

## APPENDIX 3: RECOMMENDED RESOURCE CONSENT (AMENDED 2 JULY 2019)

To undertake the following activities associated with the operation of the East Coast 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 Te Wai o Te Parapara (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 volume of treated wastewater discharged to the unnamed tributary of Te Wai o Te Parapara must not, based on a 30-day rolling average dry weather flow, exceed 790 cubic meters per day. The average dry weather flow is defined in Schedule 1 (attached).
- 2 The Consent Holder must install and maintain an operational flow meter with a measurement error of no more than  $\pm 5\%$  to measure the volume of wastewater discharged into the unnamed tributary.
- 3 The Consent Holder must keep a record of the daily volume of wastewater through the flow meter required by Condition 2 and the calculated average daily dry weather flow discharge volume. A copy of the records must be forwarded to the Northland Regional Council's Compliance Manager by the 15<sup>th</sup> of each month and also upon request by the Northland Regional Council's assigned Monitoring Officer.
- 4 The Consent Holder must calibrate the flow meter no less than annually. The calibration must be undertaken by a suitably qualified and experienced person. Written verification from the suitably qualified and experienced 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.
- 5 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 (QMRA) of the level of risk that the treated wastewater discharged from the East Coast Wastewater Treatment Plant poses to the health of people as affected by their contact with water in, and consumption of aquatic species from, Te Wai o Te Parapara and Te Wai o Te Awapoko (Awapoko River and Estuary). If the outcome of the QMRA indicates that the discharge is likely to have an unacceptable public health risk downstream of NRC Sample Site 105940 then the written report must also recommend a level of pathogen reduction

**Commented [MP1]:** This is a more accurate description of the facility and is commonly used by staff and the public. East Coast Bays is easily confused with a location in Auckland.

**Commented [MP2]:** FNDC has suggested another definition of dry weather flow. The definition is wordy and the condition reads better if it references the definition in Schedule 1.

**Commented [MP3]:** Minor word suggestion for readability.

**Commented [MP4]:** FNDC would like to remove the word immediately. The word doesn't add any value has a reasonable timeframe will always be provided and FNDC will always make every effort to get that information to NRC.

**Commented [MP5]:** Some formatting and minor word suggestions for readability.

required to reduce the risk associated with the East Coast WWTP discharge to an acceptable level. The risk assessment and, if required, recommended risk reduction, must be undertaken by an independent person(s) qualified and specialising in faecal pathogen microbiological risk assessments. The Consent Holder must provide the findings and recommendations to Ngāti Kahu and make the report publicly available on its website.

**Commented [MP6]:** FNDC wanted to make it explicitly clear that FNDC is only responsible for reducing any risk attributed to the wastewater discharge.

6 If the report required by Condition 5 recommends that pathogen reduction in the treated wastewater discharge is required to reduce risks to human health associated with contact with Te Wai o Te Parapara and Te Wai o Te Awapoko 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 twelve months of providing the report required by Condition 6(a), upgrade the wastewater treatment system in accordance with that report.

**Commented [MP7]:** In order to secure funds for the 20/21 annual plan we need the results of the QMRA prior to the end of the calendar year. After that funds can be secured through the long term plan process for spend in 21/22. The timeframe in 6 (b) has been extended to allow for either option described above (20/21 or 21/22). Alternatively staff can request unbudgeted funds. Funds of this value will need approval of Council.

**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.

7 The Consent Holder must, within one month of the commencement of this consent, establish a Working Group and invite a minimum, of three representatives of Ngāti Kahu (appointed by tangata whenua) to be members of the Group. The Group must also comprise of two senior officers of the Consent Holder, supported by an independent person(s) qualified and specialising in wastewater engineering and land disposal systems (appointed by the Consent Holder and certified by the Northland Regional Council's Compliance Manager as being independent/having no conflicts of interest).

**Commented [MP8]:** One correction and one suggested wording change. The word "supported" is suggested to provide some indication of the role of the independent engineer.

**Advice Note:** The purpose of the Working Group is to provide for the involvement of Ngāti Kahu in:

**Commented [MP9]:** FNDC are recommending that condition 8 be converted into an advice note as it is information and not enforceable.

- The analysis of options, required by Condition 8(a), for disposing treated wastewater to land;
- Providing a recommendation to FNDC Council, required by Condition 8(b), regarding alternative disposal sites for treated wastewater; and
- If required, the analysis of options, required by Condition 10, for upgrading the wastewater treatment plant
- The scoping of the QMRA as required by Condition 5.

**Commented [MP10]:** The working group has no delegated authority to make decisions on behalf of Council therefore we suggest the most productive way for the working group to contribute is to make a clear recommendation (including reasons why) to FNDC (elected members) for consideration.

**Commented [MP11]:** We feel the working group could add value in this piece of work.

**Advice Note:** The Consent Holder must, within one month of forming the Working Group, establish a Terms of Reference with the representatives of Ngāti Kahu in the Working Group, that sets out:

**Commented [MP12]:** This was a suggested Advice Note in error. FNDC consider this is a condition.

- The frequency and format of the Working Group meetings and methods for decision-making within the Working Group; and

**Commented [MP13]:** Explicit for clarity and readability.

- A dispute resolution process whereby any differences that may arise may be resolved by direct discussions between the parties in dispute, and failing that, by reference to mediation by an AMINZ affiliated mediator (the costs of the mediator to be met by the Consent Holder).

**Commented [MP14]:** We feel referring to the specific conditions does not add value and dispute resolution may be useful in a variety of circumstance which cannot always be predicted so it is best left open.

8 The Consent Holder must, within one year of the date of commencement of this consent:

- Provide a report to the Northland Regional Council's Compliance Manager on an analysis of options for disposing treated wastewater which must also identify the costs and benefits of land disposal options. The analysis of options must be undertaken by a suitably qualified and experienced person(s) and involve the Working Group established in accordance with Condition 7; and
- If the best practicable options (BPO) is to change to land disposal, this shall be consulted with the community and tabled with councillors as part of the next Long Term Plan (LTP) or Annual Plan (AP) process; and
- If approved by Council through the LTP or AP processes, then the Consent Holder must complete and commission the land disposal system in no more than five years (from the date of the decision) and notify the Northland Regional Council's Compliance Manager of the timetable by which it will happen

**Commented [MP15]:** Minor word changes for readability and consistency.

**Commented [MP16]:** Re-worded for clarity. LTP was added for completeness.

**Commented [MP17]:** Changed for consistency.

**Commented [MP18]:** FNDC feel that 3 years may be challenging to complete detailed design, go through planning approvals process, acquire land, construct and commission system. Therefore we request this be changed to 5 years

9 If the Consent Holder decides the BPO does not involve land disposal ~~not to obtain land for the disposal~~ of treated wastewater then Conditions 10 to 14 must be complied with.

**Commented [MP19]:** Wording changed for consistency and readability.

10 If the Consent Holder decides not to implement a land disposal option per conditions 8 and 9, then the consent holder must, within six months of that decision, complete an analysis of options to reduce the ammoniacal nitrogen-concentrations (NH<sub>3</sub>-N) in the treated wastewater from the East Coast Wastewater Treatment Plant discharge from the wetland so that the quality of the discharge does not exceed the following:

**Commented [MB20]:** Providing sufficient time to undertake an options study

**Commented [MB21]:** Clarification that the discharge location is at the outlet of the wetlands, not the outlet of the oxidation pond

- Median: 10 grams NH<sub>3</sub>-N per cubic metre; and
- 95 percentile: 15 grams NH<sub>3</sub>-N per cubic metre.

**Commented [MB22]:** This what was reported as the average in the AECOM report. And will likely require a treatment upgrade to achieve it reliably in the future (2017 to 2019 data shows an average of 22g/m<sup>3</sup> but there were significant operation disruptions associated with desludging

11 The analysis of options required by Condition 10 must:

- Be undertaken by an independent person(s) qualified and specialising in wastewater engineering appointed by the Consent Holder; and
- Involve the Working Group established in accordance with Condition 7.

**Commented [MB23]:** NH<sub>3</sub>-N is referring ammoniacal nitrogen (not ammonium), as required by the commissioner. Total nitrogen would be a more reliable measure of nitrogen, and more useful if land application becomes the preferred option

12 The Consent Holder must, within two weeks of completing the analysis of options required by Condition 10, provide a draft report to the Northland Regional Council's Compliance Manager that includes:

- A recommended upgrade option;
- Details of, and criteria used, for the options analysis; and
- The indicative timeframe for implementation of the selected option in order to comply with Condition 11

**Commented [MB24]:** 95%ile was selected as it is 2 standard deviations, assuming a normal distribution. Many consents use 95%ile

**Commented [MB25]:** 15 g/m<sup>3</sup> is tight and will likely require a treatment upgrade to achieve

It should be noted that the LTP process will require approvals that will take longer than 2 weeks and that the final report and recommendations will be provided within 3 months of the analysis of options required by Condition 11.

**Commented [MP26]:** This note explains the changes in condition 12 above (14 in the recommended consent).

13 The Consent Holder must, within two years of the completion of Condition 10 upgrade the wastewater treatment system so that all wastewater receives treatment within a fully commissioned and operating treatment process designed as per either the selected upgrade option provided under Condition 12 or an upgrade which meets the discharge standards required by Condition 14.

**Commented [MP27]:** Wording was changed for readability. FNDC are offering a faster turnaround time for a plant upgrade.

14 Once the upgraded treatment system required by Conditions 10 through 13 has been commissioned, the quality of the treated wastewater, as measured at NRC Sample Site 101687 (discharge from the wetland), must not exceed the following standards, as calculated using 26 fortnightly samples:

**Commented [MP28]:** Per year is unnecessary detail.

Parameter	Compliance metric	Standard
Ammoniacal nitrogen (NH <sub>3</sub> -N)	Annual median*	≤10 grams per cubic metre
	Maximum number of samples exceeding >15 g NH <sub>3</sub> -N/m <sup>3</sup> per year*	4
Five-day biochemical oxygen demand (BOD <sub>5</sub> )	Annual median	≤20 grams per cubic metre
	Maximum number of samples exceeding >30 g BOD <sub>5</sub> /m <sup>3</sup> per year	4
Total suspended solids (TSS)	Annual median	≤20 g grams per cubic metre
	Maximum number of samples exceeding >40 g TSS per year	4

\* Based on pH 8. Compliance with the standards should be undertaken after pH adjustment.

After 12 consecutive months of compliant samples, following the upgrade, the monitoring frequency shall be reduced to once per month.

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**Commented [MP29]:** FNDC would like sampling costs reduced after a period of compliance. Monthly sampling is consistent with many of our consents around the district.

15 The treated wastewater discharged from the constructed wetlands must not result in any of the following effects in the waters of the unnamed tributary of Te Wai o Te Parapara, as measured at NRC Sample Site 105941 (refer NRC Plan 3078A attached):

- (a) The pH must not be outside the range of 6.0 to 9.0.
- (b) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials
- (c) Any conspicuous change in the colour or visual clarity
- (d) Any emission of objectionable odour.

16 The Consent Holder must maintain easy and safe access to the discharge point from the constructed wetland for the purposes of sampling.

**AUT.004007.03.03 DISCHARGE TO AIR**

17 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 property boundary of the East Coast Wastewater Treatment Plant.

## GENERAL CONDITIONS

18 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 as soon as practicable to the Northland Regional Council upon written request.

**Commented [MP30]:** Replaces immediately as a more reasonable approach.

19 The Consent Holder must monitor the exercise of these consents in accordance with Schedule 1 (attached).

**Commented [MP31]:** Original condition 22 requiring FNDC to maintain the farm drain has been removed. FNDC feel this condition is ultra vires as council does not own or control the land.

20 The Consent Holder must, on becoming aware of any unauthorised discharge associated with the East Coast Wastewater Treatment System:

- (a) Take immediate action to stop and/or contain the discharge; and
- (b) Immediately notify the Northland Regional Council by telephone of the discharge-of contaminant; and
- (c) Take all reasonable steps to remedy or mitigate any adverse effects on the environment resulting from the discharge; and
- (d) Notify the Northland Regional Council in writing within one week on the cause of the unauthorised discharge-of the contaminant and the steps taken or being taken to remedy of mitigate the effects of the discharge.

**Commented [MP32]:** Inserted for clarity.

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.

21 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:

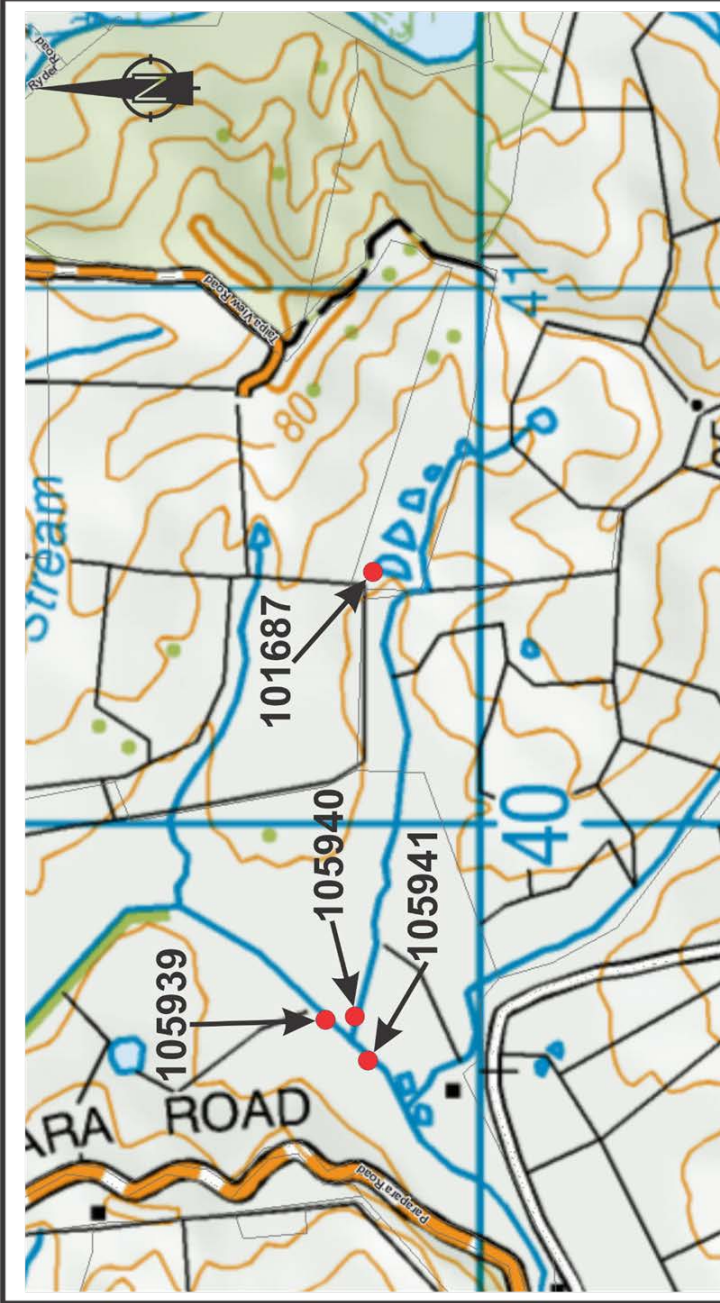
- (a) annually for any one or more of the following purposes:
  - (i) To deal with any adverse effects on the environment that may arise from the exercise of the consents and which it is appropriate to deal with at a later stage, or
  - (ii) To require the adoption of the best practicable option to remove or reduce any adverse effect on the environment.
- (b) Within three months of receiving the written report required by Condition 8(a), to provide for additional work on land disposal options; and
- (c) Within three months of receiving the written report required by Condition 6(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 DATES

This resource consent (AUT.004007.01.03, AUT.004007.02.03, and AUT.004007.03.0) will expire eight years from the date of commencement of the consents, as in accordance with section 116 of the Resource Management Act





 <p><b>NORTHLAND REGIONAL COUNCIL</b></p>	<p><b>East Coast Bays Wastewater Treatment System Sampling Sites</b></p>	
	Scale: N.T.S.	Drawn: KATM 05/19
	File Number: 4007	Plan Number: <b>3078A</b>

# 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 record of the daily (midnight to midnight) treated wastewater flows through the meter required by Condition 2 of the consent. The 30-day rolling average dry weather flow discharge volume must be calculated and recorded daily. A wet weather flow day is defined as any day with 10 or more millimetres of rain and the two subsequent days. A dry weather flow day is defined as any day that is not a wet weather flow day.

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.

**Commented [MP33]:** A new definition for dry weather is suggested. This definition allows for flows for two days after 10mm of rain to be considered wet weather. Inflow and infiltration can take time to enter and pass through the network into the plant. This is a relatively common definition.

### 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) Total ammoniacal nitrogen ( $\text{g/m}^3 \text{NH}_3\text{-N}$ )
- (b) Biochemical Oxygen Demand ( $\text{g/m}^3 \text{BOD}$ )
- (c) pH
- (d) Dissolved oxygen ( $\text{g/m}^3 \text{DO}$ )
- (e) Temperature ( $^{\circ}\text{C}$ ).

**Commented [MP34]:** Changed for consistency

**Commented [MP35]:** We wish to report on temperature.

### 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:

- (a) Total ammoniacal nitrogen ( $\text{g/m}^3 \text{NH}_3\text{-N}$ )
- (b) Biochemical Oxygen Demand ( $\text{g/m}^3 \text{BOD}$ )
- (c) pH
- (d) Dissolved oxygen ( $\text{g/m}^3 \text{DO}$ )
- (e) Total suspended solids ( $\text{g/m}^3 \text{TSS}$ )
- (f) Temperature ( $^{\circ}\text{C}$ ).



#### 4. MONITORING OF RECEIVING WATER QUALITY

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

Commented [MP36]: Consistency

- (a) Total ammoniacal nitrogen ( $\text{g/m}^3 \text{NH}_3\text{-N}$ )
- (b) pH
- (c) 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 results of monitoring in accordance with Sections 2, 3 and 4 of this schedule, for the previous calendar month, must be forwarded to the Northland Regional Council.

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