CON20010383901

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,
C/O V K CONSULTING, ENVIRONMENTAL ENGINEERS LTD, P O BOX 10022, TE MAI, WHANGAREI 0130,

To undertake the following activities associated with the treatment and disposal of wastewater from Kohukohu township and environs on Pt Sec 86 Blk X Mangamuka SD in the catchment of the Hokianga Harbour at Map Reference O05: 598 475:

01 To discharge treated wastewater to an unnamed tributary of the Hokianga Harbour.
02 To discharge contaminants to ground from an oxidation pond and a surface flow wetland.
03 To discharge contaminants to air.

subject to the following conditions:

01 & 02: Discharge to Water and Land

1) The quantity of treated wastewater discharged to the unnamed tributary shall not exceed 40 cubic metres per day, based on dry weather flows.

2) The Consent Holder shall, by the 1 December 2002, increase the planted area of at least two cells within the surface flow wetland with appropriate plant species to the extent that there is 80% cover and the plants are at no more than 0.5 metre spacings. The cells to be planted shall include the last cell but not the first cell.

3) The Consent Holder shall, by the 1 December 2002, remove all pampas grass from the embankments around and within the surface flow wetland and replant the embankments with appropriate species.

4) The Consent Holder shall maintain easy access to the NRC Sampling Sites 322, 323 and 2051 at all times.

5) If the median concentration of faecal coliforms, based on the five most recent samples collected from the NRC Sampling Site 323, exceeds 5,000 per 100

millilitres or if the concentration of faecal coliforms in any one sample collected from NRC Sampling Site 323 exceeds 15,000 per 100 millilitres, then additional monitoring shall be carried out in accordance with the **attached** monitoring Schedule B.

6) Notwithstanding Condition 5, if the concentration of total ammoniacal nitrogen in any sample taken from NRC Sampling Site 323 exceeds 40 grams per cubic metre, then additional monitoring shall be carried out in accordance with the **attached** monitoring Schedule B.

7) Notwithstanding any other conditions of this consent, the discharge shall not cause the water quality of the Hokianga Harbour at NRC Sampling Site 231 to fall below the following standards:

(a) The natural pH of the water shall not be changed by more than 0.2 units.
(b) The median concentration of the faecal coliform bacteria in the water shall not exceed 14 per 100 millilitres, and the 90 percentile concentration shall not exceed 43 per 100 millilitres, based on not fewer than 10 (ten) samples taken over any 30 day period.
(c) The visual clarity of the water shall not be reduced by more than 20%.
(d) There shall be no production of significant oil or grease films, scums or foams, floatable or suspended materials, or emissions of objectionable odour
(e) The dissolved oxygen concentration shall not be reduced below 80% of saturation.
(f) The concentration of total ammoniacal nitrogen shall not exceed the following:

Water Quality Criteria for Saltwater Aquatic Life based on Total Ammoniacal Nitrogen [(NH_4 + NH_3)-N] (milligrams per litre) Criteria - Continuous Concentrations

	Salinity - 10 g/kg				
pH	**10°C**	**15°C**	**20°C**	**25°C**	**30°C**
7.0	16	12	7.7	5.4	3.6
7.2	9.9	7.2	4.9	3.4	2.3
7.4	6.4	4.4	3.0	2.1	1.5
7.6	4.1	2.8	2.0	1.4	0.99
7.8	2.6	1.8	1.2	0.91	0.62
8.0	1.6	1.2	0.80	0.57	0.39
8.2	1.1	0.72	0.51	0.36	0.26
8.4	0.67	0.46	0.34	0.24	0.17
8.6	0.44	0.30	0.22	0.16	0.12
8.8	0.28	0.21	0.15	0.12	0.09
9.0	0.19	0.14	0.11	0.08	0.07

Salinity - 20 g/kg					
pH	10°C	15°C	20°C	25°C	30°C
7.0	17	12	8.0	5.4	3.9
7.2	11	7.4	5.1	3.6	2.5
7.4	6.7	4.6	3.4	2.2	1.6
7.6	4.4	2.8	2.1	1.4	0.99
7.8	2.8	1.9	1.3	0.91	0.64
8.0	1.7	1.2	0.82	0.59	0.41
8.2	1.1	0.77	0.54	0.39	0.26
8.4	0.69	0.49	0.36	0.25	0.18
8.6	0.46	0.34	0.23	0.16	0.12
8.8	0.30	0.21	0.16	0.12	0.09
9.0	0.20	0.15	0.11	0.08	0.07

Salinity - 30 g/kg					
pH	10°C	15°C	20°C	25°C	30°C
7.0	18	12	9.1	6.0	4.5
7.2	12	8.0	5.4	3.9	2.6
7.4	7.2	4.9	3.4	2.4	1.6
7.6	4.6	3.0	2.6	1.5	1.1
7.8	2.8	2.0	1.4	0.99	0.67
8.0	1.8	1.3	0.91	0.62	0.44
8.2	1.2	0.82	0.57	0.41	0.28
8.4	0.74	0.51	0.36	0.26	0.19
8.6	0.49	0.34	0.25	0.18	0.13
8.8	0.30	0.22	0.16	0.12	0.09
9.0	0.21	0.16	0.12	0.09	0.07

03: Discharge to Air

8) The Consent Holder shall maintain a concentration of at least one gram per cubic metre of dissolved oxygen in the oxidation pond at all times, as measured in accordance with the **attached** monitoring Schedule A.

9) The Consent Holder's operations shall not give rise to any discharge of contaminants, which in the opinion of an Enforcement Officer of the Regional Council is noxious, dangerous, offensive or objectionable at or beyond the property boundary.

General

10) The Consent Holder shall submit 2 copies of a Site Management Plan that covers all aspects of the operation and maintenance of the Kohukohu wastewater treatment system to the Regional Council by the 30 December 2002. A draft of this Site Management Plan shall be submitted to the Regional Council not later than 1 November 2002 for approval. The Site Management Plan shall cover, but not be restricted to, the operation and maintenance of:

- All septic tanks that contribute to the wastewater volume
- The oxidation pond, including mitigation measures to deal with low concentrations of dissolved oxygen e.g. temporary mechanical surface aeration.
- The surface flow wetland. This section should include a programme that covers how the Consent Holder will retain the vegetative cover that has been established within the cells planted in accordance with Condition 2. It should also include measures to prevent the re-establishment of pampas grass on any of the embankments around and within the wetland.
- Contingency measures for unforeseen or emergency situations.

11) The operation and maintenance of the Kohukohu wastewater treatment system shall be carried out in accordance with the Site Management Plan approved in Condition 10.

12) Changes may be made to the Site Management Plan approved in accordance with Condition 10 with the prior written approval of the Regional Council.

13) The Kohukohu wastewater treatment system shall be correctly operated and maintained in an effective and workmanlike manner. Any maintenance work, which in the opinion of the Regional Council is necessary for the effective operation of the Kohukohu wastewater treatment system, shall be done by the date stated by the Regional Council in writing.

14) The Consent Holder shall monitor the exercise of these consents in accordance with the **attached** monitoring Schedule A.

15) The results of any monitoring carried out in accordance with the **attached** monitoring Schedules A and/or B shall be forwarded to the Regional Council within one month of each monitoring visit.

16) 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 this consent. Such notice may be served annually during the month of May. The review may be initiated for any one or more of the following purposes:

(a) To deal with and mitigate 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 provide for compliance with rules in any regional plan that has been made operative since the commencement of the consent.

(c) 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.

(d) 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 August 2016

ISSUED at Whangarei this Nineteenth day of June 2002

Consents Manager

SCHEDULE A

MONITORING PROGRAMME – RESOURCE CONSENT 3839 (01 – 03)

The Consent Holder or its agent shall monitor the exercise of these consents in accordance with the following monitoring programme:

1 MONITORING OF KOHUKOHU WASTEWATER TREATMENT SYSTEM

At not more than four monthly intervals the following sampling and analyses shall be undertaken. The time of sampling is to vary for each sampling visit.

At NRC Sampling Site 322 (Map Reference O05: 598 476), a composite* sample of wastewater will be taken and analysed for the following:

Determinand
Total Ammoniacal Nitrogen
Faecal Coliforms

At NRC Sampling Site 323 (Map Reference O05: 598 475), a composite* sample of wastewater will be taken and analysed for the following:

Determinand
Total Ammoniacal Nitrogen
Faecal Coliforms
Five Day Biochemical Oxygen Demand
Suspended Solids

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

Temperature, pH and dissolved oxygen concentration are to be recorded at NRC Sampling Site 323 using an appropriate meter, and in accordance with standard procedures.

2 AIR QUALITY

Dissolved oxygen concentration and temperature are to be measured using an appropriate meter at three points, which are at approximately equal intervals around the edge of the oxidation pond. Measurements shall be taken at least 60 cm from the water edge and between 5 cm and 8 cm below the water surface. The median of these values shall be used to determine compliance with Consent Condition 8. Any odours at the site should be noted.

NOTE:
The objective of analysing a composite sample made up from triplicate samples, and sampling at different times of the day, is to ensure that the data gathered is representative of the conditions at the site.

2

All samples taken are to be analysed at a laboratory with registered quality assurance procedures, and all analyses are to be undertaken using standard methods. Registered Quality Assurance Procedures are procedures which ensures that the laboratory meets good management practices and would include registrations such as ISO 9000, ISO Guide 25, Ministry of Health Accreditation, amongst others.

The monitoring specified above is the minimum amount of monitoring that is required.

3 THE HOKIANGA HARBOUR

Once every five years the Hokianga Harbour shall be monitored in accordance with the **attached** monitoring **Schedule B**. The first monitoring visit should take place within three months of the consent being granted.

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SCHEDULE B

MONITORING PROGRAMME – RESOURCE CONSENT 3839 01

The Consent Holder or its agent shall monitor the exercise of this consent in accordance with the following monitoring programme:

Sampling at NRC Sampling Sites (see attached map)

231; Map Reference O05 2559843 6647261
323; Map Reference O05 2559775 6647500
2051; Map Reference O05 2559783 6647503
2052; Map Reference O05 2559711 6647660
5815; Map Reference O05 2560017 6647564

is to occur on the same day and is to be undertaken on the ebb tide as close to low tide as is practicable.

To determine the most appropriate sampling point and depth at NRC Sampling Site 231, a sufficient quantity of tracer dye (or another suitable tracer material) should be introduced at NRC Sampling Site 323 that results in a visible dye plume at NRC Sampling Site 231. The samples should then be collected from within the tracer dye plume.

Prior to the introduction of tracer dye at NRC Sampling Site 323, an assessment of water clarity should be made at NRC Sampling Sites 5185 and 231. If a conspicuous change in clarity is apparent between the waters at NRC Sampling Sites 5185 and 231, then a standard Black Disk shall be used to measure this difference in clarity.

At NRC Sampling Site 323 a composite* sample shall be taken. At NRC Sampling Sites 2051 and 2052, three samples of equal volume shall be taken at least five minutes apart. All samples taken at NRC Sampling Sites 323, 2051 and 2052 shall be analysed for the following:

Determinand
Total Ammoniacal Nitrogen
Faecal Coliforms

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

Temperature, pH and dissolved oxygen concentration are to be recorded at NRC Sampling Sites 323, 2051 and 2052 using an appropriate meter, and in accordance with standard procedures.

At NRC Sampling Sites 231 and 5815, ten samples of equal volume shall be taken at least five minutes apart. All samples taken at NRC Sampling Site 231 and 5815 shall be analysed for the following:

Determinand

Total Ammoniacal Nitrogen

Faecal Coliforms

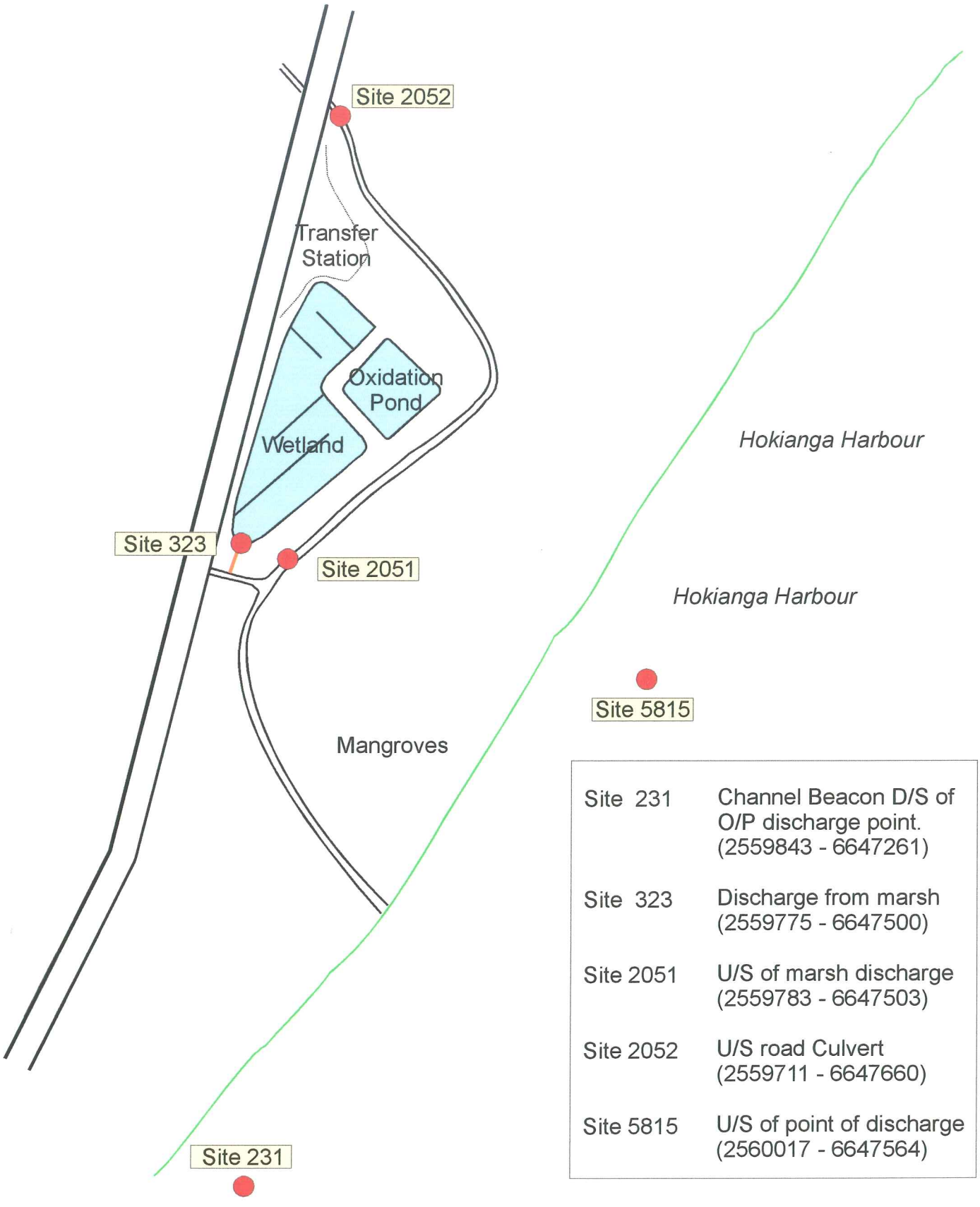
Temperature, pH, dissolved oxygen concentration and salinity are to be measured at NRC Sampling Sites 231 and 5815 using an appropriate meter, and in accordance with standard procedures.

NOTE:
All samples taken are to be analysed at a laboratory with registered quality assurance procedures, and all analyses are to be undertaken using standard methods. Registered Quality Assurance Procedures are procedures which ensures that the laboratory meets good management practices and would include registrations such as ISO 9000, ISO Guide 25, Ministry of Health Accreditation, amongst others.

The monitoring specified above is the minimum amount of monitoring that is required.

R

(01) 3839



Site 231	Channel Beacon D/S of O/P discharge point. (2559843 - 6647261)
Site 323	Discharge from marsh (2559775 - 6647500)
Site 2051	U/S of marsh discharge (2559783 - 6647503)
Site 2052	U/S road Culvert (2559711 - 6647660)
Site 5815	U/S of point of discharge (2560017 - 6647564)

	By	Date
Dwn.	C N Anderson	03/02
App'd		

Amendment		
No.	By	Date

RESOURCE CONSENT NLD 01 3839 01
for
Far North District Council
Sampling Sites
Kohukohu Waste Treatment Plant

NORTHLAND REGIONAL COUNCIL

Scale	Plan No.
N.T.S.	3316