



**environment
SOUTHLAND**

Te Taiao Tonga

AUTH-20147220-02-V1

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Discharge Permit

Pursuant to Section 104B of the Resource Management Act 1991, a resource consent is hereby granted by the Southland Regional Council to **Southland District Council, PO Box 903, Invercargill 9840** from **5 October 2016**.

Please read this Consent carefully, and ensure that any staff or contractors carrying out activities under this Consent on your behalf are aware of all the conditions of the Consent.

Details of Permit

Purpose for which permit is granted: To discharge treated wastewater from the Riversdale oxidation pond to land via Rapid Infiltration Beds and a soakage channel and to water in the Meadow Burn via a soakage channel.

Location - site locality Riversdale
- map reference Discharge into the Meadow Burn immediately east of the oxidation pond at NZTM E1271094 N4907934

Discharge into the soakage channel and via the Rapid Infiltration Basins in an area bounded by the following points:

- NZTM E1270683 N4907818
- NZTM E1270736 N4907751
- NZTM E1270998 N4907907
- NZTM E1270976 N4907969

- catchment Mataura River

Legal description of land at the site: Parts Lots 5 and 6, DP 92, Part Section 509, Hokonui Survey District; Part of Lot 3 DP 15122, Lot 7 DP 92, Lot 8 DP 92.

Expiry date: 1 April 2037

History of amendments and transfers

- Consent amended 1 May 2017 following Environment Court appeal
- Consent amended under s127 on 3 September 2021

Schedule of Conditions

1. This consent authorises:
 - a) the discharge of treated wastewater from the Riversdale Wastewater Treatment Plant oxidation pond to land via the Rapid Infiltration Beds and the soakage channel at an annual average daily flow of 260 m³/day;
 - b) the discharge of treated wastewater from the Riversdale Wastewater Treatment Plant oxidation pond to the Meadow Burn via the soakage channel. The consent holder may only discharge wastewater to the Meadow Burn, via the existing pipe from the soakage channel, in an emergency related to a natural disaster or extreme weather event which results in very high wastewater flow to the plant;
 - c) the consent holder shall advise the Consent Authority as soon as possible and within at least 24 hours of any discharge under Condition 1(b), detailing the reason for the discharge.
2. The discharge authorised by this permit shall not give rise to any of the following effects in the Meadow Burn downstream of the discharge to land:
 - a) the minimum standards set for 'Spring Fed' waters, as described in the Regional Water Plan (attached as **Appendix 1** to this consent), being exceeded;
 - b) the production of any conspicuous oil or grease films, scums or foams or floatable or suspended material;
 - c) any conspicuous change in colour or visual clarity;
 - d) any emission of objectionable odour;
 - e) the rendering of fresh water unsuitable for consumption by farm animals;
 - f) any change in the natural water temperature of more than 3 degrees Celsius;
 - g) any change in the pH outside of the range of 6.0 to 9.0, except when due to natural causes;
 - h) a reduction in the oxygen content in solution to less than 6 milligrams per litre; or
 - i) any destruction of natural aquatic life as a result of a concentration of toxic substances.

Note: Compliance with this Condition will be undertaken by way of the monitoring given in Conditions 8, 9 and 10, which will be undertaken for the first 2 years and will cease once compliance has been confirmed.

Programme of Works for Rapid Infiltration Basins

3. [deleted]
4. If the Consent Holder determines that the proposed Rapid Infiltration Basins are to be constructed and used, then:
 - a) [deleted]
 - b) a producer statement is to be submitted to the Consent Authority prior to commissioning of the Rapid Infiltration Basins, signed by a suitably qualified engineer to confirm construction of the Rapid Infiltration Basins is in accordance with the reviewed design;

- c) the rapid infiltration basins shall be constructed and operational by 31 May 2026;
- d) [deleted]

4A This resource consent shall lapse under s125 of the Resource Management Act if the Rapid Infiltration Basin system is not constructed and operational by 31 May 2026, unless extension is granted under s125(1A)(b) of the Resource Management Act.

Accidental or Emergency Discharges

5. In the event of an emergency or accidental discharge of wastewater or partially treated wastewater) to land or water (as opposed to normal treated wastewater discharging to ground through the Rapid Infiltration Basins), the consent holder (or the consent holder's agent) shall without undue delay, notify:

- a) the Medical Officer, or Health Protection Officer (ph (03) 211 0900);
- b) Te Ao Marama Inc. (ph (03) 931 1242);
- b2) Hokonui Rūnanga Inc. (ph 03 208 7954)
- c) Operations Manager (Murihiku), Department of Conservation (ph (03) 211 2400);
- d) Fish and Game Southland (ph (03) 215 9117);
- e) the Council's Pollution Response Hotline (ph 0800 76 88 45); and
- f) users of downstream surface water abstractions within 200 metres of the discharge point of the wastewater treatment plant to the Meadow Burn.

6. The consent holder shall maintain a record of all incidents and complaints relating to the exercise of this consent, including discharges occurring under Condition 1(b). This record shall include, but not be limited to:

- a) the location where the incident was detected by the complainant;
- b) the date and time when the incident occurred;
- c) a description of the weather conditions when the incident was detected by the complainant;
- d) the nature of the incident;
- e) operating conditions at the time of the complaint, including any malfunction or breakdown of plant or equipment;
- f) the duration of the incident;
- g) the most likely cause of the incident; and
- h) any corrective action undertaken by the consent holder to avoid, remedy or mitigate the incident, and any future recurrence.

Within seven days of any complaint, the consent holder shall notify the Consent Authority in writing of the response taken to remedy the cause of the complaint, and provide a copy to the complainant (if known). The consent holder shall provide a copy of the incidents and complaints register maintained in accordance with Condition 6 to the Consent Authority on request.

Monitoring

7. The consent holder shall record the daily volume of wastewater coming into the plant. This shall determine compliance with Condition 1(a). The daily volume record shall be supplied to the Consent Authority by 31 July each year, or at any time upon reasonable request.

8. In March, June, September and December each year, the consent holder shall collect representative samples of:

- a) treated wastewater immediately prior to discharge into the Rapid Infiltration Basins;
- b) groundwater from five bores, 1, 2, 3, 4 and 5 in locations as agreed to in writing with the Consent Authority as follows:
 - a. Bore 1 shall enable collection of up-gradient water samples in accordance with Conditions 13A–13D.
 - b. Bore 2 shall enable the collection of down-gradient water samples in accordance with Conditions 13A–13D and shall be located at around 220 metres from the Rapid Infiltration Basins as marked in Appendix 2 as "Bore for Condition 12".
 - c. Bores 3, 4 and 5 shall be placed at other locations down-gradient from the Rapid Infiltration Basins but no further than 220 metres from the Rapid Infiltration Basins. These bores will be located along existing fence lines as far as practicable.
- c) water from the Meadow Burn at:
 - i. a location 5 metres upstream of the WWTP (Point 1)
 - ii. a location 400 metres downstream of the discharge (Point 4), and
 - iii. a location approximately 800 metres south of the oxidation pond (Point 3).

See **Appendix 2** for a location plan of monitoring points.

- 9. Once two years of monitoring has been completed, compliance with Condition 2 will be determined and reported to the Consent Authority. Provided that compliance with Condition 2 over at least two years is demonstrated, monitoring of the Meadow Burn under Condition 8(c) is no longer required.
- 10. The following shall be measured at the time of sampling undertaken in accordance with Condition 8:
 - a) groundwater levels in each bore;
 - b) the depth of the bores sampled;
 - c) observations of any conspicuous oil or grease films, scums or foams or floatable or suspended material resulting from the discharge (supported by photographic evidence);
 - d) water level at the Consent Authority's water level station on the Meadow Burn at Round Hill Road; and
 - e) groundwater level at the Consent Authority's monitoring bore F44/0181.
- 11. Samples collected in accordance with Condition 8 will be analysed for:
 - Temperature (field measurement)
 - pH
 - Electrical conductivity
 - Total suspended solids (discharge only)
 - Turbidity (surface water only)
 - Total 5 day carbonaceous biochemical oxygen demand (discharge only)
 - Dissolved oxygen (measurement in surface water only) (as mg/l and percentage of Saturation)
 - Total Ammoniacal nitrogen
 - Total oxidised nitrogen
 - Total nitrogen
 - Dissolved reactive phosphorus
 - Total Phosphorus
 - Escherichia coli
 - Faecal coliforms
 - Fluoride
 - Chloride
 - Bromide

The analytical sample results for each sampling event shall be reported in writing to the Consent Authority within four (4) weeks of receipt of the sample results by the consent holder.

12. In the event that monitoring undertaken in accordance with Condition 8 identifies that any of the trigger values listed in Condition 13 are exceeded, the consent holder shall undertake the following as appropriate:

- a) check for anomalous results;
- b) assess monitoring results against the up-gradient or up-stream samples to determine whether other land uses may be influencing the exceedance of the trigger value;
- c) identify any mitigation measures that are considered necessary to ensure that groundwater quality is compliant with the trigger values in Condition 13;
- d) determine any mounding effect in the groundwater levels;
- e) within one month of receiving the results, submit a report to the Consent Authority on the actions undertaken, including identification of any mitigation measures that have been identified and a programme for implementing these measures; and
- f) implement the identified mitigation measures within the proposed timeframes, which shall not be greater than 12 months from submission of the report according to Condition 12(e).

13. The following trigger values shall apply to the monitoring undertaken in accordance with Condition 8:

Parameter sampled	Discharge	Groundwater (at "Bore for Condition 12" on downgradient fenceline only)
Total five day carbonaceous biochemical oxygen demand (g/m ³)	50	
Soluble Inorganic Nitrogen (g N/m ³) (sum of total oxidised nitrogen and total ammoniacal nitrogen)	30	5
Dissolved Reactive Phosphorus	10	
<i>Escherichia coli</i> (MPN/100 mL)		2

Compliance limits

- 13A. In the event that analyses of groundwater samples taken in accordance with Condition 8 (the first samples) show Bore 2 has a soluble inorganic nitrogen concentration $\geq 5 \text{ g N/m}^3$ higher than the soluble inorganic nitrogen concentration in Bore 1, then the Consent Holder shall:
- immediately obtain second samples from Bores 1 and 2;
 - analyse the second samples for soluble inorganic nitrogen using the same laboratory and same method as was used to analyse the first samples; and
 - provide copies of results from the analyses of the first and second samples (pair of samples) to the Consent Authority.
- 13B. The discharge authorised by this consent shall not cause the soluble inorganic nitrogen concentrations in Bore 2 to be $\geq 5 \text{ g N/m}^3$ higher than the soluble inorganic nitrogen concentrations in Bore 1, for the pair of samples.

Note:

If the concentration of soluble inorganic nitrogen in Bore 2 exceeds the concentration in Bore 1 by more than 5 g N/m^3 for the pair of samples, the consent authority shall be entitled to assume that the breach is caused by the Consent Holder, unless the Consent Holder demonstrates to the satisfaction of the consent authority that the exceedance has not been caused by the discharge authorised by this consent.

- 13C. In the event that analyses of groundwater samples taken in accordance with Condition 8 (the first samples) show Bore 2 has an *Escherichia coli* concentration of $\geq 2 \text{ MPN/100 mL}$, then the Consent Holder shall:
- immediately obtain second samples from Bore 2;
 - analyse the second samples for *Escherichia coli* concentration using the same laboratory and same method as was used to analyse the first samples; and
 - provide copies of results from the analyses of the first and second samples (pair of samples) to the Consent Authority.
- 13D. The discharge authorised by this consent shall not cause the *Escherichia coli* concentration in Bore 2 to be $\geq 2 \text{ MPN/100 mL}$ for five consecutive pairs of samples.

Note:

*If the *Escherichia coli* concentration in Bore 2 exceeds $\geq 2 \text{ MPN/100 mL}$, for five consecutive pairs of samples, the consent authority shall be entitled to assume that the breach is caused by the Consent Holder, unless the Consent Holder demonstrates to the satisfaction of the consent authority that the exceedance has not been caused by the discharge authorised by this consent.*

Reporting

14. The consent holder shall submit a report every two years from the date of granting this consent to the Consent Authority (email: escompliance@es.govt.nz) and to Hokonui Rūnanga Inc (email: hokonui.office@ngaitahu.iwi.nz) prior to 30 June. The report shall include the following:

- a) a summary of the previous 24 months monitoring data collected in accordance with Condition 8 which shall include an assessment and interpretation of the collected data. This data assessment shall include assessment of the system performance, quality of discharge and implications of the discharge on the receiving environment including any monitoring limitations. The monitoring data shall be provided electronically in a suitable format;
- b) a summary of any remedial or improvement works carried out to improve the quality of the discharges from 1 July to 30 June each year;
- c) all available data collected under this consent relevant to wastewater system performance;
- d) All available data collected under this consent relevant to the groundwater and freshwater receiving environment;
- e) Any trends shown by data collection from the grant of consent related to the receiving environment, wastewater system performance or habitat;
- f) Identification of areas where the water quality has exceeded the trigger values in Condition 13 and has triggered the actions required by Condition 12.

On Site Management

15. The Operations and Maintenance Plan (“the Plan”) is to be updated and submitted to the Consent Authority prior to the first exercise of this consent. This Plan shall cover the management of discharges from the site. The system shall be operated in accordance with this manual, which shall be updated as appropriate and updates provided to the Consent Authority, provided the changes do not result in non-compliance with any conditions of this consent. The manual shall include, but not be limited to:

- a) a brief description of the system, including a site map indicating the location of the system;
- b) key operational matters including weekly, monthly and annual maintenance checks;
- c) monitoring requirements and procedures;
- d) contingency plans in the event of system malfunctions or breakdowns;
- e) the means of receiving and dealing with any complaints; and
- f) the management of discharges to the Rapid Infiltration Basins.

At all times the consent holder shall ensure that the Consent Authority has a copy of the most recent version of the Operations and Maintenance Manual.

16. Records of maintenance, complaints, malfunctions and breakdowns shall be kept in a log and this log shall be made available to the Consent Authority’s staff at any time upon request.

17. a) For the purpose of this consent, the analyses and preservation of all aqueous samples shall be carried out in accordance with the latest edition of APHA “Standard Methods for the Analysis of Water and Wastewater” or by methods approved by the Consent Authority.

b) The analyses specified in these conditions are to be carried out by a laboratory with IANZ accreditation, or as agreed to in writing by the Consent Authority.

18. Throughout the duration of this consent, the consent holder shall maintain suitable warning signs at the wastewater treatment plant and adjacent to the Rapid Infiltration Basins that clearly indicate the presence of treated wastewater.

19. This permit does not authorise the discharge of sludge to land or water.

20. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the consent holder of its intention to review the conditions of this consent during the period 1 February to 30 September each year, or within two months of any enforcement action being taken by the Consent Authority in relation to the exercise of this consent, or on receiving monitoring results, for the purposes of:
- a) determining whether the conditions of this permit are adequate to deal with any adverse effect on the environment, including cumulative effects, which may arise from the exercise of the permit, and which it is appropriate to deal with at a later stage, or which become evident after the date of commencement of the permit; or
 - b) ensuring the conditions of this consent are consistent with any National Environmental Standards Regulations, relevant plans and/or the Environment Southland Regional Policy Statement; or
 - c) amending the monitoring programme to be undertaken; or
 - d) adding or adjusting compliance limits; or
 - e) requiring the consent holder to adopt the best practicable option to remove or reduce any adverse effect on the environment arising as a result of the exercise of this permit.

Reissued following amendment or deletion of Conditions 3, 4, 5 and 14 under s127 of the Resource Management Act

for the **Southland Regional Council**



Bruce Halligan
Acting Consents Manager

Note

1. *The consent holder shall pay an annual administration and monitoring charge to the Consent Authority, collected in accordance with Section 36 of the Resource Management Act 1991. This charge may include the costs of inspecting the site twice each year (or otherwise as set by the Consent Authority's Annual Plan).*

APPENDIX 1: Water Quality Standards from Regional Plan: Water – Appendix G

Surface water bodies classified as “Spring Fed”

The temperature of the water:

- shall not exceed 21°C
- shall not exceed 11°C in trout spawning areas during May to September inclusive
- the daily maximum ambient water temperature shall not be increased by more than 3°C when the natural or existing water temperature is 16°C or less, as a result of any discharge. If the natural or existing water temperature is above 16°C, the natural or existing water temperature shall not be exceeded by more than 1°C as a result of any discharge.

The pH of the water shall be within the range 6.5 to 9, and there shall be no pH change in water due to a discharge that results in a loss of biological diversity or a change in community composition.

The concentration of dissolved oxygen in water shall exceed 99% of saturation concentration.

There shall be no bacterial or fungal slime growths visible to the naked eye as obvious plumose growths or mats. Note that this standard also applies to within the zone of reasonable mixing for a discharge.

When the flow is below the median flow, the visual clarity of the water shall not be less than 3 metres.¹

The concentration of total ammonia shall not exceed 0.32 milligrams per litre.

The concentration of faecal coliforms shall not exceed 1,000 coliforms per 100 millilitres, except for popular bathing sites, defined in Appendix K “Popular Bathing Sites” and within 1 km immediately upstream of these sites, where the concentration of *Escherichia coli* shall not exceed 130 *E. coli* per 100 millilitres.

Chlorophyll *a* shall not exceed 50 milligrams per square metre at any time, or exceed a monthly mean of 15 milligrams per square metre for filamentous algae or diatoms and cyanobacteria.²

The Macroinvertebrate Community Index shall exceed a score of 90 and the Semi-Quantitative Macroinvertebrate Community Index shall exceed a score of 4.5.

Fish shall not be rendered unsuitable for human consumption by the presence of contaminants.

Note: *Not all the Spring Fed standards in Condition 2(a) are being specifically monitored for given that discharge will be to groundwater and hence is not expected to have these effects in the Meadow Burn.*

¹ Visual clarity is assessed using the black disc method or other comparable method employed by Environment Southland.

² Expressed in terms of reach biomass per unit of exposed strata (i.e., tops and sides of stones) averaged across the full width of the stream or river.

APPENDIX 2: Surface Water Monitoring Location Plan

