

Resource Consent

Document Date: 27.06.2023

***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

To undertake the following activities associated with the operation of the Whatuwhiwhi Wastewater Treatment Plant on Lot 1 DP 52317 Blk IV Karikari SD, at or about location co-ordinates 1633600E 6141700N (*Note: All location co-ordinates in this document refer to Geodetic Datum 2000, New Zealand Traverse Mercator Projection*):

AUT.007203.02.02 To discharge contaminants to land from the outlet of the treatment system and via seepage from the base of the treatment system.

AUT.007203.03.02 To discharge contaminants (primarily odour) to air.

Subject to the following conditions:

AUT.007203.02 - Discharge to Land

- 1 The quantity of wastewater discharged to land from the outlet of the treatment system shall not exceed 700 cubic metres per day, based on average dry weather inflows to the treatment system. For compliance purposes the "average dry weather flow" shall be calculated in accordance with the details provided in Schedule 1 (**attached**).
- 2 The Consent Holder shall minimise, as far as practicable, any increase in the quantity of wastewater entering the treatment system as a result of stormwater inflow and infiltration to the sewers.

Advice Note: *A significant increase in the quantity of wastewater entering the treatment plant during wet weather periods can have a significant adverse effect on the treatment efficiency of the plant, thereby increasing the potential for adverse effects from the discharge.*

The correct design, construction and maintenance of the wastewater reticulation network, including the connections to private lots, are major factors in minimising the volume of stormwater inflow and infiltration during wet weather periods.

- 3 To enable the collection of wastewater samples, the Consent Holder shall, within one month of the date of commencement of these consents, provide and maintain easy and safe access to NRC Sampling Site 105629: Treatment system outlet.

- 4 The Consent Holder shall, within three years of the date of commencement of these consents, upgrade the treatment system so that:
- (a) The quality of the treated wastewater discharged from the outlet of the treatment system meets the discharge standards specified in Condition 8;
 - (b) A meter that has an accuracy of $\pm 5\%$ is installed, and then maintained, prior to the inlet to the treatment system to record the total wastewater inflow rates and volumes. This meter shall then be used to determine compliance with the requirements of Condition 1 and 2; and
 - (c) The direct discharge from the wetland outlet into the marsh drain ceases and the treated wastewater from the wetland outlet is discharged to land via a disposal system that evenly distributes the wastewater to the surface of that part of Lot 1 DP 52317 which is not being occupied by the treatment system.
- 5 Once the upgraded treatment system has been commissioned, the Consent Holder shall ensure that all wastewater receives treatment within the upgraded treatment system prior to it being discharged to land from the outlet of the treatment system.
- 6 The Consent Holder shall ensure that the upgraded treatment system is, at all times, connected to, and actively communicating with, the Far North District Council's telemetry system for wastewater 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) If a disinfection system is installed, any electrical or mechanical failures within the disinfection system, including any parameter measurement device installed within the disinfection system.
- 7 There shall be no discharge of gross solids from the outlet of the treatment system, 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.
- 8 Once the upgraded treatment plant has been commissioned, the concentration of the following determinands within the treated wastewater, as measured at NRC Sampling Site 308643 – Post UV Treatment, shall not exceed the following:

Determinand	Median	90 th Percentile
5 day Biochemical Oxygen Demand (grams per cubic metre)	30	50
Total Suspended Solids (grams per cubic metre)	30	40
Faecal Coliform (per 100 millilitres)	500	2,600
Total ammoniacal nitrogen (grams per cubic metre)	30	50

- 9 Notwithstanding any other conditions, the exercise of these consents shall not cause any of the following effects in the water quality of the Waimango Swamp:
- (a) The production of any conspicuous oil or grease films, scums or foams;
 - (b) Any emission of objectionable odour;

- (c) The four-day average concentration of total ammoniacal nitrogen $[(\text{NH}_3 + \text{NH}_4)\text{-N}]$ shall not exceed the following:

Total Ammoniacal Nitrogen, $[(\text{NH}_3 + \text{NH}_4)\text{-N}] \text{ g/m}^3$					
pH	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

- (d) Any significant adverse effects on aquatic life.

In addition, the exercise of these consents shall not result in a more than minor increase in the extent of eutrophic wetland vegetation that is adjacent to both Lot 1 DP 52317 and any unnamed tributary/drain that flows from Lot 1 DP 52317 into the natural wetland.

For compliance purposes, “a more than minor increase in the extent of eutrophic wetland vegetation” shall be assessed against the results of a baseline vegetation survey of the wetland areas that are adjacent to both Lot 1 DP 52317 and any unnamed tributary that flows from Lot 1 DP 52317 into the natural wetland. This baseline vegetation survey shall be undertaken by a suitably qualified and experienced person and shall provide details of the species of vegetation present adjacent to both Lot 1 DP 52317 and any unnamed tributary/drain that flows from Lot 1 DP 52317 into the natural wetland, and the extent of eutrophic wetland vegetation in these areas. A copy of the results of the survey shall be forwarded to the Regional Council within 3 months of the date of commencement of this consent.

AUT.007203.03 - Discharge to Air

- 10 The Consent Holder’s operations shall not give rise to any discharge of contaminants at or beyond the boundary of Lot 1 DP 52317, 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

- 11 The Consent Holder shall notify the Regional Council in writing of any new connection that will discharge any industrial or trade wastewater to the treatment system, at least two weeks prior to that connection occurring.
- 12 The Consent Holder shall maintain the wastewater treatment system so that it operates effectively at all times. This maintenance shall include, but not be limited to the monitoring of sludge levels within the treatment system and the annual calibration of the wastewater flow meter installed on the inlet to the treatment system.

A written record of all maintenance undertaken shall be kept and a copy of this record shall be forwarded to the Regional Council immediately upon 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 these consents 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 these consents:
- (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 Resource Management Act 1991, 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 these consents 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 these consents, following the establishment of the activity the subject of these consents;
 - (e) To change existing, or impose new limits on, conditions relating to the quality of the discharge and the receiving waters; and
 - (f) 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: 30 NOVEMBER 2025

These consents were granted on 8 July 2011 under delegated authority from the council by Rob Lieffering, Consents Senior Programme Manager. Pursuant to Section 133A of the Resource Management Act 1991, minor corrections have been made to Condition 8 and Schedule 1 which have been authorised under delegated authority from the council by Stuart Savill, Consents Manager on 27 June 2023.

SCHEDULE 1

MONITORING PROGRAMME

The Consent Holder shall undertake the following monitoring:

1. Wastewater volumes

Once the treatment system has been upgraded, the Consent Holder shall keep a written record of the daily wastewater inflow volumes to the treatment system, mid-day to mid-day, using the meter installed as required by Condition 4 of the Consent.

The average dry weather flow shall be a "rolling" (moving) average based on the inflow 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.

Advice note: *The daily rainfall used to calculate the average dry weather flow will be taken from a NZ Meteorological Service rainfall recorder site at Rangiputa. This data will be supplied by the Regional Council on written request by the Consent Holder.*

2. Treated wastewater

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 at least three occasions.

A composite* wastewater sample shall be collected from the outlet of the treatment system at NRC Sampling Site 308643 – Post UV Treatment.

The composite wastewater sample shall be analysed for the following:

Faecal coliforms
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.

3. Receiving Environment

3.1 Vegetation

The first vegetation survey, excluding the baseline survey, shall be undertaken by a suitably qualified and experienced person within 3 years of the date of commencement of these consents, or prior to the upgrade to the wastewater treatment system being commissioned, whichever is the sooner. Once the upgrade to the wastewater treatment system has been commissioned, a vegetation survey shall be undertaken by a suitably qualified and experienced person at least every two years.

These vegetation surveys shall provide details of the vegetation species that are adjacent to Lot 1 DP 52317 and any unnamed tributary that flows from Lot 1 DP 52317 into the natural wetland, and any increase in the extent of eutrophic wetland vegetation within these areas. These vegetation surveys shall be undertaken in the same month of year during which the baseline survey was undertaken.

4. Compliance

4.1 Conditions 8: Discharge Standards

4.1.1 Median Value

The median value for the determinands listed shall be a “rolling” median calculated on the 12 most recent treated wastewater samples collected. During the 12 month period immediately after the upgraded wastewater treatment plant is first commissioned, the “rolling” median value shall be calculated on the first five treated wastewater samples collected, and then the results of each subsequent treated wastewater sample collected shall be added to calculate the “rolling” median until a total of 12 samples have been collected.

4.1.2 90th Percentile Value

The 90th percentile value shall be calculated annually for the period 1 May to 30 April using, as a minimum, the results from the monthly sampling required by Section 2. If a single sample results in non-compliance of a 90th percentile value, the Regional Council will not consider any subsequent non-compliances caused by the single sample during the same reporting period as non-compliances. When the upgraded wastewater treatment plant has been commissioned, compliance with Condition 8, excluding total ammoniacal nitrogen, shall be calculated on the results of the wastewater samples collected between the date of commissioning and the following 30 April. Compliance with the total ammoniacal nitrogen discharge standard shall be calculated using both the pre and post upgrade treated wastewater samples for that 12 month period.

4.1.3 Collection of Samples

All samples shall be collected using standard procedures and in appropriate laboratory supplied containers.

All samples collected as part of this monitoring programme shall be transported in accordance with standard procedures and under chain of custody to the laboratory.

All samples taken shall be analysed at a laboratory with registered quality assurance procedures[#], and all analyses are to be undertaken using standard methods, where applicable.

[#] Registered Quality Assurance Procedures are procedures which ensure that the laboratory meets recognised management practices as would include registrations such as ISO 9000, ISO Guide 25, Ministry of Health Accreditation.

5. Non-compliance with consent conditions

The Consent Holder shall notify the Regional Council of any non-compliance with Condition 8 immediately after the results of the monitoring required by Section 2 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.

6. Reporting

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

- The daily wastewater inflow volumes, the daily rainfall data, dry weather discharge days, and the “rolling” 30 day average dry weather inflow volumes;
- The monitoring results for Section 2; and
- 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 required numerical monitoring results shall be provided in a Microsoft Excel spreadsheet, or otherwise an alternative format agreed to beforehand with the Regional Council.

The Consent Holder shall forward a copy of the vegetation survey results and an assessment of any changes to the vegetation of the wetland to the Regional Council within one month of the survey being undertaken.