

### APPENDIX 3: RECOMMENDED RESOURCE CONSENT (AMENDED 25 JUNE 2019)

To undertake the following activities associated with the operation of the East Coast Bays Wastewater Treatment System on Pt Allot 57, Pt Sec 33, and Pt Allot 24 Blk IV Mangonui SD:

- AUT.004007.01.03** To discharge treated municipal wastewater to an unnamed tributary of the Parapara Stream, at or about location coordinates 1640435E 6126160N
- AUT.004007.02.03** To discharge contaminants to land from the base of a wastewater treatment system, at or about location coordinates 1641450E 6126950N and 1640435E 6126160N
- AUT.004007.03.03** To discharge contaminants to air (primarily odour) from a wastewater treatment system, at or about location coordinates 1641450E 6126950N and 1640435E 6126160N.

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

Subject to the following conditions:

#### **AUT.004007.01.03 and AUT.004007.02.03 DISCHARGE TO WATER AND LAND**

- 1 ~~The quantity of treated wastewater discharged to the unnamed tributary of the Parapara Stream must not exceed 1,570 cubic metres per day, as calculated using the average daily dry weather discharge volume. The 30-day rolling average dry weather flow must not exceed 790 cubic meters per day. For compliance purposes, the "average daily dry weather discharge volume" "30-day rolling average dry weather flow" must be calculated in accordance with Schedule 1 (attached).~~
- 2 ~~The Consent Holder must minimise, as far as practicable, any increase in the quantity of wastewater discharged as a result of stormwater inflow and infiltration into the sewage reticulation network and treatment system.~~
- 3 The Consent Holder must install and maintain a flow measuring device with a measurement error of  $\pm 5\%$  to measure the volume of wastewater discharged into the unnamed tributary.
- 4 The Consent Holder must keep a written record of the daily volume of wastewater through the flow measuring device required by Condition 3 and the calculated average daily dry weather discharge volume, as in accordance with Schedule 1 (**attached**). A copy of these records must be forwarded to the Northland Regional Council in accordance with Schedule 1 (**attached**), and also immediately upon request by the Northland Regional Council's assigned Monitoring Officer.
- 5 ~~The accuracy of the meter required by Condition 3 must be verified at least five yearly to ensure that the specified accuracy is maintained. The Consent Holder must check the operability of the flow meter no less than monthly and calibrate the flow meter no less than annually. The calibration must be undertaken by a suitably qualified and experienced person. The calibration data must be verified and the verified data sent to the assigned Northland Regional Council Monitoring Officer within one month of calibration. Written confirmation from a suitably qualified person that the meter~~

~~accuracy has been verified must be forwarded to the Northland Regional Council's assigned Monitoring Officer within one month of the verification being completed.~~

- 6 The Consent Holder must, within one year of the commencement date of this consent, provide a written report to the Northland Regional Council's Compliance Manager on a quantitative microbiological risk assessment of the level of risk that the treated wastewater discharge poses to the health of people, as affected by their contact with water in, and consumption of aquatic species from, the Parapara Stream (Te Wai o Te Parapara) Awapoko River and Estuary (Te Wai o Te Awapoko) (including estuary). If the outcome of the quantitative microbiological risk assessment indicates that the discharge is likely to have a public health risk in the Awapoko River (including estuary), then the written report must also recommend a level of pathogen reduction required to ~~avoid~~ reduce the this risk. The risk assessment and, if required, recommended risk reduction must be undertaken by an independent person(s) qualified and specialising in faecal pathogen quantitative microbiological risk assessments. ~~The Consent Holder must make this report publicly available on its website. The Consent Holder must provide the findings and recommendations to Ngāti Kahu, and the wider community.~~
- 7 If the report required by Condition 6 recommends that pathogen reduction in the treated wastewater discharge is required to ~~avoid~~ reduce a public health risk from contact with in Te Wai o Te Parapara (Parapara Stream) and Te Wai o Te Awapoko (the Awapoko River), then the Consent Holder must:
- (a) Within six months of that report being provided to the Northland Regional Council, provide a written report to the Northland Regional Council's Compliance Manager on how the required pathogen reduction will be achieved in the treated wastewater prior to it being pumped to the wetlands; and
  - (b) Within six months of providing the report required by Condition 7(a), upgrade the wastewater treatment system in accordance with that report.

**Advice Note:** *If the method of pathogen removal introduces any new contaminants into the discharge, then a new consent for these contaminants may be required.*

- 8 The Consent Holder must, within ~~one year~~ six months of the commencement date of this consent, complete an analysis of options to reduce the ~~ammonia~~ total nitrogen concentrations ( $\text{NH}_4\text{-N}$ ) in the treated wastewater discharge from the wetland so that the quality of the discharge does not exceed the following discharge quality standards in Condition 11:
- (a) Annual Median: 10 grams per cubic metre; and
  - (b) Annual 92<sup>nd</sup> percentile: 15 grams per cubic metre.
- 9 ~~A copy of the analysis of options required by Condition 8 must be provided to the Northland Regional Council's Compliance Manger and must be made publicly available on the Consent Holder's webpage. The Consent Holder must take meaningful and reasonable steps to provide for the involvement of Ngati Kahu in the analysis of options.~~
- 10 The Consent Holder must, within three years of the date of commencement of this consent, upgrade the wastewater treatment system so that all wastewater receives treatment within a fully commissioned and operating treatment process specifically designed to reduce the concentration of ammonia within the treated wastewater

discharged from the constructed wetlands to meet the discharge quality standards in Condition 11.

- 11 Once the upgraded treatment system required by Condition 10 has been commissioned, the ammonia concentration (NH<sub>4</sub>-N) in quality of the treated wastewater discharged from the wetland must not exceed the following discharge quality standards, calculated using 26 fortnightly samples:
- (a) Annual Median: 10The annual median concentration of total nitrogen must not exceed 15 grams per cubic metre, calculated using a minimum of 26 consecutive fortnightly samples; and
  - (b) Annual 92<sup>nd</sup> percentile: 15 grams per cubic metre, calculated using a minimum of 26 consecutive fortnightly samples. The concentration of total nitrogen must not exceed 20 grams per cubic metre on more than four occasions per year.
  - (c) The annual median concentration of biochemical oxygen demand must not exceed 20 grams per cubic metre.
  - (d) The concentration of biochemical oxygen demand must not exceed 30 grams per cubic metre on more than four occasions per year.
  - (e) The annual median concentration of total suspended solids must not exceed 20 grams per cubic metre.
  - (f) The concentration of total suspended solids must not exceed 40 grams per cubic metre on more than four occasions per year.

- 12 ~~Once the upgraded treatment system required by Condition 10 has been commissioned, the wastewater discharge from the wetlands must not cause the ammonia concentration\* (NH<sub>4</sub>-N) in the unnamed tributary of the Parapara Stream, as measured at NRC Sample Site No 105941 (see **attached** NRC Plan 3078A), to exceed the following:~~

- ~~(a) — Annual Median: 1.3 grams per cubic metre, calculated using a minimum of 12 consecutive monthly samples; and~~
- ~~(b) — Annual 92<sup>nd</sup> percentile: 2.2 grams per cubic metre, calculated using a minimum of 12 consecutive monthly samples.~~

~~\*Based on pH 8 and temperature of 20°C. Compliance with the standard must be undertaken after pH adjustment.~~

13A) The Consent Holder must, within one year of the date of commencement of this consent, undertake a full analysis of options for disposing treated wastewater to land. The Consent Holder must take meaningful and reasonable steps to provide for the involvement of Ngāti Kahu and potentially affected land owners in the analysis of options.

13B The Consent Holder must, no longer than five years after the date of commencement of this resource consent, decide (a) if suitable land is available and, (b) if suitable land is available, whether to obtain the land for disposing treated wastewater. The Consent Holder must take meaningful and reasonable steps to provide for the involvement of Ngāti Kahu in the decision-making regarding alternative disposal sites for treated wastewater.

- 13 The treated wastewater discharged from the constructed wetlands must not result in any of the following effects on the quality of the water in the unnamed tributary of the

Parapara Stream, as measured at NRC Sample Site 105941 (see **attached** NRC Plan 3078A):

- (a) The pH must not be outside the range of 6.0 to 9.0.
  - (b) The natural colour and clarity of the waters must not be changed to a conspicuous extent.
  - (c) There must be no conspicuous oil or grease films, scums or foams, floatable or suspended materials, nor emissions of objectionable odour.
- 14 The Consent Holder must maintain easy access to NRC Sampling Site 101687 (discharge point from the wetland), as shown on NRC Plan 3078A (**attached**).

#### **AUT.004007.03.03 DISCHARGE TO AIR**

- 15 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.

#### **GENERAL CONDITIONS**

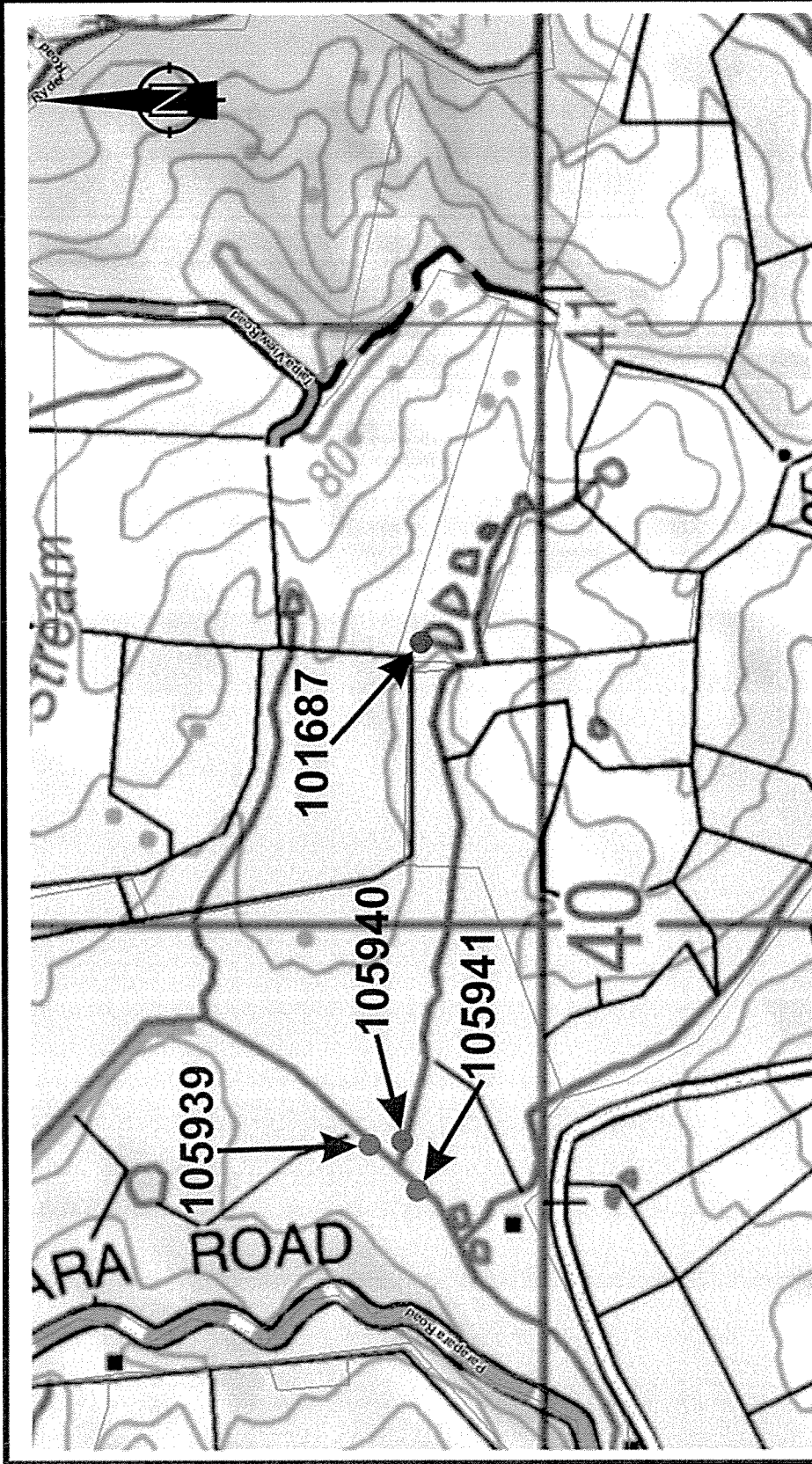
- 16 The Consent Holder must maintain the treatment system so that it operates effectively at all times, and a written record of all maintenance undertaken must be kept. A copy of this record must be forwarded to the Northland Regional Council immediately on written request.
- 17 The Consent Holder must monitor the exercise of these consents in accordance with Schedule 1 (**attached**).
- 18 The Consent Holder must maintain fencing of the drain, an unnamed tributary of the Parapara Stream between NRC sampling sites 101687 and 105940, as shown on NRC Plan 3078A (**attached**), to prevent stock access.
- 19 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; and
  - (b) Immediately notify the Northland Regional Council by telephone of an escape of contaminant; and
  - (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.

- 20 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:
- (a) annually during the month of May for any one or more of the following purposes:
    - (i) 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
    - (ii) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.
  - (b) Within three months of receiving the written report required by Condition 7(a) to insert new conditions to deal with the ongoing monitoring and compliance of the pathogen reduction system that is to be installed.

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

**EXPIRY DATE: <ENTER DAY AND MONTH> 2027**



Scale:	N.T.S.
Drawn:	KATM 05/19
File Number:	4007
Plan Number	<b>3078A</b>

**East Coast Bays  
Wastewater Treatment System  
Sampling Sites**



# SCHEDULE 1

## MONITORING PROGRAMME

The Consent Holder, or its authorised agent, must undertake the following monitoring:

### 1. WASTEWATER VOLUMES

~~The Consent Holder must keep a written record of the daily (midnight to midnight) wastewater flows through the meter required by Condition 3 of the consent.~~

~~The average dry weather discharge volume must be a “rolling” (moving) average calculated using the recorded discharge volume from the meter required by Condition 3. For the purposes of this calculation, a “dry weather” day is any day on which there is less than 1 millimetre of rainfall and that day occurs after three consecutive days, each day of which has had less than 1 millimetre of rainfall.~~

The consent holder must keep a record of the daily (midnight to midnight) treated wastewater flows through the meter required by Condition 3 of the consent. A 30-day rolling average dry weather flow must be calculated and recorded daily. A dry weather day is defined as any day with less than 10 mm of rainfall.

The daily rainfall must be taken from the Northland Regional Council's automatic rain station 530511 (Oruru Bowling Club). This data can either be downloaded from the Northland Regional Council's website or supplied by the Northland Regional Council on request. An alternative rainfall station may be used with the prior written approval of the Northland Regional Council's Compliance Manager.

### 2. MONITORING OF THE WASTEWATER WITHIN THE WWTP

At fortnightly intervals, samples of wastewater must be collected at the influent to the WWTP, outflow from Pond 3, and the outflow from the Maturation Pond, and analysed for the following:

- (a) Ammonia ( $\text{g/m}^3$   $\text{NH}_4\text{-N}$ )
- (b) Biochemical Oxygen Demand ( $\text{g/m}^3$  BOD)
- (c) pH
- (d) Dissolved oxygen ( $\text{g/m}^3$  DO)

### 3. MONITORING OF THE DISCHARGE FROM THE CONSTRUCTED WETLAND

At fortnightly intervals, samples of wastewater must be collected at NRC Sampling Site 101687 (discharge point from the wetland) and analysed for the following:

- (aa) Total nitrogen ( $\text{g/m}^3$   $\text{NH}_4\text{-N}$ )
- (a) Total ammoniacal nitrogen Ammonia ( $\text{g/m}^3$   $\text{NH}_4\text{-N}$ ) ( $\text{g/m}^3$ )

- (b) Biochemical Oxygen Demand ( $\text{g/m}^3$  BOD)
- ~~(c) Escherichia coli (E.coli/100 mL)~~
- ~~(d) Enterococci (Enterococci/100 mL)~~
- (e) pH
- (f) Dissolved oxygen ( $\text{g/m}^3$  DO)

#### 4. MONITORING OF RECEIVING WATER QUALITY

Each calendar month, samples of water must be collected from the unnamed tributaries of the Parapara Stream at NRC Sampling Sites 105939, 105940, and 105941, as shown on NRC Plan 3078A (**attached**), and analysed for the following:

- (a) Ammonia ( $\text{mg NH}_4\text{-N/L}$ )
- ~~(b) Escherichia coli (E.coli/100 mL)~~
- ~~(c) Enterococci (Enterococci/100 mL)~~
- (d) pH
- (e) Dissolved oxygen ( $\text{g/m}^3$ )

#### 5. SAMPLE COLLECTION, SAMPLE TRANSPORT, AND LABORATORY REQUIREMENTS

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

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

All samples collected must be analysed at a laboratory with registered quality assurance procedures<sup>#</sup>, and all analyses are to be undertaken using standard methods, where applicable.

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

#### 6. REPORTING

By the 15<sup>th</sup> of each month, the following information for the previous calendar month must be forwarded to the Northland Regional Council:

- (a) The monitoring results for Sections 1, 2, 3 and 4 of this schedule; and
- (b) An assessment of compliance with Conditions 1 and 11 to 13 of the consent.

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