



Resource Consent

Pursuant to the Resource Management Act 1991, the Northland Regional Council (hereinafter called "the Council") does hereby grant a Resource Consent to:

FAR NORTH DISTRICT COUNCIL, PRIVATE BAG 752, KAIKOHE 0440.

To undertake the following activities associated with the operation of a wastewater treatment system to service Kaeo township alone (excluding any new Whangaroa or Totara North system).

Note: All location co-ordinates in this document refer to Geodetic Datum 2000, New Zealand Traverse Mercator Projection:

- (01) To discharge treated wastewater to the Kaeo River, at or about location co-ordinates 1669840E 6116425N.
- (02) To discharge contaminants to land via seepage from the base of a treatment pond and constructed wetland system, on Lot 1 DP 100604 Blk II Kaeo SD, at or about location co-ordinates 1669780E 6115580N.
- (03) To discharge contaminants (primarily odour) to air, on Lot 1 DP 100604 Blk II Kaeo SD, at or about location co-ordinates 1669780E 6115580N.

Subject to the following conditions:

(01) & (02): Discharge to Land and to Water

- 1 The quantity of treated wastewater discharged to the Kaeo River shall not exceed 360 cubic metres per day, based on average dry weather flows. For compliance purposes the "average dry weather flow" shall be calculated in accordance with the details provided in Schedule 1 (**attached**).
- 2 Notwithstanding Condition 1, the Consent Holder shall minimise, as far as practicable, any increase in the quantity of wastewater discharged to the Kaeo River as a result of stormwater inflow and infiltration.
- 3 The Consent Holder shall ensure that all wastewater discharged to the Kaeo River from the outlet of the treatment system has received treatment within at least two facultative ponds and a constructed wetland. This condition shall cease to have effect once the upgrade to the treatment system has been commissioned.

- 4 There shall be no discharge of septic tank contents into the treatment system nor shall there be gross solids discharged from the outlet of the treatment system to the Kaeo River, as a result of the exercise of these consents. For the purpose of this condition, "gross solids" shall be defined as any material (organic or inorganic) within the discharge that is visible to the naked eye.
- 5 The Consent Holder shall, prior to 31 December 2011 ensure that an upgrade to the treatment system is constructed and commissioned. The upgraded treatment system shall:
- (a) Achieve at least a four order of magnitude (ie. four logarithm) reduction in the concentration of F-specific bacteriophage within the wastewater, as measured at NRC Sampling site 110433 (outlet pipe from the upgraded wastewater treatment system);
 - (b) Have a wastewater meter installed on the outlet pipe from the upgraded wastewater treatment system that has an accuracy of $\pm 5\%$;
 - (c) Have an automated daily rainfall gauge installed.

Advice Note: *The meter and rain gauge required to be installed by Condition 5(b) and (c) will be used to calculate the average daily dry weather discharge volume from the upgraded Kaeo wastewater treatment system.*

- 6 The Consent Holder shall within one month of the upgraded treatment system being constructed, forward to the Regional Council's Monitoring Manager "as built" plant layout plans and a maintenance programme for the upgraded treatment system. The "as built" plans shall be drawn to a sufficient scale that allows a Regional Council's Monitoring Officer to identify all structures shown on the plans.
- 7 Once the upgraded treatment system has been commissioned, to enable the collection of wastewater samples, the Consent Holder shall provide and maintain easy and safe access to the following:
- (a) Sampling point prior to the inlet screen;
 - (b) NRC Sampling Site 110433 (outlet pipe from the upgraded wastewater treatment system); and
 - (c) To the discharge pipeline as close as possible to the discharge point into the Kaeo River.

Advice Note: *Condition 11(c): The discharge pipe into the Kaeo River is submerged at all times. To determine where to collect a representative downstream sample of the discharge after reasonable mixing, it may be necessary to introduce tracer dye into to the discharge pipe.*

- 8 The Consent Holder shall ensure that the upgraded treatment system is, at all times, connected, and actively communicating, with the Far North District Council's telemetry system for treatment systems. The telemetry system shall be capable of, and utilised for, notifying the operator of the telemetry system of at least the following:
- (a) Any failure of mechanical equipment within the treatment system due to either electrical or mechanical faults; and
 - (b) The recorded daily rainfall from the automated rainfall gauge.
- 9 Notwithstanding any other conditions, the exercise of these consents shall cause no significant adverse change to the following water quality parameters in the Kaeo River at NRC Sampling Site 100671, at or about 15 metres downstream of Kaeo Sewage discharge:
- (a) Temperature;
 - (b) pH;
 - (c) Dissolved oxygen concentration;
 - (d) Faecal coliform concentration;
 - (e) Escherichia coli concentration.

In addition, the exercise of these consents shall not cause any of the following effects in the Kaeo River at NRC Sampling Site 100671:

- (f) The production of conspicuous oil or grease films or scums or foams;
- (g) Any conspicuous change in the colour or visual clarity;
- (h) Any emissions of objectionable odour;
- (i) The rendering of fresh water unsuitable for consumption by farm animals;
- (j) Any significant adverse effects on aquatic life;
- (k) The microcystin concentration, expressed as microcystin-LR toxicity equivalents, shall not exceed 2.3 micrograms per litre and/or cell counts of Microcystis shall not exceed 11,500 cells per millilitre; and

- (l) The four-day average concentration of total ammoniacal nitrogen [(NH₃ + NH₄)-N] shall not exceed the following:

pH	Total Ammoniacal Nitrogen, [(NH ₃ + NH ₄)-N] g/m ³				
	10°C	15°C	20°C	25°C	30°C
6.50	1.81	1.81	1.22	0.86	0.60
6.75	1.81	1.81	1.22	0.86	0.60
7.00	1.81	1.81	1.22	0.86	0.61
7.25	1.81	1.81	1.23	0.86	0.61
7.50	1.81	1.81	1.23	0.86	0.61
7.75	1.73	1.64	1.15	0.81	0.58
8.00	1.13	1.09	0.76	0.54	0.39
8.25	0.64	0.62	0.44	0.32	0.23
8.50	0.37	0.36	0.26	0.19	0.14

For compliance purposes, the water quality at NRC Sampling Site 100671 shall be compared to the background water quality at NRC Sampling Site 100052, at or about 10 metres upstream of Kaeo Sewage discharge, for each of the above parameters, and the error of the analytical method, or measuring instrument, at the 95%ile confidence level shall be taken into account.

In the event that the background water quality does not meet the concentrations specified in (k) and/or (l), then the discharge shall not result in any adverse change to those concentrations.

(03) Discharge to Air from Treatment System

- 10 The Consent Holder's operations shall not give rise to any discharge of contaminants at or beyond the boundary of Lot 1 DP 100604 Blk II Kaeo SD, which is deemed by a suitably trained and experienced Enforcement Officer of the Regional Council to be noxious, dangerous, offensive or objectionable to such an extent that it has, or is likely to have, an adverse effect on the environment.

General Conditions (01) – (03)

- 11 The Consent Holder shall notify the Regional Council in writing of all new trade and industrial discharges to the treatment system, and provide details on the nature of that discharge, at least two weeks prior to the new connection occurring.

- 12 The Consent Holder shall maintain the treatment system so that it operates effectively at all times. A written record of all maintenance undertaken shall be kept and a copy of this record shall be forwarded to the Regional Council immediately on written request by the Regional Council.
- 13 The Consent Holder shall monitor these consents in accordance with Schedule 1 (**attached**).
- 14 The Consent Holder shall, for the purposes of adequately monitoring the consent, as required under Section 35 of the Resource Management Act 1991, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with this consent:
 - (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain such escape;
 - (b) Immediately notify the Regional Council by telephone of an escape of contaminant;
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (d) Report to the Regional Council in writing within one week on the cause of the escape of the contaminant and the steps taken or being taken to effectively control or prevent such escape.
- 15 The Regional Council may, in accordance with Section 128 of the Act, serve notice on the Consent Holder of its intention to review the conditions of these consents annually during the month of June. The review may be initiated for any one or more of the following purposes:
 - (a) To deal with any adverse effects on the environment that may arise from the exercise of the consent and which it is appropriate to deal with at a later stage, or to deal with any such effects following assessment of the results of the monitoring of the consent and/or as a result of the Regional Council's monitoring of the state of the environment in the area;
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment;
 - (c) To provide for compliance with rules in any regional plan that has been made operative since the commencement of the consent;
 - (d) To deal with any inadequacies or inconsistencies the Regional Council considers there to be in the conditions of the consent, following the establishment of the activity the subject of the consent;
 - (e) To change existing, or impose new limits on, conditions relating to the quality of the discharge and the receiving waters;
 - (f) To change the monitoring programme contained in Schedule 1; and
 - (g) To deal with any material inaccuracies that may in future be found in the information made available with the application (notice may be served at any time for this reason).

The Consent Holder shall meet all reasonable costs of any such review.

EXPIRY DATE: 31 OCTOBER 2022

Please note that this consent was issued by Rob van Voorthuysen who has signed the decision as Hearings Commissioner on the Second day of September 2011, being the date of the Hearings Commissioner's decision. Please note that the date of commencement of the Resource Consent is 28 September 2011.

SCHEDULE 1

MONITORING PROGRAMME

The Consent Holder shall undertake the following monitoring:

1 AVERAGE DRY WEATHER FLOW

Once the treatment system has been upgraded, the Consent Holder shall keep a record of the daily volume of wastewater discharged, midday to midday, from the upgraded treatment system using the meter installed as required by Condition 5.

The average dry weather flow shall be a "rolling" (moving) average based on the discharge volumes from the 30 most recent "dry weather flow" days. For the purposes of this calculation, a "dry weather flow day" is any day on which there is less than 1 millimetre of rainfall and that day occurs after three consecutive days either without rainfall or with rainfall of less than 1 millimetre.

2 WASTEWATER TREATMENT SYSTEM

The following sampling and analyses shall be undertaken on at least one occasion each calendar month. During the winter months, the sampling shall be undertaken during, or immediately after, a rain event on as many occasions as is possible, but on no less than three occasions.

A composite* wastewater sample shall be collected from NRC Sampling Site 105622: Kaeo Sewage System at the discharge from the constructed wetland. The composite* wastewater sample shall be analysed for the following determinands:

Determinand
Faecal coliforms
Escherichia coli
5 day Biochemical Oxygen Demand
Total Suspended Solids
Total Ammoniacal Nitrogen

*A sample made up of equal volumes from three samples taken at least one minute apart during the same sampling event.

Temperature, pH and dissolved oxygen concentration shall be recorded in the wastewater sample using an appropriate meter, and in accordance with standard procedures.

Once the upgrade to the treatment system is commissioned, the following additional sampling and analyses shall also be undertaken on at least one occasion each calendar month.

During the winter months, this sampling shall be undertaken during, or immediately after, a rain event on at least three occasions. This monitoring is to occur in conjunction with the required monitoring at NRC Site 105622.

A wastewater sample shall be collected at the following two points:

- (a) Kaeo WWTP immediately prior to the inlet screen; and
- (b) Kaeo WWTP at NRC Sampling Site 110433 (outlet pipe from the upgraded wastewater treatment system).

The wastewater samples shall then be analysed for F-specific bacteriophage concentration.

Advice Note: *Prior to undertaking this sampling the Consent Holder should contact the Regional Council to determine how these samples should be collected.*

3

RECEIVING WATER QUALITY

The following sampling and analyses shall be undertaken in conjunction with the monitoring required under Section 2 and shall occur on at least one occasion each calendar month. During the winter months, this sampling shall be undertaken during, or immediately after, a rain event on at least three occasions.

The receiving water samples shall only be collected between three and seven hours after the high tide has occurred within Whangaroa Harbour.

Composite* water samples shall be collected from the following sampling sites on at outgoing tide:

- (a) NRC Site 100052: Kaeo River at or about 10 metres up stream of Kaeo sewage discharge; and
- (b) NRC Site 100671, Kaeo River at or about 15 metres down stream of Kaeo sewage discharge.

The collected composite* water samples shall then be analysed for the following determinands:

Determinand
Faecal coliforms
Escherichia coli
Total Ammoniacal Nitrogen

*A sample made up of equal volumes from three samples taken at least one minute apart during the same sampling event.

Temperature, pH and dissolved oxygen concentration shall be measured and recorded in the field using an appropriate meter.

4

NON COMPLIANCES

The Consent Holder shall notify the Regional Council of any non-compliance with Conditions 13 and 14 immediately after the results of the monitoring required by Sections 2 and 3 become known.

If the Consent Holder detects any noxious, dangerous, offensive or objectionable odours at the legal boundary of the treatment system, then the Regional Council should be notified immediately.

5

REPORTING

The Consent Holder shall forward an annual report to the Regional Council by the 1 May each year, for the preceding year 1 April and 31 March, detailing the following:

- The daily wastewater discharge volumes, the daily rainfall data, dry weather discharge days, and the "rolling" 30 day average dry weather discharge volumes;
- The monitoring results for Sections 2 and 3;
- Once the treatment system has been upgraded, verification from a suitably qualified person that the wastewater flow meter installed has been calibrated during the previous 12 month period.

All the above records shall be provided in electronic format (Excel spreadsheet) or as agreed with the Regional Council.