

KEY: **YELLOW** HIGHLIGHTING IS FROM NRC CHANGES
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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:

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- 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 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 metres per day. 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 daily dry weather discharge volume" must be calculated in accordance with the average dry weather flow is defined by Schedule 1 (attached).~~
- 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 metres per day. 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. For compliance purposes, a dry weather flow day is defined as any day with less than 10 millimetres of rainfall. the "average daily dry weather discharge volume" must be calculated in accordance with See 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.
- 2 The Consent Holder must install and maintain an operational flow meter measuring device with a measurement error of no more than ±5% to measure the volume of wastewater discharged into the unnamed tributary.

Commented [SK1]: For compliance purposes, 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.

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3 The Consent Holder must keep a written record of the daily volume of wastewater through the flow meter measuring device required by Condition 1 and the calculated average daily dry weather flow discharge volume, as in accordance with Schedule 4 (attached). A copy of these records must be forwarded to the Northland Regional Council's Compliance Manager by the 15th of each month in accordance with Schedule 4 (attached), and also immediately upon request by the Northland Regional Council's assigned Monitoring Officer.

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4 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 physically check the flow meter required by Condition 2 the operability of the flow meter at least once every month no less than to confirm that it is operational monthly and calibrate the flow meter at least 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 verification confirmation from the a 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.

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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 Bays Wastewater Treatment Plant 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 (Awapoko River and Estuary)) (including estuary). If the outcome of the quantitative microbiological risk assessment (QMRA) indicates that the discharge is likely to have an unacceptable public health risk downstream of NRC Sample Site 1059404 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 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 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 make the report publicly available on its website the wider community.

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- Commented [SK2]: Believe that checking of the meter is covered by compliance with conditions 2 & 3 above
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- Commented [SK3]: Believe 105940 is more suitable for determining impacts of East Coast WWTP only
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6 If the report required by Condition 6-5 recommends that pathogen reduction in the treated wastewater discharge is required to avoid reduce a public health risk risks to human health associated with 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 twelve six months of providing the report required by Condition 6(a), upgrade the wastewater treatment system in accordance with that report.

- Commented [SK4]: Not sufficient time for design, contract, procurement, installation & commissioning
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discharged from the constructed wetlands to meet the discharge quality standards in Condition 14.

- 16 Once the upgraded treatment system required by Condition 10-11 has been commissioned, the ammonia concentration (NH₄-N) in quality of the treated wastewater, as measured at NRC Sample Site 101687 (discharge from the wetland) discharged from the wetland, must not exceed the following discharge quality standards, as calculated using 26 fortnightly samples per year:

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

- (a) Annual Median: 10 The 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 92nd 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.

(f) ~~After one year of data collection 12 consecutive months of compliant samples following the upgrade, the monitoring frequency shall be reduced to once per month if previous monitoring has demonstrated compliance with the above discharge standards Condition 16.~~

17. Once the upgraded treatment system required by Condition 10 has been commissioned, the wastewater discharge from the wetlands must not cause the ammonia concentration* (NH₄-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

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Commented [MB13]: These values are not unreasonable, but really should be based on dilution studies from the drain. The farm drain is "man-made" and it should be the effect on the river that the drain connects to that is critical location

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(b) ~~Annual 92nd percentile: 2.2 grams per cubic metre, calculated using a minimum of 12 consecutive monthly samples.~~

²Based on pH 8 and temperature of 20°C. Compliance with the standard must be undertaken after pH adjustment.

17 The treated wastewater discharged from the constructed wetlands must not result in any of the following effects ~~on in the quality of the waters in of~~ the unnamed tributary of ~~Te Wai o Te Parapara the Parapara Stream~~, as measured at NRC Sample Site 105941 (~~see attached 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. The natural colour and clarity of the waters must not be changed to a conspicuous extent.~~
- (c) ~~Any conspicuous change in the colour or visual clarity. There must be no conspicuous oil or grease films, scums or foams, floatable or suspended materials, nor emissions of objectionable odour.~~
- (d) ~~Any emission of objectionable odour.~~

18 The Consent Holder must maintain easy ~~and safe~~ access to ~~the NRC Sampling Site 404687 (discharge point from the constructed wetland for the purposes of sampling.); as shown on NRC Plan 3078A (attached).~~

~~20. The Consent Holder must, within one year of the date of commencement of this resource 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.~~

~~21. 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.~~

AUT.004007.03.03 DISCHARGE TO AIR

19 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 area legally occupied by the East Coast Bays Wastewater Treatment Plant wastewater treatment system.~~

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GENERAL CONDITIONS

20 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 ~~immediately upon~~ written request.

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

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22 The Consent Holder must maintain fencing of the drain, an unnamed tributary of the Te Wai o Te Parapara Stream between NRC sampling sites 101687 and 105940, as shown on NRC Plan 3078A (~~attached~~), to prevent stock access.

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23 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 ~~unauthorised discharge~~ contaminant associated with the East Coast Bays Wastewater Treatment System Consent Holder's operations ~~escaping otherwise than in conformity with these consents:~~

Commented [HT15]: This is ultra vires. Council does not own or control the land and this condition should be deleted.

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

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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.

24 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 101(a), to provide for additional work on land disposal options; and~~
- (c) Within three months of receiving the written report required by Condition ~~7-6~~(a) to insert new conditions to deal with the ongoing monitoring and compliance of the pathogen reduction system that is to be installed.

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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



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

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



SCHEDULE 1

MONITORING PROGRAMME

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

Commented [MB16]: Suggest we note that this would change if land disposal is selected in the future, as Total Nitrogen becomes much more important than Ammoniacal Nitrogen.

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. ~~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. A dry weather flow day is defined as any day with less than 10 mm of rainfall.~~

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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~~ Total ammoniacal nitrogen (g/m³ NH₄-N)
- (b) Biochemical Oxygen Demand (g/m³ BOD)
- (c) pH
- (d) Dissolved oxygen (g/m³ DO)
- ~~(e) Temperature (°C)~~

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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 (g/m³ TN)~~

(a) ~~Total ammoniacal nitrogen Ammonia (g/m³ NH₃-N) (g/m³)~~

(b) Biochemical Oxygen Demand (g/m³ BOD)

~~(c) Escherichia coli (E.coli/100 mL)~~

~~(d) Enterococci (Enterococci/100 mL)~~

(e) pH

(f) Dissolved oxygen (g/m³ DO)

~~(g) Total suspended solids (g/m³ TSS)~~

~~(h) Temperature (°C)~~

~~(i)~~

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4. MONITORING OF RECEIVING WATER QUALITY

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

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(a) ~~Ammonia~~ Total ammoniacal nitrogen (g/m³ NH₃-N)

~~(b) Escherichia coli (E.coli/100 mL)~~

~~(c) Enterococci (Enterococci/100 mL)~~

(d) pH

(e) Dissolved oxygen (g/m³)

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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[#], 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 as would include registrations such as ISO 9000, ISO Guide 25, Ministry of Health Accreditation.

6. REPORTING

By the 15th of each month, the following information 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.:

~~(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.