

FAR NORTH DISTRICT COUNCIL

To undertake the following activities associated with the operation of the Opononi Wastewater Treatment Plant on ~~Lot 1 DP 110735 and Lot 1 DP 167208 Blk VII Hokianga servicing the townships of Ōmāpere and Opononi, as defined by the Operative Far North District Council Plan, and all existing connections to this system that are outside these townships, as at the date of commencement of these consents~~ Part Taumatawiwi Survey Office Plan 405122 (aeration and detention ponds), Section 1 Survey Office 405122 (clean water tank), Part River Bed (part-of constructed wetland over the bed of the Waiarohia Stream), and Lot 1 Deposited Plan 167208 (majority of constructed wetlands):

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

- AUT.002667.01.04** **To discharge treated wastewater into the coastal marine area of the Hokianga Harbour, at or about location co-ordinates 1634768E 6069462N.**
- AUT.002667.02.03** **To discharge treated wastewater to land (seepage) from the base of a wastewater treatment system, at or about location co-ordinates 1635620E 6069420N and 1635800E 6069350N.**
- AUT.002667.03.03** **To discharge contaminants (primarily odour) to air from the operation of the wastewater treatment system, at or about location co-ordinates 1635620E 6069420N and 1635800E 6069350N.**
- AUT.002667.04.02** **To occupy the bed of the coastal marine area of the Hokianga Harbour with an existing wastewater discharge pipeline structure.**

Subject to the following conditions:

General Conditions

- 1 The Consent Holder must maintain the treatment system so that it operates effectively at all times and a written record of all maintenance undertaken must be kept. A copy of this record must be forwarded to Northland Regional Council's assigned monitoring officer immediately upon request.
- 2 The Consent Holder must monitor the exercise of these consents in accordance with Schedule 1 (**attached**). The results of monitoring carried out for each calendar month in accordance with Schedule 1 must be forwarded to Northland Regional Council's assigned monitoring officer by the 15th of the following month, and also immediately on written request. This information must be in an electronic format that has been agreed to by the Northland Regional Council.
- 3 If any monitoring results show that any of the following determinants in the treated wastewater are exceeded, as measured at Northland Regional Council Sampling Site 101580 (final outlet from the treatment plant prior to the discharge pipeline)

Determinant	Median Concentration	90 TH Percentile Concentration
5 day Biochemical Oxygen Demand (grams per cubic metre)	20	35
Escherichia Coli (per 100 millilitres)	3,000 4,400	5,500 24,000
Total ammoniacal nitrogen (grams per cubic metres)	30	38 43
Total suspended solids (grams per cubic metre)	35	80

the Consent Holder must, within one month of becoming aware of any exceedance, forward to the Northland Regional Council's Compliance Monitoring Manager a written report that provides the following:

- (a) Reasons for the exceedance; and
- (b) What actions are intended to be undertaken by the Consent Holder to correct the exceedances and timeframes for implementation of actions.

This condition ceases to have effect once the wastewater treatment plant has been upgraded in accordance with Condition 17.

4 To prevent damage to the wastewater treatment system, ~~no stock shall be allowed to enter the Consent Holder must install and maintain a reasonable stock-proof fence to prevent stock from entering~~ any area that is utilised for the treatment of wastewater.

~~5 The Consent Holder must maintain a Community Liaison Group, consisting of representatives from:~~

- ~~(a) Te Rūnanga o Te Rarawa;~~
- ~~(b) Nga Marae O Te Wahapū; and~~
- ~~(c) Ōmāpere and Opononi Communities (duly appointed).~~

~~The Community Liaison Group must also include a representative(s) of the Consent Holder.~~

~~6 The purpose of the Community Liaison Group is to provide a forum to:~~

- ~~(a) Share and discuss information on the performance of the wastewater treatment plant and monitoring of the Hokianga Harbour;~~
- ~~(b) Discuss and make recommendations on upgrades to the wastewater treatment plant and opportunities to improve the quality of the wastewater discharge; and~~
- ~~(c) Address any other matters relating to the wastewater treatment plant as identified by the Group.~~

~~7 The Consent Holder must:~~

- ~~(a) Hold regular meetings (at least annually) for the duration of the Consent, unless representatives from Te Rūnanga o Te Rarawa, Nga Marae O Te Wahapū or from the Ōmāpere or Opononi communities in the Community Liaison Group request a different schedule; and~~
- ~~(b) Prepare an agenda for each meeting and prepare minutes recording actions. A copy of the minutes must be provided to the members of the group within a reasonable period following a meeting.~~

~~8 The Consent Holder, or its authorised agent, must invite and allow representative(s) of a Community Liaison Group formed under Condition 5 to attend monitoring of the wastewater discharge.~~

- 9 The Consent Holder must, for the purpose of adequately monitoring these consents as required under Section 35 of the Act, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with these consents:
- (a) Take immediate action to stop and/or contain such escape;
 - (b) Immediately notify the Northland Regional Council by telephone of an escape contaminant;
 - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the escape; and
 - (d) Notify the Northland 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 escapes.

For telephone notification during the Northland Regional Council's opening hours (8:00 am to 5:00 pm), the Northland Regional Council's assigned Monitoring Officer for these consents must be contacted. If that person cannot be spoken to directly, or it is outside of the Northland Regional Council's opening hours, then the Environmental Hotline must be contacted.

- 10 The 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 annually during the month of May 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 consents and which it is appropriate to deal with at a later stage, or
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

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

AUT.002667.01 and AUT.002667.02 – Discharges to Coastal Water and Land

- 11 The ~~quantity of treated wastewater discharged to the Hokianga Harbour shall not exceed 450 cubic metres per day peak 30-day rolling average dry weather flow (ADWF) of treated wastewater discharged the Hokianga Harbour shall not exceed 420 cubic meters per day.~~
- 12 Notwithstanding Condition 11, the Consent Holder shall minimise, as far as practicable, any increase in the quantity of wastewater discharged to the Hokianga Harbour as a result of stormwater inflow and infiltration into the sewage reticulation network and treatment system. This shall include the prevention, as far as practicable, of stormwater run-off from the surrounding land entering the treatment system. For compliance purposes, the Consent Holder shall record the daily wastewater inflow volume to the treatment plant.
- 13 The Consent Holder shall maintain a meter on both the inlet to, and the outlet from, the treatment system that has a measurement error of +/- 5% or less. These meters must be used to determine compliance with Conditions 11 and 12.

14 The Consent Holder shall re-calibrate the meters required by Condition 13 at least annually to ensure the specified accuracy is maintained. Written verification from a suitably qualified person that the meter has been calibrated during the previous 12 month period shall be forwarded to the Northland Regional Council's assigned monitoring officer by 1 May each year.

15 Treated wastewater shall only be discharged to the Hokianga Harbour for a maximum of three hours each tidal cycle between one hour and four hours after high tide via the discharge pipeline from the treatment system.

~~16 The Consent Holder shall calibrate the tidal clock used to control the time of the discharge to the Hokianga Harbour at least annually to ensure that the programmed high tide discharge time is, as far as practicable, the same as when high tide actually occurs at the site. Written verification from a suitably qualified person that this calibration has been undertaken during the previous 12 month period shall be forwarded to the Northland Regional Council's assigned monitoring officer by 1 May each year.~~

17 The Consent Holder must, within ~~three~~ six years of the date of commencement of these consents, upgrade the wastewater treatment plant so that all wastewater receives treatment within a fully commissioned and operating treatment process specifically designed to reduce the concentration of E.coli, total suspended solids and total ammoniacal nitrogen. These upgrade works shall include, but are not limited to, the following:

- (a) Implementing chemically assisted solids removal;
- (b) Installing UV disinfection treatment; and
- (c) Installing an external ammonia removal technology (either in pond or external package plant).

18 The Consent Holder must provide an annual update to Northland's Regional Council's assigned monitoring officer by 1 May each year regarding the progress of the planned upgrades to the wastewater treatment system.

19 Once the plant is upgraded, as required by Condition 17, the quality of the treated wastewater, as measured at NRC Sampling Site 101580 must meet the following standards:

Determinant	Maximum Concentration 90th Percentile
Escherichia Coli (per 100 millilitres)	3,000
Total suspended solids (grams per cubic metre)	35
Total ammoniacal nitrogen (grams per cubic metres)	30

20 The Consent Holder shall ensure safe and easy access to the final outlet from the treatment plant prior to the discharge pipeline (Northland Regional Council sampling site 101580), so that treated wastewater samples can be collected.

- 21 There shall be no discharge of contaminants onto or into land, or into water, from any part of the treatment system except via seepage from the base of the treatment system and the designated outlet pipe from the treatment system into the Hokianga Harbour.
- 22 The discharge of contaminants to land via seepage from the base of the treatment system shall not result in any adverse effects on the water quality of the Waiarohia Stream, as measured immediately downstream of either the treatment ponds or the constructed wetland system. For compliance purposes the downstream water quality shall be compared with the water quality immediately upstream of the constructed wetland system. The error of the analytical method and measuring instrument at the 95th 90th percentile confidence level shall be included in determining all parameters.
- 23 Notwithstanding any other conditions, the discharge of any contaminant (either by itself or in combination with the same, similar or other contaminants or water) shall not result in any of the following effects in the water quality of the Hokianga Harbour, as measured at any point at, or down-current of, where the treated wastewater first contacts the surface of the Hokianga Harbour:
- (a) The production of conspicuous oil or grease films, scums or foams, floatable or suspended materials;
 - (b) Any conspicuous change in the colour or visual clarity;
 - (c) Any emissions of objectionable odour;
 - (d) Any significant adverse effects on aquatic life; and
 - (e) No more than minor adverse change in either the Escherichia coliform or Enterococci concentration.

For compliance purposes, the down-current water quality shall be compared to the background water quality of the Hokianga Harbour at an up-current site that is not affected by this discharge of the above parameters. The error of the analytical methods and measuring instrument at the 95th 90th percentile confidence level shall be included in determining all parameters.

AUT.002667.03 – Discharge to Air

- 24 The exercise of this consent must not result in the discharge of contaminants which are deemed by a Monitoring Officer of the Northland Regional Council to be noxious, dangerous, offensive or objectionable at or beyond the boundary of the area legally occupied by the wastewater treatment plant.

AUT.002667.04 – Discharge Pipeline Structure

- 25 This consent only authorises use of the existing structure as installed at the date of commencement of this consent.
- 26 The pipeline shall
- a) remain buried at all times ~~and~~
 - b) ~~the~~ maintain structural integrity ~~of the pipeline shall be maintained~~ at all times; ~~and~~
 - c) be identifiable at the surface of the water by a permanent marker buoy.

Advice Note: Should the marker buoy become unfixed from its position, it shall be reinstated as soon as is practicable and safe to do so.

- 27 The Consent Holder shall undertake inspections of the bed of the Hokianga Harbour where

the pipeline is installed and also the outlet of the pipeline at least once every two years. ~~The Consent Holder shall give the representatives of the Community Liaison Group as required by Condition 5 at least seven days notice of the proposed inspection of the pipeline.~~ A written report on the results of the inspection shall be forwarded to the Northland Regional Council's assigned monitoring officer ~~and the representatives of the Community Liaison Group~~ by 1 May every two years from the date of commencement of this consent.

EXPIRY DATE: **31 AUGUST ~~2039~~ 2043**

SCHEDULE 1

The Consent Holder shall undertake the following monitoring:

1 Wastewater volumes

The Consent Holder shall keep a written record of both the daily, midday to midday, inflow volumes to the treatment system and the wastewater discharge volume using the meters required by Condition 13 of this Consent.

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 wastewater sample shall be collected from the final outlet of the treatment system, prior to it entering the discharge pipeline(Northland Regional Council Sampling Site 101580).

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

3 Waiarohia Stream

On a quarterly basis, a sample of water shall be collected from the Waiarohia Stream at Northland Regional Council Sampling Sites:

- 101579: Waiarohia Stream upstream of treatment plant, approximate location coordinates 1635907E 6069331N; and
- 100756: Waiarohia Stream downstream of treatment plant, approximate location coordinates 1635728E 6069372N.

These water samples shall then be analysed for Escherichia coli concentration.

The upstream and downstream Escherichia coli concentration shall be compared after sampling occasion to determine whether there is any adverse effect on the water quality of the Waiarohia Stream as a result of the discharge of contaminants to land via seepage from the base of the constructed wetland system.

~~This monitoring shall cease after a two year period if the results show that the discharge of contaminants to land via seepage from the base of the constructed wetland system is not having an adverse effect on the water quality of the Waiarohia Stream.~~

4 Compliance with Median and 90th Percentiles

Median Value

The median value for the determinants listed shall be a “rolling” median calculated on the 12 most recent treated wastewater samples collected

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.

Compliance with the median and 90th percentile cease once the plant has been upgraded.

5 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.

6 Non-compliance with Consent Conditions

The Consent Holder shall notify the Regional Council of any non-compliance of the “rolling median” or any adverse effects on the water quality of the Waiarohia Stream, immediately after the results of the monitoring required by Sections 2 and 3 are known.

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

FAR NORTH DISTRICT COUNCIL

To undertake the following activities associated with the operation of the Kohukohu Wastewater Treatment Plant on ~~PT Part~~ Section 86 ~~Blk Block~~ X Mangamuka ~~SD Survey District, at or about location co-ordinates 1648970E 6085775N:~~

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

- AUT.003839.01.03** To discharge treated wastewater into the coastal marine area of the Hokianga Harbour at or about location co-ordinates 1648970E 6085775N.
- AUT.003839.02.03** To discharge treated wastewater to land (seepage) from the base of a wastewater treatment system at or about location co-ordinates 1648970E 6085775N.
- AUT.003839.03.03** To discharge contaminants (primarily odour) to air from the operation of the wastewater treatment system at or about location co-ordinates 1648970E 6085775N.

Subject to the following conditions:

General Conditions

- 1 The Consent Holder must maintain the treatment system so that it operates effectively at all times and a written record of all maintenance undertaken must be kept. A copy of this record must be forwarded to Northland Regional Council's assigned monitoring officer immediately upon written request.
- 2 The Consent Holder must monitor the exercise of these consents in accordance with Schedule 1 (**attached**).
- 3 The results of any monitoring carried out in accordance with Schedule 1 and/or Schedule 2 shall be forwarded to Northland Regional Council's assigned monitoring officer within one month of each monitoring visit.
- 4 The Consent Holder must maintain a Site Management Plan that covers all operation and maintenance of the Kohukohu Wastewater Treatment System. The Site Management Plan shall cover, but not be restricted to, the operation and maintenance of:
 - (a) All septic tanks that contribute to the wastewater volume;
 - (b) The ~~oxidation facultative~~ pond, including mitigation measures to deal with low concentrations of dissolved oxygen ~~e.g. temporary mechanical surface aeration;~~

- (c) The surface flow wetland. This section should include a programme that covers how the Consent Holder will maintain the vegetation cover that is established around the constructed wetland. It should also include measures to prevent the re-establishment of pampas grass on any of the embankments around and within the wetland.
 - (d) Contingency measures for unforeseen or emergency situations.
- 5 The Consent Holder must, within three months of the date of commencement of this consent and then on at least a three yearly basis thereafter, complete a review of the Site Management Plan. The purpose of the review is to identify, evaluate and determine improvements to the operation and maintenance of the treatment plant and discharge to better ensure good plant performance and compliance with conditions of these consents. The Site Management Plan must be revised to address any findings from the review.
- 6 A written copy of the review's findings and a revised Site Management Plan must be provided to the Northland Regional Council' assigned monitoring officer ~~and the Kaitiaki Liaison Group~~ on completion of the review.
- 7 The Consent Holder must, as a minimum, operate and manage the wastewater treatment plan in accordance with the most recent reviewed version of the Site Management Plan required by Condition 4.
- 8 Within six months of the commencement date of these consents, the Consent Holder must commission a suitably qualified and experienced person to prepare a Septage Management Plan to demonstrate how the septic tanks that are a part of the common effluent drainage service (CEDS) are to be operated and maintained. The Septage Management Plan must, at minimum, contain the following information:
- (a) A suitable record of each individual tank connected to the CEDS that contains, at minimum, the following information:
 - i. Location details (i.e. GPS coordinates), ~~and sketch plan~~ of the septic tank on each property
 - ii. Basic property information (legal description, address)
 - iii. Contact information for the property owner
 - iv. ~~Water supply type~~
 - v. The number of years the septic tank has been in service (the age of the septic tank).
 - (b) A protocol for tank inspections which includes
 - i. The frequency at which tanks will be inspected;
 - ii. The methods of inspection that may be used.
 - (c) Details on how education and advice will be shared with properties connected to the CEDS for proper septic tank use and operation.
 - (d) A template for recording tank inspection information which generally follows tank inspection requirements under AS/NZS 1547:2012.
 - (e) A desludging programme for the septic tanks connected to the CEDS which recognises that older tanks may need to be desludged more frequently than newer tanks.

- 9 Septic tanks that are a part of the CEDS must be inspected and maintained in accordance with the Septage Management Plan required by Condition 8.
- ~~10 The Consent Holder must, within three months of commencement of this Consent, invite representatives from Te Rūnanga o Te Rarawa, Ngā Hapū o Ngāti Korokoro, Pākanae Resource Management Committee, Te Hikutū, Ngāpuhi and Te Rararwa to form a Kaitiaki Liaison Group. The Group must also include a representative(s) of the Consent Holder.~~
- ~~11 The purpose of the Kaitiaki Liaison Group is to provide a forum to:~~
- ~~(a) Share and discuss information on the performance of the wastewater treatment plant and monitoring of the Hokianga Harbour; and~~
 - ~~(b) Address any other matters relating to the wastewater treatment plant as identified by the Group.~~
- ~~12 The Consent Holder must:~~
- ~~(a) Hold regular meetings (at least annually) for the duration of the Consent, unless the representatives of the Kaitiaki Liaison Group request a different meeting schedule; and~~
 - ~~(b) Provide the monitoring data for the previous year.~~
 - ~~(c) Prepare minutes recording actions from the meeting. A copy of the minutes must be provided to the members of the group within one month following a meeting.~~
- ~~13 The Consent Holder, or its authorised agent, must invite and allow representative(s) of a Kaitiaki Liaison Group formed under Condition 10 to attend monitoring of the wastewater discharge.~~
- 14 The Consent Holder must keep a record of all wastewater flows to the treatment plant. Records must be provided to Northland Regional Council's assigned monitoring officer upon written request.
- 15 The Consent Holder must, for the purposes of adequately monitoring these consents as required under Section 35 of the Act, on becoming aware of any contaminant associated with the Consent Holder's operations escaping otherwise than in conformity with these consents:
- (a) Take immediate action to stop and/or contain such escape;
 - (b) Immediately notify the Northland 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) Notify the Northland 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.

For telephone notification during the Northland Regional Council’s opening hours (8.00 a.m. to 5.00 p.m.), the Northland Regional Council’s assigned Monitoring Officer for these consents must be contacted. If that person cannot be spoken to directly, or it is outside of the Northland Regional Council’s opening hours, then the Environmental Hotline must be contacted.

- 16 The 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 annually during the month of May 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 consents and which it is appropriate to deal with at a later stage, or
 - (b) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.

AUT.003839.01 and AUT.003839.02 – Discharges to Coastal Marine Area and Land

- 17 The quality of treated wastewater discharged to the Hokianga Harbour must not exceed 40 cubic meters per day.
- 18 The Consent Holder must maintain easy and safe access to the NRC Sampling Sites ~~322~~, 323 and 2051 at all times.
- 19 If the median concentration of faecal coliforms, based on the five most recent samples collected from the NRC Sampling Site 323 (discharge from the wetland), 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 must be carried out in accordance with Schedule 2 (**attached**). This condition ceases to have effect once the treatment plant is upgraded in accordance with Condition 20.
- 20 The Consent Holder must, no later than 1 July 2025, de-sludge the facultative pond, remove the excess vegetation present in the wetland, install baffles and move the influent inlet to the north-eastern corner of the pond, as recommended in the *Kohukohu WWTP Issues and Options Report, prepared by Jacobs, dated 15 October 2020, ref.IZ134400*.
- 21 Once the treatment plant has been upgraded in accordance with Condition 20, the quality of the treated wastewater, as measured at NRC Sample Site 323 (discharge from the wetland), must meet the following standards based on the results of samples collected in accordance with **Schedule 1 (attached)**:

Parameter	Unit	Median	95 TH 90 TH Percentile
Ammoniacal Nitrogen	g/m ³	20	32
Faecal Coliforms	CFU/100ml	2,500	24,000

- 22 Notwithstanding Conditions 19 and 21, if the concentration of total ammoniacal nitrogen in any sample taken from NRC Sampling Site 323 (discharge from the wetland) exceeds 40 grams per cubic metre, then additional monitoring shall be undertaken in accordance with Schedule 2 (**attached**).

~~23 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 faecal coliform bacteria in the water shall not exceed 14 per 100 millilitres and the 90th 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 emission 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:~~

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

APP.003839.03 – Discharge to Air

- 24 The exercise of this consent must not result in the discharge of contaminants which are deemed by a Monitoring Officer of the Northland Regional Council to be noxious, dangerous, offensive or objectionable at or beyond the boundary of the area legally occupied by the wastewater treatment system.

EXPIRY DATE: 31 AUGUST ~~2031~~ 2038

SCHEDULE 1

The Consent Holder must undertake the monitoring specified in this schedule.

All samples must be collected using National Environmental Monitoring Standards (NEMS) procedures and stored in appropriate laboratory supplied containers.

All samples collected must be transported in accordance with NEMS procedures to the laboratory.

All samples must be analysed at an accredited 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 and would include registrations such as ISO 9000, ISO Guide 25, Ministry of Health Accreditation.

MONITORING OF KOHUKOHU WASTEWATER TREATMENT SYSTEM

At no more than four monthly intervals, the following samples and analyses shall be undertaken. The time of sampling is to vary for each sampling visit.

At NRC Sampling Site 322 323 (discharge from the wetland) a composite* sample of wastewater will be undertaken and analysed for the following:

Determinant

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.

COMPLIANCE WITH MEDIAN AND 95TH 90TH PERCENTILES

Median Value

The median value for the determinants listed shall be a "rolling" median calculated on the 12 most recent composite wastewater samples collected at NRC Sampling Site 323. Until such time as 12 composite wastewater samples have been collected, the results of sampling to date shall be utilised for compliance purposes.

95TH 90TH Percentile Value

The 95th 90th percentile value shall be calculated using the 12 most recent composite wastewater samples collected at NRC Sampling Site 323. Until such time as 12 composite wastewater samples have been collected, the results of sampling to date shall be utilised for compliance purposes.

HOKIANGA HARBOUR

Once every five years the Hokianga Harbour shall be monitored in accordance with the **attached** Monitoring Schedule 2.

SCHEDULE 2

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

Sampling at NRC Sampling Sites 231, 323, 2051, 2052 and 5815 (see **attached** map) is to occur on the same day and is to be undertaken on the ebb tide as close to low ~~time~~ 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 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 Site 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, ~~there~~ 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:

Determinant

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 Site 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:

Determinant

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.

Monitoring Locations:

