following parameters:

Parameter
5-day iv) Carbonaceous Biochemical Oxygen Demand (BOD ₅)
Total suspended solids (TSS)
Total Nitrogen (TN)
Total Ammonia-Nitrogen (NH _{4-N})
Total nitrate+nitrite nitrogen (NNN)
Dissolved inorganic nitrogen (DIN)
Total phosphorous (TP)
Dissolved reactive phosphorous (DRP)
Particulate Organic Matter
Faecal Coliforms (FC)
Escherichia coli (<i>E.coli</i>)

5. The quality of treated wastewater immediately before it is discharged to outflow channel of Lake Waihola must:

(a) Not exceed any standard specified below:

Parameter	Units	Samples must not exceed Median limits in more than 8 out of 12 consecutive samples	Samples must not exceed 95 th percentile limits in more than 2 out of 12 consecutive samples
5-day iv) Carbonaceous Biochemical Oxygen Demand (BOD ₅)	g/m ³	75	140
Total Suspended Solids (TSS)	g/m ³	100	175
Escherichia coli (<i>E.coli</i>)	cfu/100mL	80,000	315,000
Total ammoniacal nitrogen (NH _{4-N})	g/m ³	23	31
Total phosphorus (TP)	g/m ³	5.7	8.2

(b) Be within the pH range of 6.5 – 9.0.

(c) Be no less 2 g/m³ of Dissolved Oxygen as an average of any five consecutive weekly measurements taken at approximately 9.00 am.

6. The following monitoring parameters must be used to assist with assessing the effects of the wastewater discharge to the outflow channel of Lake Waihola:

(a) The discharge must not cause the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;

- (b) The discharge must not cause bacterial and / or fungal slime growths visible to the naked eye as plumose growths or mats;
- (c) The visual clarity must not be reduced by more than 30% between upstream and downstream of the discharge;
- (d) The QMCI must not be reduced by more than 20% between upstream and downstream of the discharge; and
- (e) The maximum cover of visible streambed of periphyton as filamentous algae more than 2cm long should not exceed 30%.

7 From the 31st of March 2025 samples of receiving water taken from the outflow channel of Lake Waihola in accordance with Condition 4 must be monitored against exceedances of the following standards when calculated over a rolling five-year period:

- (a) The 80th percentile for Total nitrogen (TN) concentrations **should / must** not exceed 0.55 g/m³; and
- (b) The 80th percentile for dissolved reactive phosphorous concentrations **should / must** not exceed 0.033 mg/L; and
- (c) The 80th percentile for turbidity **should / must** not exceed 5 NTU.

8 In the event of 1 (one) or more of the limits set out in Conditions 1 or 7 being exceeded, the Consent Holder must resample and/or retest that parameter within 5 (five) working days to confirm the exceedance. In circumstances where one or more of the limits set out in Condition 7 are exceeded on two consecutive sampling occasions and these results are confirmed exceedances (i.e. it is not due to faulty testing or other parameters affecting the results) or an effect outlined in Condition 6 is caused, the Consent Holder must report to the Consent Authority as follows:

- (a) The Consent Authority must be notified in writing within 48 hours of any confirmed non-compliance; and
- (b) This notification must include advice of any corrective actions taken by the Consent Holder;
- (c) An incident report must be provided to the Consent Authority in writing within 20 working days of the notification of the exceedance. This report must include:
 - (i) identification of the likely cause of the limit exceedance;
 - (ii) the resulting effects on the receiving environment likely to arise because of the limit exceedance;
 - (iii) the management responses undertaken, or which may be necessary to prevent any further limit exceedances occurring;
 - (iv) remedial action undertaken or which may be necessary and confirmation of implementation if it is within scope of the consent.

9. Should any of the limits set out in Condition 8 be exceeded, the Consent Holder must prepare a report by a suitably qualified person within 20 (twenty) working days of the first exceedance of the limits that were assessed identifying:
- (a) why the limits have not been met;
 - (b) actions to be taken to ensure targets are met;
 - (c) the actual and potential adverse effects the discharge is causing on water quality; and
 - (d) if there has been improvement in the discharge quality since the commencement of the consent.
- The report must be provided to the Consent Authority within 5 (five) working days of its completion for certification that clauses (a)-(d) have been fulfilled. The Consent Holder must adhere to any actions outlined under clause (b).
10. (a) Within three months of the commencement of this consent, the Consent Holder must prepare an Operations and Maintenance Manual for treatment and disposal system with the objective of ensuring the effective and efficient operation of the Waihola Wastewater Treatment Plant at all times. The Operations and Maintenance Manual must include, but is not limited to:
- (i) a brief description of the treatment system, including a detailed site map indicating the location of the treatment system, discharge location, sampling and monitoring sites;
 - (ii) key operational matters, including the detailed monthly maintenance checks and a schedule of system maintenance;
 - (iii) details around the methodology of providing accurate tidal information to determine discharge times as required by Condition 2;
 - (iv) monitoring requirements and procedures, including discharge rates, volumes and limits to be complied with and reporting procedures;
 - (v) contingency plans for response to non-compliance with this discharge permit or system malfunctions or breakdowns;
 - (vi) the means of receiving and dealing with any complaints and system malfunctions;
 - (vii) Key personnel, contact details and emergency phone numbers.
- (b) The Consent Holder must provide a copy of the Operations and Maintenance Manual to the Consent Authority within 5 (five) working days of its completion for certification that the objective and minimum details have been fulfilled.
- (c) The Consent Holder must adhere to the certified Operations and Maintenance Manual at all times.
- (d) Should changes to the Operations and Management Manual be required, the Consent Holder must provide the updated version to the Consent Authority on request.
11. Records of maintenance, complaints, malfunctions and breakdowns must be kept in a log and this log must be submitted along with the report required under Condition 14 to the Consent Authority by 31 March each year, and upon request.
12. Before the first anniversary of the exercise of this consent and by 31 March in each year thereafter, an annual monitoring report must be prepared relating to the activities authorised by this consent over the preceding 12-month period. This report must be prepared by a suitably qualified person and must include, but not be limited to:
- (a) Flow monitoring records required by Condition 3;
 - (b) A record of any discharges that exceeded the discharge rate as set in Condition 1;

- (c) Discharge flow monitoring records providing detail of the timing of discharge in relation to tidal flows at the point of discharge
 - (d) A summary of all sampling and analysis undertaken under this consent in the previous 12-month period and an assessment of compliance with limits set by Conditions 5 and the Schedule 15 targets in Condition 7
 - (e) Analysis of surface water quality monitoring and the difference in water quality upstream and downstream of the discharge required by Conditions 4;
 - (f) An overview of compliance with the requirements of the Operations and Maintenance Manual
 - (g) Overview of compliance with all conditions of this consent;
 - (h) Recommendations for improvements in the system;
 - (i) Maintenance service records and malfunctions or breakdowns and the corrective action taken;
 - (j) Any complaints received and action taken; and
 - (k) Confirmation of funding to ensure any upgrades are adhered to in accordance with Condition 13.
13. (a) Within the first year of the exercise of this consent, the Consent Holder must prepare an Activity Management Plan. The Activity Management Plan must be prepared by a suitably qualified person and have the following objectives:
- (i) To ensure the discharge will meet current water quality standards; and
 - (ii) To ensure improvement in the quality of the discharge throughout the duration of the consent; and
 - (iii) To establish a **plan / process** for the discharge to be removed from the Lake Waihola outflow channel by the expiry of this consent.
- (b) The Activity Management Plan must include, but is not limited to:
- (i) Proposed upgrades to the current wastewater treatment plant throughout the duration of the consent;
 - (ii) An assessment of alternative discharge methods to remove the discharge from the Waihola outflow channel;
 - (iii) Timing and budgeting for any proposed upgrades;
 - (iv) The timing, budgeting and other steps required to identify and develop an alternative discharge method to discharging to the Waihola outflow channel; and
 - (v) Analysis of how upgrades under both Condition 13(b)(i) and (b)(iv) above will ensure the objectives of the Activity Management Plan will be met; and
 - (vi) A process for engaging with mana whenua, designed in collaboration with Te Rūnanga o Ōtākou, on alternative discharge methods.
 - (vii) A process for engaging with the wider community on alternative discharge methods; and
 - (viii) A process for confirming, funding and consenting the preferred discharge method by the expiration of this consent.
- (c) The Consent Holder must provide the Activity Management Plan to the Consent Authority within 5 (five) working days of its completion for **certification / approval** that the objectives have been met as specified in Condition 13(a).
- (d) The Consent Holder must adhere to the Activity Management Plan that has been **certified / approved** by the Consent Authority in accordance with Condition 13(c).

General

14. (a) The Consent Holder must erect and maintain suitable signage that warns public of the discharge that can be visible and read at a distance of no less than 5 (five) metres at the following locations:
 - (i) Adjacent to the outfall; and
 - (ii) 100 metres upstream and downstream of the outfall; and
- (b) Signage identifying the location of the discharge outfall must be erected and maintained at the Waihola and Henley boat ramps. Signage must include a map of the location of the discharge outfall.
- (c) All signage must display warnings in both English and Te Reo.

Review

15. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve three months notice on the Consent Holder of its intention to review the conditions for the purpose of:
 - (a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage, or which becomes evident after the date of commencement of the consent;
 - (b) Ensuring the conditions of this consent are consistent with any National Environmental Standards, relevant regional plans, and/or the Otago Regional Policy Statement;
 - (c) Reviewing the frequency of monitoring or reporting required under this consent to ensure consent requirements are being met;
 - (d) Amending the monitoring programme set out in accordance with Condition 4; or
 - (e) Requiring the Consent Holder to adopt the best practicable option, in order to prevent or minimise any adverse effect on the environment arising as a result of the exercise of this consent.