

*Preface - This document has been prepared to respond to the directions given by Sharon McGarry (Chair) on behalf of the Hearing Commissioners in Minute 2, dated 7 July 2023. As it contains versions of conditions previously prepared by the consenting authority and the applicant, text colouring has been used to distinguish changes which were added during the hearing adjournment, and changes which were made to the consent authorities recommended conditions (in the Section 42A Reports) at the commencement of the hearing that have been retained. For clarification, all deletions made during the adjournment are shown as revised changes in green.*

#### **KEY TO TEXT COLOURING**

|                   |  |
|-------------------|--|
| <b>Red Text</b>   | Changes proposed to recommended consent conditions contained in Northland Regional Council's Section 42A Report at commencement of hearing (May 2023). |
| <b>Green Text</b> | Revised changes proposed by Far North District Council during the adjournment of the hearing (May – August 2023).                                      |
| <b>Blue Text</b>  | Changes proposed by Far North District Council (October 2023).   |

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## **REVISED CONSENT CONDITIONS FOR OPONONI/ŌMAPERE WASTEWATER TREATMENT PLANT RESOURCE CONSENTS**

### **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 Taumatāwī 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.*

- |                         |   |
|-------------------------|---|
| <b>AUT.002667.01.04</b> | <b>To discharge treated wastewater into the coastal marine area of the Hokianga Harbour, at or about location co-ordinates 1634768E 6069462N.</b>   |
| <b>AUT.002667.02.03</b> | <b>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.</b>         |
| <b>AUT.002667.03.03</b> | <b>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.</b> |
| <b>AUT.002667.04.02</b> | <b>To occupy the bed of the coastal marine area of the Hokianga Harbour with an existing wastewater discharge pipeline structure.</b>   |

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 **keep** a written record of all maintenance **required and** undertaken ~~must be kept~~. A copy of this record must be forwarded to Northland Regional Council's assigned monitoring officer immediately upon request.  
  
~~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 15<sup>th</sup> 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.~~
- 2 ~~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.
- 3 The Consent Holder must ~~prepare~~**provide** a Site Management Plan (SMP) that covers all operations and maintenance of the Opononi-Ōmapere Wastewater Treatment System (~~OPO-WWTP~~) and ~~submit it~~ **to the Northland Regional Council's assigned monitoring officer within six months of the date of commencement of this consent.**

- 4 The Consent Holder must complete a review of the SMP required by Condition 4 at least once during the term of this consent. 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 SMP must be revised to address any findings from the review.
- 5 A written copy of the review's findings and any revised ~~SMP Site Management Plan~~ must be provided to the Northland Regional Council's assigned monitoring officer within one month of completion of the review.
- 6 The Consent Holder must, as a minimum, operate and manage the wastewater treatment plant in accordance with the most recent reviewed version of the ~~SMP Site Management Plan~~ required by Condition 3.
- 7 ~~The Community Liaison Group must also include a representative(s) of the Consent Holder.~~ The Consent Holder shall assist in the facilitation of, and actively participate in, meetings with a Community Liaison Group.
- 8 ~~must, maintain a~~ Within three months of the commencement of ~~this~~ these consents, the Consent Holder must assist in the formation of the Community Liaison Group by inviting ~~form~~ and invite representatives from the following groups to form a Community Liaison Group:
  - (a) Ngāti Korokoro Hapū (supported by ngā hapū o Hokianga, Te Rūnanga Ā Iwi o Ngāpuhi and Te Rūnanga o Te Rarawa; and
  - (b) ~~Te Rūnanga Ā Iwi o Ngāpuhi;~~
  - (c) ~~Nga Marae O Te Wahapū Nga hapū o Hokianga; and~~
  - (d) Ōmāpere and Opononi Communities (duly appointed);
- 9 The purpose of the Community Liaison Group is to provide a forum to:
  - (a) Develop, adopt, and maintain a Terms of Reference which must include names of members who will receive and distribute monitoring information to be reported to the Community Liaison Group in accordance with Schedule 1 (**attached**);
  - (b) Input into the drafting, preparation, and development of the SMP to be prepared by the Consent Holder as set out in Condition 3;
  - (c) Share and discuss information on the performance of the wastewater treatment plant and monitoring of the Hokianga Harbour;
  - (d) Review, discuss, and make recommendations on ~~upgrades to the wastewater treatment plant~~ the maintenance programme and opportunities to improve the quality of the wastewater discharge; ~~and~~
  - (e) Be involved in the investigation of discharge options for the treated wastewater as required by Condition 11, ~~discuss, and make recommendations on alternative discharge options;~~ and
  - (f) Address any other matters relating to the wastewater treatment plant as identified by the Community Liaison Group.
- 10 The Consent Holder must:
  - (a) Alongside the Community Liaison Group, review the Terms of Reference at least annually or as set out in the Terms of Reference.
  - (b) Provide the Community Liaison Group with technical support from an independent person qualified and specializing in wastewater engineering and land disposal systems (~~appointed by the Community Liaison Group and approved by the Northland Regional Council's assigned monitoring officer as being independent, suitably qualified and having no conflict of interest~~);

- (c) Schedule and hold ~~Hold~~ regular meetings ~~(at least annually)~~ for the duration of the Consent, at least annually unless ~~representatives from Te Rūnanga o Te Rarawa, Nga Marae O Te Wāhāpū or from the Ōmāpere or Opononi communities in the Community Liaison Group request~~ agrees a different ~~less frequent~~ schedule and this is formalized and adopted within the Terms of Reference; and
- (d) Prepare and circulate 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.

~~Report to the Northland Regional Council's assigned monitoring officer as to the outcome of each review of the treatment and/or discharge of wastewater; and~~

~~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.~~

- 11 The Consent Holder must, no later than one-year from commencement of the consent, provide a report to the Northland Regional Council's assigned monitoring officer which assesses the options for discharging treated wastewater, including a recommendation as to which discharge option is considered to be the best practicable option (BPO). The assessment must include the option of discharging the treated wastewater to land and must identify the costs and benefits of all practicable discharge options. The assessment of options must be undertaken by a suitably qualified and experienced person(s) and must involve the Community Liaison Group established in accordance with Condition 8.

~~In the event the BPO is to change to land disposal, advise the Northland Regional Council's assigned monitoring officer whether or not it is committing to the land disposal option and, if so, the anticipated timeframe to decommission existing infrastructure if it is to take place within the term of this consent.~~

**Advice Note:** *Should the Consent Holder authorise, construct and commission infrastructure to discharge treated wastewater to land within the 3-year consent term, then Resource Consent AUT.002667.01.04 will be surrendered. The terms of the surrender are expected to be set out in any consent that authorises that discharge to land.*

- 12 The Consent Holder must, on becoming aware of any discharge associated with the Consent Holder's operations that is not authorised by these consents:
  - (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain the discharge; and
  - (b) Immediately notify the Northland Regional Council by telephone of the discharge; and
  - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge; and
  - (d) Report to the Northland Regional Council's Compliance Monitoring Manager in writing within one week on the cause of the discharge and the steps taken, or being taken, to effectively control or prevent the discharge.

For telephone notification during the Northland Regional Council's opening hours, 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 council's opening hours, then the Environmental Hotline must be contacted.

~~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.~~

- 13 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. ~~;~~~~or~~
  - ~~(c) To reduce the term of the consent to discharge to coastal water in the event the Consent Holder has commissioned a land discharge scheme during the term of the consent and has not surrendered the consent.~~

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**

- 14 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.~~
- 15 Notwithstanding Condition ~~14~~, 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.
- 16 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 ~~14~~ and ~~15~~.
- 17 The Consent Holder shall re-calibrate the meters required by Condition ~~16~~ 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.
- 18 The Consent Holder must keep a written record of the daily volume of wastewater through the flow measuring devices required by Condition 16. A copy of these records shall be forwarded to the Northland Regional Council and Community Liaison Group in accordance with Schedule 1 (attached), and also immediately upon request by the Northland Regional Council's assigned Monitoring Officer.
- 19 Treated wastewater shall only be discharged to the Hokianga Harbour ~~for a maximum of three hours each tidal cycle in the three-hour period~~ between one hour and four hours after high tide via the discharge pipeline from the treatment system.

- 20 The Consent Holder must utilise a programmable tidal clock that is connected to the wastewater pump system to control the time of the discharge to the Hokianga Harbour. This tidal clock must be verified at least monthly to ensure that the programmed high tide discharge time is, as far as is practicable, the same as when high tide actually occurs at the site. Written verification from the Consent Holder that this calibration has been undertaken each month must be provided to the Northland Regional Council's assigned monitoring officer and the Community Liaison Group in accordance with Schedule 1 (**attached**).
- 21 The Consent Holder must; ~~within three 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).;~~
- (a) within three years of the date of commencement of these consents, implement chemically assisted solids removal and install UV disinfection treatment; and
- (b) 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.
- 22 ~~Prior to the completion of the upgrade required by Condition 17, Once the plant is upgraded, the quality of the treated wastewater, as measured at the final outlet from the treatment plant prior to the discharge pipeline, must meet the following standards based on the results of samples collected in accordance with Schedule 1 (attached):~~

| Determinant   | <b>Median 50<sup>th</sup> Percentile Concentration</b><br><b>Prior to completion of upgrade required at Condition 18</b> | <b>90<sup>th</sup> Percentile Concentration prior to completion of upgrade required at Condition 21</b> | <b>90<sup>th</sup> Percentile Concentration after completion of upgrade required at Condition 21</b> |
|---|--|---|--|
| 5 day Biochemical Oxygen Demand (grams per cubic metre) | 20   | 35  | 35   |
| Escherichia Coli (per 100 millilitres)                  | <del>3,000</del> 4,400   | <del>5,500</del> 24,000   | 3,000  |
| Total ammoniacal nitrogen (grams per cubic metres)      | 30   | <del>38</del> 43  | 43   |
| Total suspended solids (grams per cubic metre)          | 35   | 80  | 35   |

Compliance with the 50<sup>th</sup> and 90<sup>th</sup> percentile concentrations shall be in accordance with Section 2 of Schedule 1 (**attached**).

**Advice Note:**

*Compliance with the median for Escherichia Coli and Total Suspended Solids cease once the plant has been upgraded in accordance with Condition 21.*

~~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) 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 prompt implementation of actions.~~

~~The Consent Holder must keep the Northland's Regional Council's assigned monitoring officer informed regarding the progress of the implementation of actions and confirm once actions are completed.~~

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

| <del>Determinant</del>                                       | <del>Maximum Concentration<br/>90th Percentile</del> | <del>Stage</del> |
|--|--|------------------|
| <del>Escherichia Coli (per 100 millilitres)</del>            | <del>3,000</del>                                     | <del>1</del>     |
| <del>Total suspended solids (grams per cubic metre)</del>    | <del>35</del>  | <del>1</del>     |
| <del>Total ammoniacal nitrogen (grams per cubic metre)</del> | <del>30</del>  | <del>2</del>     |

- 23 The Consent Holder ~~shall~~ **must** ensure safe and easy access ~~to the final outlet from the treatment plant prior to the discharge pipeline (to Northland Regional Council sampling site 101580 is maintained at all times),~~ so that treated wastewater samples can be collected.
- 24 There ~~shall~~ **must** 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.
- 25 The discharge of contaminants to land via seepage from the base of the treatment system ~~must shall~~ not result in any ~~adverse effects on the water quality change to the concentration of Escherichia Coli in of the Waiarohia Stream at NRC Sampling Site 100756, as measured immediately downstream of either the treatment ponds or the constructed wetland system.~~ For compliance purposes the ~~downstream water quality~~ concentration of Escherichia Coli at NRC Sampling Site 100756 ~~shall must~~ be compared with the background concentration of Escherichia Coli upstream ~~of the constructed wetland system at NRC Sampling Site 101579.~~ The error of the analytical method, ~~or and~~ measuring instrument, at the ~~95<sup>th</sup> 90<sup>th</sup>~~ percentile confidence level ~~must shall~~ be ~~taken into account included in determining all parameters.~~
- 26 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 must~~ 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 that point~~, 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 ~~must 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 95<sup>th</sup> 90<sup>th</sup> percentile confidence level ~~must shall~~ be included in determining all parameters.

#### **AUT.002667.03 – Discharge to Air**

- 27 The exercise of this consent must not result in the discharge of contaminants ~~to air~~ 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**

- 28 This consent only authorises use of the existing structure as installed at the date of commencement of this consent.
- 29 The Consent Holder ~~must shall~~, at all times, ensure the pipeline~~shall~~;
- (a) remains buried at all times; ~~and~~
  - (b) ~~The is maintained to ensure its structural integrity of the pipeline shall be maintained at all times; and~~
  - (c) ~~be~~ is identifiable at the surface of the water by a permanent marker buoy.

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

- 30 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 ~~on~~ at least on one occasion ~~within the duration of the consent 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 and made available on the Consent Holder's website~~ by 1 May every two years from the date of commencement of this consent.

**EXPIRY DATE:** ~~31 AUGUST 2039~~ Three years from the date of commencement of the consents, as in accordance with Section 116 of the Resource Management Act 1991



## SCHEDULE 1

### MONITORING PROGRAMME

The Consent Holder ~~must~~ ~~shall~~ undertake the following monitoring:

#### 1. ~~AVERAGE DRY WEATHER DAILY WASTEWATER FLOWS~~

The Consent Holder ~~must~~ ~~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 16 of this Consent.

#### 2. WASTEWATER TREATMENT SYSTEM

##### 2.1. Sampling and Analysis

The following sampling and analyses ~~shall~~ ~~must~~ be undertaken on at least one occasion each calendar month. During the winter months, the sampling ~~must~~ ~~shall~~ be undertaken during, or immediately after, a rain event on at least three occasions.

| Determinant   |
|---|
| 5 day Biochemical Oxygen Demand (grams per cubic metre) |
| Escherichia Coli (per 100 millilitres)                  |
| Total ammoniacal nitrogen (grams per cubic metres)      |
| Total suspended solids (grams per cubic metre)          |

A wastewater sample ~~must~~ ~~shall~~ be collected from the final outlet of the treatment system, prior to it entering the discharge pipeline ~~{at Northland Regional Council NRC Sampling Site 101580}~~.

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

##### 2.2. Wastewater Concentrations

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

##### ~~90<sup>TH</sup> Percentile Value~~

~~The 90<sup>th</sup> 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 2.1. 2-~~

~~Compliance with the 50<sup>th</sup> and 90<sup>th</sup> percentile values shall be determined OVER a fixed 12-month period. The 50<sup>th</sup> and 90<sup>th</sup> percentile values shall be calculated using the “fortnightly” monitoring results required by Section 2.1 of this schedule and any monitoring results from audit sampling undertaken by the Northland Regional Council.~~

~~The number of allowable exceedances within a 12-month period for the 50<sup>th</sup> and 90<sup>th</sup> percentile is shown in the following table:~~

| Number of Samples | 50 <sup>th</sup> Percentile value:<br>Allowable number of<br>exceedances | 90 <sup>th</sup> percentile value:<br>Allowable number of<br>exceedances |
|-------------------|--|--|
| 12                | 6  | 1  |
| 13                | 7  | 1  |
| 14                | 7  | 1  |
| 15                | 8  | 2  |
| 16                | 8  | 2  |
| 17                | 9  | 2  |
| 18                | 9  | 2  |
| 19                | 10   | 2  |
| 20                | 10   | 2  |
| 21                | 11   | 2  |
| 22                | 11   | 2  |
| 23                | 12   | 2  |
| 24                | 12   | 2  |
| 25                | 13   | 3  |
| 26                | 13   | 3  |
| 27                | 14   | 3  |
| 28                | 14   | 3  |

A non-compliance occurs when the number of exceedances for a percentile value is greater than that allowable for the number of samples used to calculate the percentile. If non-compliance occurs, then the 12-month period for that determinand and percentile begins again. An allowable exceedance of a percentile value shall only be as a result of natural variation in the treated wastewater quality from a well maintained and effectively operating treatment system.

Compliance with the 50<sup>th</sup> Percentile median and 90<sup>th</sup> percentile for Escherichia Coli and Total Suspended Solids ceases once the plant has been upgraded as required by Condition 21.

### 3. ~~RECEIVING WATER QUALITY WAIAROHIA STREAM SAMPLING~~

The following sampling and analysis must ~~shall~~ occur ~~On~~ on a quarterly basis starting on 1 May and ending on 30 April each year. During the winter months, this sampling must ~~shall~~ be undertaken during, or immediately after, a rain event on at least three occasions.

A sample of water must ~~shall~~ be collected from the following sampling sites ~~from the Waiarohia Stream at Northland Regional Council Sampling Sites:~~

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

These water samples must ~~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 90<sup>th</sup> Percentiles

#### 4. **COLLECTION OF SAMPLES**

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.

~~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.~~

#### 5. **REPORTING NON-COMPLIANCE WITH CONSENT CONDITIONS**

By the 15<sup>th</sup> of each month, the following information for the previous calendar month shall be forwarded to the Northland Regional Council and the Community Liaison Group<sup>1</sup>:

- (a) The monitoring results for Sections 1, 2 and 3 of this Schedule;
- (b) An assessment of compliance with Condition 22 in accordance with Section 2 of this Schedule;
- (c) An assessment of compliance with Condition 25 in accordance with Section 3 of this Schedule.

This information shall be in electronic format that has been agreed to by the Northland Regional Council.

~~The Consent Holder must 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 Section 3 s 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.~~

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<sup>1</sup> As named in the Terms of Reference for this group to receive these reports.

## **REVISED CONSENT1 CONDITIONS FOR KOHUKOHU WASTEWATER TREATMENT PLANT RESOURCE CONSENTS**

### **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 ~~keep~~ a written record of all maintenance ~~required and~~ undertaken ~~must be kept~~. A copy of this record must be forwarded to Northland Regional Council's assigned monitoring officer immediately upon written request.  
  
~~The Consent Holder must monitor the exercise of these consents in accordance with Schedule 1 (attached).~~  
  
~~The Consent Holder must forward 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.~~
- 2      The Consent Holder must ~~maintain~~ ~~prepare~~ provide a ~~Site~~ System Management Plan that covers all operations, ~~and~~ maintenance ~~and repairs~~ of the Kohukohu Wastewater Treatment System ~~and submit it to the Northland Regional Council's assigned monitoring officer within six months of the date of commencement of this consent.~~ The ~~Site~~ System Management Plan ~~must shall~~ cover, but not be restricted to, the operation and maintenance of:
  - (a)      All septic tanks that ~~are a part of the common effluent drainage service (CEDS) contribute to the wastewater volume.~~ This section must include the Septage Management Plan required by Condition 6;
  - (b)      The reticulation network and associated pumping stations;
  - (c)      The ~~oxidation facultative~~ pond. This section should include ~~including~~ measures which would be implemented to remedy low concentrations of dissolved oxygen ~~e.g. temporary mechanical surface aeration;~~

- (d) 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;
  - (e) The perimeter fencing and access arrangements. This section should include measures to avoid illegal dumping of septage at the site; and
  - (f) Contingency measures for unforeseen or emergency situations.
- 3 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 System Management Plan ~~at least once during the exercise of this consent every three years.~~ 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 System Management Plan must be revised to address any findings from the review.
- 4 A written copy of the review's findings and any revised Site System Management Plan must be provided to the Northland Regional Council's assigned monitoring officer ~~and the Kaitiaki Liaison Working Community Liaison Group~~ ~~on~~ within one month of completion of the review.
- 5 The Consent Holder must, as a minimum, operate and manage the wastewater treatment plant in accordance with the most recent ~~reviewed~~ version of the Site System Management Plan ~~required by Condition~~ **Error! Reference source not found.**
- 6 Within ~~six~~ three months of the ~~date of~~ 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 deslugged more frequently than newer tanks.

- (f) A works programme for the implementation of any repairs, maintenance or upgrade works required to fully implement the Septage Management Plan.
- 7 The Consent Holder must inspect and maintain the 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.
- 8 The Consent Holder shall assist in the facilitation of, and actively participate in, meetings with a Community Liaison Group.
- 9 Within three months of commencement of ~~this~~ these Consents, the Consent Holder must invite representatives from the following groups to form a Community Liaison Group:
- (a) Te Ihutai Hapū, supported by Nga hapū o Hokianga, Te Rūnanga o Te Rarawa, and Te Rūnanga A Iwi o Ngāpuhi; and
  - (b) ~~Broader~~ the Kohukohu community (duly appointed);
- 10 ~~Te Rūnanga o Te Rarawa, Ngā Hapū o Ngāti Korokoro, Pākanae Resource Management~~ In the event the invitations are accepted, the ~~Group~~ Consent Holder must ~~also include a~~ appoint two senior officers as representative(s) of the Consent Holder in the Community Liaison Group.
- 11 The purpose of the ~~Kaitiaki Liaison~~ Community Liaison Group is to provide a forum to:
- (a) Develop, adopt, and maintain a Terms of Reference which must include names of members who will receive and distribute monitoring information to be reported to the Community Liaison Group in accordance with Schedule 1 (attached);
  - (b) Involve the CLG in the drafting, preparation, and development of the plans to be prepared by the Consent Holder as set out in the conditions of this consent;~~The preparation of the System Management Plan required by Condition 4;~~  
~~The preparation of the Odour Management Plan required by Condition 25;~~
  - (c) Share and discuss information on the performance of the wastewater treatment plant and monitoring of the Hokianga Harbour;
  - (d) Review, ~~Discuss~~ and make recommendations on ~~upgrades to the wastewater treatment plant,~~ the maintenance programme, and opportunities to improve the quality of the wastewater discharge;
  - (e) Be involved in the investigation of discharge options for the treated wastewater as required by Condition 13.~~The further assessment of land disposal options for the treated wastewater;~~  
~~In the event that land disposal is not feasible, the further assessment of upgrade options to maintain or improve the health and wellbeing of the receiving waters of the Hokianga Harbour;~~  
~~Reviewing the Best Practicable Option for the treatment and disposal of wastewater at least annually.~~
  - (f) Address any other matters relating to the wastewater treatment plant as identified by the Group.
- 12 The Consent Holder must:
- (a) Alongside the Community Liaison Group, review the Terms of Reference at least annually or as set out in the Terms of Reference;
  - (b) Provide the Community Liaison ~~Working~~ Group with technical support from an independent person qualified and specializing in wastewater engineering and land

disposal systems (appointed by the Community Liaison Working Group and approved by the Northland Regional Council's assigned monitoring officer as being independent, suitably qualified and having no conflict of interest);

- (c) Schedule and hold ~~Hold~~ regular meetings ~~(at least annually)~~ for the duration of the Consent, at least annually 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~~ agrees a different ~~less frequent~~ schedule and this is formalized and adopted within the Terms of Reference; and
- (d) Prepare and circulate 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;

~~Report to the Northland Regional Council's assigned monitoring officer as to the outcome of each review of the Best Practicable Option for the treatment and/or disposal discharge of wastewater.~~

~~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~~

~~Provide the monitoring data for the previous year.~~

~~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.~~

~~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.~~

~~In the event the BPO is to change to land discharge, advise the Northland Regional Council's assigned monitoring officer whether or not it is committing to the land disposal option and, if so, the anticipated timeframe to decommission existing infrastructure.~~

- 13 The Consent Holder must, no later than one-year from commencement of the consent, provide a report to the Northland Regional Council's assigned monitoring officer which assesses the options for discharging treated wastewater, including a recommendation as to which discharge option is considered to be the best practicable option (BPO). The assessment must include the option of discharging the treated wastewater to land and must identify the costs and benefits of all practicable discharge options. The assessment of options must be undertaken by a suitably qualified and experienced person(s) and must involve the Community Liaison Group established in accordance with Condition 9.

**Advice Note:** *Should the Consent Holder authorise, construct and commission infrastructure to discharge treated wastewater to land within the 3-year consent term, then Resource Consent AUT.002667.01.04 will be surrendered. The terms of the surrender are expected to be set out in any consent that authorises that discharge to land.*

~~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.~~

- 14 The Consent Holder must, on becoming aware of any discharge associated with the Consent Holder's operations that is not authorised by these consents:
- (a) Immediately take such action, or execute such work as may be necessary, to stop and/or contain the discharge; and
  - (b) Immediately notify the Northland Regional Council by telephone of the discharge; and
  - (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge; and
  - (d) Report to the Northland Regional Council's Compliance Monitoring Manager in writing within one week on the cause of the discharge and the steps taken, or being taken, to effectively control or prevent the discharge.

~~For telephone notification during the Northland Regional Council's opening hours, 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 council's opening hours, then the Environmental Hotline must be contacted.~~

- 15 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.~~or~~

~~To reduce the term of the consent to discharge to coastal water in the event the Consent Holder has commissioned a land discharge scheme during the term of the consent and has not surrendered the consent.~~

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

- 16 The ~~quality~~ quantity of treated wastewater discharged to the Hokianga Harbour must not exceed 40 cubic meters per day.
- 17 The Consent Holder must maintain easy and safe access to the NRC Sampling Sites ~~322,~~ 323 and 2051 at all times.
- 18 Notwithstanding Condition 16, 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.
- 19 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 16 and 18.
- 20 The Consent Holder shall re-calibrate the meters required by Condition 19 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.

- 21 The Consent Holder must keep a written record of the daily volume of wastewater through the flow measuring devices required by Condition 19. A copy of these records shall be forwarded to the Northland Regional Council and Community Liaison Group in accordance with Schedule 1 (**attached**), and also immediately upon request by the Northland Regional Council's assigned Monitoring Officer.
- 22 Prior to the completion of the upgrade required by Condition 23, if ~~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 1 ~~2~~ (**attached**).

**Advice note:** This condition ceases to have effect once the treatment plant is upgraded in accordance with Condition 23.

- 23 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*.
- 24 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 50 <sup>th</sup> Percentile | 95 <sup>TH</sup> 90 <sup>TH</sup> Percentile |
|---------------------|------------------|------------------------------------|--|
| Ammoniacal Nitrogen | g/m <sup>3</sup> | 20                                 | 32   |
| Faecal Coliforms    | CFU/100ml        | 2,500                              | 24,000                                       |

- 25 Notwithstanding Condition ~~24s 19 and 21~~, if at any time 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~~ must be undertaken in accordance with Schedule 1 (**attached**).
- 26 Notwithstanding any other conditions of this Consent, the discharge ~~shall~~ must 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~~ must not be changed by more than 0.2 units.
  - (b) The median concentration of faecal coliform bacteria in the water ~~shall~~ must not exceed 14 per 100 millilitres and the 90<sup>th</sup> percentile concentration ~~shall~~ must 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~~ must not be reduced by more than 20%.
  - (d) There ~~shall~~ must 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~~ must not be reduced below 80% of saturation.
  - (f) The concentration of total ammoniacal nitrogen ~~shall~~ must 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

- 27 The exercise of this consent must not result in the discharge of **contaminants to air** ~~odour~~ which ~~are~~ **is** 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.
- 28 The Consent Holder must prepare an Odour Management Plan in consultation with representatives of Tauteihihi Marae that details the management measures to be followed to ensure that odour does not impact Tauteihihi Marae and the customary practices required for a functioning marae and, once agreed, must:
- (a) provide a copy to the Northland Regional Council's assigned monitoring officer; and
  - (b) implement any agreed measures within six months of the commencement of the consent.

EXPIRY DATE: ~~31 AUGUST 2031~~ ~~2038~~ Three years from the commencement of the consents, as  
in accordance with Section 116 of the RMA

## SCHEDULE 1

### MONITORING PROGRAMME

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

#### 1. WASTEWATER TREATMENT SYSTEM

##### ~~MONITORING OF KOHUKOHU WASTEWATER TREATMENT SYSTEM~~

##### 1.1. Daily Wastewater Flows

The Consent Holder ~~must~~ 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 16 of this Consent.

##### 1.2. Sampling and Analysis

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   |
|---|
| 5 day Biochemical Oxygen Demand (grams per cubic metre) |
| Faecal Coliforms (per 100 millilitres)                  |
| Total ammoniacal nitrogen (grams per cubic metres)      |
| Total suspended solids (grams per cubic metre)          |

*\*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.

##### 1.3. Wastewater Concentrations

##### ~~COMPLIANCE WITH MEDIAN AND 95<sup>TH</sup> 90<sup>TH</sup> 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.~~

##### ~~95<sup>TH</sup> 90<sup>TH</sup> Percentile Value~~

~~The 95<sup>th</sup> 90<sup>th</sup> 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.~~

Compliance with the 50th and 90th percentile values shall be determined OVER a fixed 12-month period. The 50th and 90th percentile values shall be calculated using the “fortnightly” monitoring results required by Section 1.2 of this schedule and any monitoring results from audit sampling undertaken by the Northland Regional Council. The number of allowable exceedances within a 12-month period for the 50th and 90th percentile is shown in the following table:

| Number of Samples | 50 <sup>th</sup> Percentile value:<br>Allowable number of<br>exceedances | 90 <sup>th</sup> percentile value:<br>Allowable number of<br>exceedances |
|-------------------|--|--|
| 12                | 6  | 1  |
| 13                | 7  | 1  |
| 14                | 7  | 1  |
| 15                | 8  | 2  |
| 16                | 8  | 2  |
| 17                | 9  | 2  |
| 18                | 9  | 2  |
| 19                | 10   | 2  |
| 20                | 10   | 2  |
| 21                | 11   | 2  |
| 22                | 11   | 2  |
| 23                | 12   | 2  |
| 24                | 12   | 2  |
| 25                | 13   | 3  |
| 26                | 13   | 3  |
| 27                | 14   | 3  |
| 28                | 14   | 3  |

A non-compliance occurs when the number of exceedances for a percentile value is greater than that allowable for the number of samples used to calculate the percentile. If non-compliance occurs, then the 12-month period for that determinand and percentile begins again. An allowable exceedance of a percentile value shall only be as a result of natural variation in the treated wastewater quality from a well maintained and effectively operating treatment system.

## 2. RECEIVING WATER QUALITY

The following sampling and analyses shall occur at least bi-annually.

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

### ~~HOKIANGA HARBOUR~~

~~Once every five years the Hokianga Harbour shall be monitored in accordance with the attached~~

~~Monitoring Schedule 2.~~

### ~~SCHEDULE 2~~

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.~~

## 2.1. NRC Sampling Sites 323, 2051 and 2052

- (a) At NRC Sampling site 323 a composite\* sample shall be taken.
- (b) 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 (grams per cubic metres) |
| Faecal coliforms (grams per cubic metre)           |

*\*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.

## 2.2. NRC Sampling Sites 231 and 5815

- (a) 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 (grams per cubic metres) |
| Faecal coliforms (grams per cubic metre)           |

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.

## 6. COLLECTION OF SAMPLES

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.

## 7. Reporting

By the 15th of each month, the following information for the previous calendar month shall be forwarded to the Northland Regional Council and the Community Liaison Group :

- (a) The monitoring results for Sections 1, 2 and 3 of this Schedule;

(b) An assessment of compliance with Conditions # and # in accordance with Section 2 of this Schedule;

(c) An assessment of compliance with Condition # in accordance with Section 3 of this Schedule.

This information shall be in electronic format that has been agreed to by the Northland Regional Council.

Monitoring Locations:

