

Site Compliance Report

Site No: REG600151
Site Owner: Waikato District Council
Site Name: Meremere Village WWTP: SH 1, Meremere
Date: 15 December 2021

1 INTRODUCTION

The following resource consents are held for the site:

Resource Consent	Status	Description	Commenced	Expiry
AUTH142286.01.01	Current	Discharge treated municipal wastewater to the Waikato River, with associated operational discharge to land	10/12/2020	9/12/2055
AUTH142286.03.01	Current	Continued occupation of the Wastewater Treatment Plant outfall structure in the Waikato River	10/12/2020	9/12/2055

This report examines the level of compliance of Waikato District Council with the selected conditions of the resource consents. AUTH105031.01.03 was in force until December 2020 and therefore I have assessed the period 1 July 2020 to 31 November 2020 under the now expired authorisation.

2 BACKGROUND

The Meremere wastewater treatment plant (WWTP) is operated by Watercare Services Limited (WSL) as part of a contract with the Waikato District Council (WDC). The WWTP receives, treats and discharges municipal wastewater from the Meremere township on behalf of the local community. The site has recently been upgraded with a membrane reactor plant (MBR) and some major changes to layout and process flows on site. The upgrade coincided with the replacement resource consents for the site which became active in December 2020.



The assessment of compliance has been undertaken against:

- AUTH105031.01.03 for the period 1 July 2020 to 31 November 2020, and;
- AUTH142286.01.01 for the period 10 December 2020 to 30 June 2021.



2.1 PREVIOUS COMPLIANCE HISTORY

Date Period	Site Compliance
1 July 2020 to 30 June 2021	Low Risk Non-Compliance
1 July 2019 to 30 June 2020	Significant non-compliance
1 July 2018 to 30 June 2019	Significant non-compliance
1 July 2017 to 30 June 2018	Significant non-compliance
1 July 2016 to 30 June 2017	Significant non-compliance

The Meremere WWTP has been in significant non-compliance for four years previous to this year's audit. The site has recently undergone a major upgrade commissioned in December 2021, and therefore compliance has already improved and should improve further as the new technology settles in.

The consent holder was issued an abatement notice in April 2019 to comply with the conditions of their consents and once the remaining determinant of suspended solids becomes compliant, then the consent holder can apply to WRC for the abatement notice to be cancelled.

Enforcement details

IRISID	Details
EAC7228	31/07/20 (Served) - Formal Warning - Continued non-compliance with consent conditions
EAC6145	18/04/19 (Served) - Notice - Non-compliance with multiple discharge parameters
EAC6143	18/04/19 (Served) - Formal Warning - Non-compliance with multiple discharge parameters
EAC5132	19/02/18 (Served) - Formal Warning - Continued failure to comply with consent conditions
EAC5127	16/02/18 (Served) - Formal Warning - Continued failure to comply with consent conditions
EAC4494	19/04/17 (Served) - Formal Warning - For significant non-compliance this year and prolonged partial compliance for 5 years prior to that

Please note: For the 2020-21 compliance year WRC has commenced using the new MfE compliance monitoring scoring regime that has been implemented nationwide for all regional councils. This new scoring system is designed to bring all the regions into line and make the measuring of national compliance much easier to compare. A full definition is available at the end of this report in appendix 1.

3 COMPLIANCE ASSESSMENT

Unless otherwise specified in this document this hybrid assessment covers the period from **1 July 2020 to 30 June 2021**.

This compliance assessment has been undertaken based on the submitted annual report by the consent holder, monitoring data supplied throughout the compliance period and any site inspections undertaken. Some administration, duplicate or irrelevant conditions have been omitted for brevity.

Please note that a description of the classification system used to describe compliance status is given in Appendix 1 of this report.

AUTH105031.01.03 - Water - sewage

Activity Authorised: Discharge up to 480 c/m p/d of treated wastewater effluent (up to 160 c/m p/d dry weather flow) from a new constructed sub-surface flow wetland (planted rock filter) to the Waikato River, in the vicinity of SH 1, Meremere

Condition No.	Description
1	The wastewater treatment and disposal system shall be operated and maintained in accordance with: (a) the application for this resource consent; and (b) the document titled "Meremere Wastewater Treatment, Application for Resource Consents, Renewal", 25 March 2001, Community Assets Department, Waikato District Council; and (c) the document titled "Meremere Wastewater Treatment, Assessment of Environmental Effects, Document to Support Application for Resource Consents, Renewal", 25 March 2001, Community Assets Department, Waikato District Council; subject to the conditions of this resource consent.
Evidence	
Status Reasoning	
Action Required	Full Compliance
2	The treatment plant and discharge shall be managed and operated by an appropriately trained operator.
Evidence	
Status Reasoning	
Action Required	Full Compliance
3	The consent holder shall provide easy access to the treatment plant and disposal facilities for the measurement of flow and quality of the discharge to the Waikato River.
Evidence	
Status Reasoning	

Action Required		Full Compliance
4	The consent holder shall ensure contractors are made aware of the conditions of this resource consent and ensure compliance with those conditions.	
Evidence		
Status Reasoning		
Action Required		Full Compliance
6	The tertiary treatment constructed subsurface flow wetland (planted rock filter) shall be constructed and maintained to the following standards: (a) A minimum area of 0.2 hectares including embankments; (b) An average depth of 0.3 metres; (c) Contain a filter medium with demonstrated ability to provide tertiary treatment to secondary treated wastewater; (d) Planted with suitable native wetland species; and (e) Maintained to high vegetative cover.	
Evidence	The previous wetland was undersized however the site has now been upgraded and this condition is no longer relevant	
Status Reasoning		
Action Required	No further action required as conditions of AUTH142286.01.01 are now in force	Low Risk Non-Compliance
8	The consent holder shall ensure that the oxidation pond banks are maintained to a good working standard. To this end the consent holder shall: (a) Repair the oxidation pond banks within six months of the commencement of this consent at locations where the banks have slumped and the geotextile fabric is damaged, repair shall include rock armouring to stabilise the embankments; (b) Carry out six monthly visual structural inspection of the oxidation pond banks and liner and undertake maintenance where necessary to comply with this condition; and (c) Keep a record of maintenance that is undertaken on the pond banks and liner and make this record available to the Waikato Regional Council at all reasonable times and upon request.	
Evidence		
Status Reasoning		
Action Required		Full Compliance
12	The maximum volume of treated wastewater discharged shall not exceed 480 cubic metres in any 24 hour period and the average dry weather flow shall be maintained at a level not exceeding 160 cubic metres per day.	
Evidence	Max discharge volume was 1381m ³ /day and 90%ile result was 1218m ³ /day	
Status Reasoning	The volumes involved are minor in comparison to the volumes and dispersion and dilution at the discharge point into the Waikato River.	
Action Required	Ensure that new consented volume discharge limits are complied with	Low Risk Non-Compliance
13	The time of discharge shall be limited to the period between 10pm and 5am the following day, provided always that if: 1. there is an accidental power failure during that period, or 2. the daily rainfall exceeds a 5% AEP event (Annual Exceedance Probability event), such that discharging is reasonably necessary outside those hours, the consent holder may discharge for such longer or other period as may be required. If at all possible, the consent holder shall notify and consult with Waikato Regional Council and the Mercer Rowing Club (as per condition 23) prior to the events described above, or if this is not possible, as soon as practicable after the event, as to an appropriate discharge regime.	
Evidence	Numerous outside of consented hours discharges have occurred throughout the year. These are primarily due to excessive inflows exceeding the holding capacity of the wastewater system or discharges related to the upgrade of the plant and commissioning of the new plant. The volumes involved are small scale in comparison to the receiving water flows in the Waikato River at this location, so it is unlikely to have had any adverse effects on the receiving	

	environment. Downstream stakeholders are advised of any such discharges.																																																					
Status Reasoning	The discharges are largely due to high inflows due to I&I into the reticulation system																																																					
Action Required	No further action as AUTH142286.01.01 is now in force and those conditions will take precedence	Low Risk Non-Compliance																																																				
15 (Table)	<p>The consent holder shall ensure that the quality of the discharge prior to entering the Waikato River is equal to or less than the concentrations outlined in the table below following the installation and commissioning of the wetland and the baffling of the oxidation pond at the treatment plant, or until six months after the commencement of this consent, whichever occurs first, as follows: Parameter Median Discharge Quality (g/m3) Ninety Percentile Discharge Quality (g/m3) Total Kjeldahl Nitrogen 12 15 Ammoniacal Nitrogen 8 10 Total Phosphorus 5 7 Biochemical Oxygen Demand 15 20 Suspended Solids 20 30 Parameter Median Discharge Quality (MPN/100ml) Ninety Percentile Discharge Quality (MPN/100ml) Escherichia coli 3,500 17,000 Note: Intent is that discharge bacteriological quality is not worse than the current river quality, and target is to progress to bathing water standard. The median of each parameter shall be calculated from the preceding 10 samples taken at the relevant river flow. Compliance with the ninety-percentile discharge quality standard shall be determined by not more than one sample result in the preceding ten sample results at the relevant river flow being above the stated limit. The median and ninety percentile measures shall be based on every sample taken in accordance with monitoring conditions of this consent, any other samples taken of the discharge by the consent holder, and any samples taken by the Waikato Regional Council staff of the discharge where the results have been provided to the consent holder.</p>																																																					
Evidence	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Median</th> <th>Ninety Percentile</th> <th></th> </tr> </thead> <tbody> <tr> <td>Total Kjeldahl Nitrogen (g/m3)</td> <td>12</td> <td>15</td> <td></td> </tr> <tr> <td colspan="4">Non-compliant for median 16.95 (g/m³) non-compliant for 90% ile 22(g/m³)</td> </tr> <tr> <td>Ammoniacal Nitrogen</td> <td>8</td> <td>10</td> <td></td> </tr> <tr> <td colspan="4">non-compliant for median 11.25 (g/m³) non-compliant for 90% ile 16 (g/m³)</td> </tr> <tr> <td>Total Phosphorus</td> <td>5</td> <td>7</td> <td>Compliant</td> </tr> <tr> <td>Biochemical Oxygen Demand</td> <td>15</td> <td>20</td> <td></td> </tr> <tr> <td colspan="4">Compliant for median 15(g/m³) & non-compliant for 90% ile 27.5(g/m³)</td> </tr> <tr> <td>Suspended Solids</td> <td>20</td> <td>30</td> <td></td> </tr> <tr> <td colspan="4">non-compliant 54 (g/m³) and 105.5(g/m³)</td> </tr> <tr> <td colspan="4">Parameter Median Discharge Quality Ninety Percentile Discharge Quality (MPN/100ml)</td> </tr> <tr> <td>Escherichia coli (MPN/100ml)</td> <td>3500</td> <td>17,000</td> <td></td> </tr> <tr> <td colspan="4">Compliant 3.3 (MPN/100ml) and 42.3 (MPN/100ml)</td> </tr> </tbody> </table>		Parameter	Median	Ninety Percentile		Total Kjeldahl Nitrogen (g/m3)	12	15		Non-compliant for median 16.95 (g/m ³) non-compliant for 90% ile 22(g/m ³)				Ammoniacal Nitrogen	8	10		non-compliant for median 11.25 (g/m ³) non-compliant for 90% ile 16 (g/m ³)				Total Phosphorus	5	7	Compliant	Biochemical Oxygen Demand	15	20		Compliant for median 15(g/m ³) & non-compliant for 90% ile 27.5(g/m ³)				Suspended Solids	20	30		non-compliant 54 (g/m ³) and 105.5(g/m ³)				Parameter Median Discharge Quality Ninety Percentile Discharge Quality (MPN/100ml)				Escherichia coli (MPN/100ml)	3500	17,000		Compliant 3.3 (MPN/100ml) and 42.3 (MPN/100ml)			
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Status Reasoning	<p>Some extended periods of non-compliance for TKN, cBOD5, Ammoniacal nitrogen and suspended solids under the previous consent that expired in December 2020.</p> <p>Only suspended solids remained in non-compliance once the upgrade and new resource consent limits became active in January 2021.</p> <p>The discharge volume at Meremere is very small in relation to the flows in the Waikato River at the discharge point. the flows average around 350cumecs whereas the discharge equates to 0.048cumecs at the maximum flow discharge rate.</p>																																																					
Action Required	Take action to reduce suspended solids discharged to within the consented limits of the new AUTH142286.01.01.	Moderate Risk Non-Compliance																																																				
16	Notwithstanding the stated limits in conditions 14 and 15, of this consent, the consent holder shall make all reasonable and practical efforts to ensure that the final effluent quality is maximised																																																					

	within the capabilities of the treatment system in operation.	
Evidence		
Status Reasoning		
Action Required		Full Compliance
17	The consent holder shall ensure that after reasonable mixing the discharge does not cause any of the following effects in the Waikato River: (a) The production of any conspicuous oil or grease films, scums, foams, or floatable or suspended materials (b) Any conspicuous change in the colour or visual clarity (c) Any emission of objectionable odour (d) The rendering of fresh water unsuitable for consumption by farm animals (e) Any significant adverse effects on aquatic life	
Evidence	No reports or complaints of any of the following effects in the Waikato River: (a) The production of any conspicuous oil or grease films, scums, foams, or floatable or suspended materials (b) Any conspicuous change in the colour or visual clarity (c) Any emission of objectionable odour (d) The rendering of fresh water unsuitable for consumption by farm animals (e) Any significant adverse effects on aquatic life	
Status Reasoning		
Action Required		Full Compliance
20	The consent holder shall provide to the Waikato Regional Council, Watercare Services Limited Ngati Naho Co-operative Society and Mercer Rowing Club Incorporated a written monitoring report by 30 September each year that this consent is current. As a minimum this report shall include the following: (a) all data collected as required by condition 18 of this consent for 1 April to 31 March of the preceding year; (b) a summary of the monitoring results required by condition 18 of this consent for 1 April to 31 March of the preceding year and a critical analysis of the information in terms of compliance and environmental effects; (c) a comparison of data with previously collected data identifying any emerging trends; (d) comment on compliance, and any reasons for non-compliance or difficulties in achieving compliance, with conditions 14, and 15 of this consent; (e) comment on any works that have been undertaken, or that are proposed to be undertaken in the up-coming year, to improve the environmental performance of the treatment and/or disposal system; (f) report on and discuss any complaints received regarding the treatment and/or discharge of treated effluent; and (g) any other issues considered important by the consent holder.	
Evidence	Reports are disseminated to the named stakeholders as required.	
Status Reasoning		
Action Required		Full Compliance
21	The consent holder shall notify the following parties as soon as practicable and as a minimum requirement within 48 hours, of the consent holder becoming aware of the limits specified in condition 14 and 15 of this consent being exceeded: (a) any Resource Officer, Monitoring Officer or Programme Manager within the Resource Use Group at the Hamilton Office of the Waikato Regional Council, or equivalent personnel should those positions be superseded; (b) the Superintendent at the Tuakau Treatment Plant and the 24 hour control room of Watercare Services Limited, or equivalent personnel should those positions be superseded; (d) The Chairman and Secretary of Mercer Rowing Club Incorporated, or persons to be nominated by the Mercer Rowing Club Incorporated. (d) The Manager, Ngati Naho Co-operative Society.	
Evidence	WRC are notified. No evidence of the others being notified	
Status Reasoning		
Action Required		Not assessed
22	The consent holder shall notify the following parties as soon as practicable and as a minimum requirement within 24 hours, of any accidental discharge, plant breakdown, or other circumstances which are likely to result in the limits of this consent being exceeded: (a) any Resource Officer, Monitoring Officer or Programme Manager within the Resource Use Group at the Hamilton Office of the Waikato Regional Council, or equivalent personnel should those positions be superseded; (b) the Superintendent at the Tuakau Treatment Plant and the 24 hour	

	control room of Watercare Services Limited, or equivalent personnel should those positions be superseded; (c) The Chairman and Secretary of Mercer Rowing Club Incorporated, or persons to be nominated by the Mercer Rowing Club Incorporated.	
Evidence	WSL notifies WRC when there is a non-routine discharge	
Status Reasoning		
Action Required		Full Compliance
25	The consent holder shall maintain and keep a complaints register for all complaints made about the treatment and disposal site received by the consent holder. The register shall record: (a) the date, time and duration of the event/incident that has resulted in a complaint; (b) any corrective action undertaken by the consent holder in response to the complaint including actions taken to prevent similar events in the future; (c) the location of the complainant when the event was detected; (d) the possible cause of the event; (e) the weather conditions and wind direction at the site when the odour event occurred. The register shall be available to the Waikato Regional Council at all reasonable times. Complaints received by the consent holder which may infer non-compliance with the conditions of this consent shall be forwarded to the Waikato Regional Council within 5 days of the complaint being received.	
Evidence		
Status Reasoning		
Action Required		Full Compliance
26	The consent holder shall construct and place a sign in the vicinity of the discharge to the Waikato River, in such a way that it is conspicuous to river users, advertising of the presence of the wastewater discharge.	
Evidence	A sign is in place but is difficult to see from the river as reported in the annual dive report.	
Status Reasoning		
Action Required	Please ensure that the signage is visible to river users	Low Risk Non-Compliance
		Low Risk Non-Compliance
	Authorisation Compliance:	

AUTH142286.01.01 - Water - other

Activity Authorised: Discharge treated municipal wastewater to the Waikato River, with associated operational discharge to land		
Condition No.	Description	
1	<p>The activity authorised by this consent shall be undertaken in general accordance with the information and plans contained in the following application documentation:</p> <p>“Application for Resource Consent; Proposed Meremere Wastewater Scheme, September 2020” (recorded as document number 17273352 on the Waikato Regional Council document management system)</p> <p>and as identified in the resource consent conditions below which shall prevail in the event of any inconsistency between the aforementioned documentation and the conditions.</p>	
Evidence		
Status Reasoning		
Action Required		Full Compliance
2	The consent holder shall be responsible for all sub-contracted operations related to the exercise	

	of this consent and must ensure sub-contractors are made aware of the conditions of this consent.
Evidence	All contractors employed at the treatment site are inducted in both health and safety procedures and relevant conditions of this consent.
Status Reasoning	
Action Required	Full Compliance
4	The volume of treated wastewater discharged shall not exceed a 90th percentile of 1,500 cubic metres per day, determined for the period of 1 July to 30 June.
Evidence	The discharge volume is compliant since the commencement of the new consent- Maximum volume discharged during December 2020- June 2021 is 1233m ³ /day (please see Appendix One).; July-November 2020 compliance is based on the old consent limits.; non-compliances were noted for July and August 2020 due to heavy rain events. The non-compliances were resolved when the new consent came into effect in December 2020.
Status Reasoning	
Action Required	Full Compliance
5	<p>Until the consent holder advises Waikato Regional Council of the successful commissioning of the side-stream Membrane Bioreactor (MBR) treatment process in writing, or by 1 December 2021, whichever occurs first, the consent holder shall ensure that the treated wastewater leaving the WWTP following UV treatment does not exceed the following limits:</p> <p>The median five-day carbonaceous biochemical oxygen demand concentration (cBOD5) shall not exceed 15 milligrams per litre and the 90th percentile shall not exceed 30 milligrams per litre;</p> <p>The median suspended solids (TSS) concentration shall not exceed 55 milligrams per litre and the 90th percentile shall not exceed 110 milligrams per litre;</p> <p>The median total ammoniacal-nitrogen (NH₄-N) concentration shall not exceed 8 milligrams per litre and the 90th percentile shall not exceed 25 milligrams per litre;</p> <p>The median total Kjeldahl nitrogen (TKN) concentration shall not exceed 12 milligrams per litre and the 90th percentile shall not exceed 30 milligrams per litre;</p> <p>The median total phosphorus (TP) concentration shall not exceed 6 milligrams per litre and the 90th percentile shall not exceed 9 milligrams per litre; and</p> <p>The median Escherichia coli (E.coli) concentration shall not exceed 3,500 MPN per 100 millilitres and the 90th percentile shall not exceed 17,000 MPN per 100 millilitres.</p> <p>Advice note: For the avoidance of doubt:</p> <p>compliance with median concentration limits require that no more than 10 in any 20 consecutive monthly samples exceed the specified limit, and</p> <p>compliance with 90th percentile limits requires that no more than one in any 10 consecutive monthly samples exceed the specified limit.</p>
Evidence	<p>The median five-day carbonaceous biochemical oxygen demand concentration (cBOD5) shall not exceed 15 milligrams per litre and the 90th percentile shall not exceed 30 milligrams per litre; - Compliant</p> <p>The median suspended solids (TSS) concentration shall not exceed 55 milligrams per litre and the 90th percentile shall not exceed 110 milligrams per litre; - NON-COMPLIANT - results were 86.2g/m³ and 117.5g/m³</p> <p>The median total ammoniacal-nitrogen (NH₄-N) concentration shall not exceed 8 milligrams per</p>

	<p>litre and the 90th percentile shall not exceed 25 milligrams per litre; - Compliant</p> <p>The median total Kjeldahl nitrogen (TKN) concentration shall not exceed 12 milligrams per litre and the 90th percentile shall not exceed 30 milligrams per litre; - Compliant</p> <p>The median total phosphorus (TP) concentration shall not exceed 6 milligrams per litre and the 90th percentile shall not exceed 9 milligrams per litre; - Compliant</p> <p>The median Escherichia coli (E.coli) concentration shall not exceed 3,500 MPN per 100 millilitres and the 90th percentile shall not exceed 17,000 MPN per 100 millilitres.- Compliant</p>
Status Reasoning	<p>One determinant (Suspended solids) has exceeded the limits of the new resource consent with a median result of 86.2g/m3 (limit 55g/m3) and the 90% ile result of 117.5g/m3 (limit 110g/m3).</p> <p>Otherwise the site has been in compliance with the other consent limits since it became active in January 2021.</p>
Action Required	<p>Please investigate and take action to reduce the levels of suspended solids in the discharge to within compliant levels.</p> <p style="text-align: right;">Low Risk Non-Compliance</p>
6	<p>After the consent holder advises Waikato Regional Council of the successful commissioning of the side-stream MBR treatment process in writing, or by 1 December 2021, whichever occurs first, the consent holder shall ensure that the treated wastewater leaving the WWTP following UV treatment does not exceed the following limits:</p> <p>The median five-day carbonaceous biochemical oxygen demand concentration (cBOD5) shall not exceed 15 milligrams per litre and the 90th percentile shall not exceed 55 milligrams per litre;</p> <p>The median suspended solids (TSS) concentration shall not exceed 16 milligrams per litre and the 90th percentile shall not exceed 110 milligrams per litre;</p> <p>The median total ammoniacal-nitrogen (NH4-N) concentration shall not exceed 6 milligrams per litre and the 90th percentile shall not exceed 25 milligrams per litre;</p> <p>The average annual total nitrogen (TN) load shall not exceed 2.6 kilograms per day;</p> <p>The average summer (1 December to 31 May inclusive) total phosphorus (TP) load shall not exceed 0.5 kilograms per day;</p> <p>The average winter (1 June to 30 November inclusive) TP load shall not exceed 1.1 kilograms per day; and</p> <p>The median Escherichia coli (E.coli) concentration shall not exceed 650 MPN per 100 millilitres.</p> <p>Advice note: For the avoidance of doubt:</p> <p>compliance with the median concentration limits require that no more than 12 in any 24 consecutive fortnightly samples exceed the specified limit,</p> <p>compliance with the 90th percentile limits require that no more than two in any 20 consecutive fortnightly samples exceed the specified limit,</p> <p>compliance with summer average load limits will be assessed for the average load calculated from samples collected on a fortnightly basis over the period of 1 December to 31 May inclusive,</p> <p>compliance with winter average load limits will be assessed for the average load calculated from samples collected on a fortnightly basis over the period of 1 June to 30 November inclusive, and</p> <p>compliance with annual average load limits will be assessed for the average load calculated from samples collected on a fortnightly basis over the period of 1 July to 30 June.</p>
Evidence	<p>The median five-day carbonaceous biochemical oxygen demand concentration (cBOD5) shall not exceed 15 milligrams per litre and the 90th percentile shall not exceed 55 milligrams per litre; -</p>

	<p>Compliant</p> <p>The median suspended solids (TSS) concentration shall not exceed 16 milligrams per litre and the 90th percentile shall not exceed 110 milligrams per litre; - NON-COMPLIANT - results were 86.2g/m3 and 117.5g/m3</p> <p>The median total ammoniacal-nitrogen (NH4-N) concentration shall not exceed 6 milligrams per litre and the 90th percentile shall not exceed 25 milligrams per litre; - Compliant</p> <p>The median total Kjeldahl nitrogen (TKN) concentration shall not exceed 12 milligrams per litre and the 90th percentile shall not exceed 30 milligrams per litre; - Compliant</p> <p>The median total phosphorus (TP) concentration shall not exceed 6 milligrams per litre and the 90th percentile shall not exceed 9 milligrams per litre; - Compliant</p> <p>The median Escherichia coli (E.coli) concentration shall not exceed 3,500 MPN per 100 millilitres and the 90th percentile shall not exceed 17,000 MPN per 100 millilitres.- Compliant</p> <p>The average annual total nitrogen (TN) load shall not exceed 2.6 kilograms per day; NON-COMPLIANT - no nitrogen load data has been submitted</p> <p>The average summer (1 December to 31 May inclusive) total phosphorus (TP) load shall not exceed 0.5 kilograms per day; The average winter (1 June to 30 November inclusive) TP load shall not exceed 1.1 kilograms per day. – NON-COMPLIANT - no TP Load data has been submitted</p> <p><i>Please refer to Appendix One for the 2020-21 monitoring results CONSENT SUMMARY REPORT Conditions Comments; Meremere WWTP discharge has been compliant for cBOD5, TP, and E.coli. Non-compliances noted for TSS, NH4N and TKN 90th percentile limits during the 2020-21 monitoring period exceedances related to ongoing contract works for the plant upgrade and heavy rainfall events.; The Meremere MBR Plant commissioning will commence in December 2021 and expect to improve on compliance thereafter</i></p> <p>.</p>	
<p>Status Reasoning</p>	<p>It has been difficult to fully assess compliance with some elements of this condition due to the consent conditions changing mid-year when the old consent expired in December and the new conditions commenced from 1 January.</p> <p>This may be due to there not being a full sample set available under the new conditions however an estimate could have been provided on the limited data set available.</p> <p>I calculated the average daily load of TP for each month and the range was between 0.31 and 0.79kg/day and for the December to May period the range was 0.07 to 0.38kg/day</p>	
<p>Action Required</p>	<p>Please investigate and take action to reduce the suspended solids in the discharge to below compliance limits. Also make sure all required data is provided for in the monthly and annual reports.</p>	<p>Low Risk Non-Compliance</p>
<p>7</p>	<p>The consent holder shall ensure that after reasonable mixing the discharge does not cause any of the following effects in the Waikato River:</p> <p>The production of conspicuous oil or grease films, scums, foams, or floatable or suspended materials;</p> <p>Any conspicuous change in the colour or visual clarity;</p> <p>Any emissions of objectionable odour;</p>	
<p>Evidence</p>	<p>None reported for the 2020-21 reporting period</p>	
<p>Status Reasoning</p>		
<p>Action Required</p>		<p>Full Compliance</p>

8	<p>The operation, management and maintenance of the WWTP shall not result in noxious, dangerous, offensive or objectionable odour to the extent that it causes an adverse effect at or beyond the boundary of the site, in the opinion of a Waikato Regional Council enforcement officer.</p> <p>Advice Note: For the purpose of this consent, the Waikato Regional Council will use the guidelines for assessment in chapter 6.4 of the Waikato Regional Plan (or any superseding document) to determine whether adverse effects are occurring from the discharge of odour or particulate matter.</p>
Evidence	None reported for the 2020-21 reporting period
Status Reasoning	
Action Required	Full Compliance
9	<p>The consent holder shall monitor the flow rate of the treated wastewater leaving the WWTP and shall record the total daily (24-hour) discharge volume discharged.</p>
Evidence	The flow rate of the treated wastewater leaving the WWTP is monitored as required and the Water Outlook reporting enable to record the daily volume and report to WRC monthly.
Status Reasoning	
Action Required	Full Compliance
10	<p>Until the consent holder advises Waikato Regional Council of the successful commissioning of the side-stream MBR treatment process in writing, or by 1 December 2021, whichever occurs first, the consent holder shall take grab samples of the treated wastewater on a monthly basis from a point immediately after the UV disinfection system and analyse for all parameters as detailed within condition 5.</p>
Evidence	The treated wastewater samples are collected as required by the consent condition and monitoring results are submitted to WRC monthly
Status Reasoning	
Action Required	Full Compliance
11	<p>After the consent holder advises Waikato Regional Council of the successful commissioning of the side-stream MBR treatment process in writing, or by 1 December 2021, whichever occurs first, the consent holder shall take grab samples of the treated wastewater on a fortnightly basis from a point immediately after the UV disinfection system and analyse for all parameters as detailed within condition 6.</p>
Evidence	The fortnightly sample collection of the treated wastewater will be implemented upon successful commissioning of the side-stream MBR treatment process
Status Reasoning	
Action Required	Full Compliance
12	<p>All wastewater quality analyses shall be undertaken by an IANZ accredited or equivalent laboratory. All methods used shall be appropriate for the wastewater analyses undertaken.</p>
Evidence	All compliance monitoring samples are collected and analysed by the Watercare Services Lab

	(IANZ accredited)	
Status Reasoning		
Action Required		Full Compliance
13	The consent holder shall forward the results of the monitoring undertaken via conditions 10, 11 and 12 to the Waikato Regional Council, via electronic means, on a three-monthly basis.	
Evidence	All monitoring results are reported to WRC monthly with comments/investigation details included for any non-compliances noted.	
Status Reasoning		
Action Required		Full Compliance
14	<p>The consent holder shall provide to the Waikato Regional Council and Ngāti Naho Trust a written report (the Annual Report) by 30 September each year, including as a minimum:</p> <p>A summary of the monitoring results required by the conditions of these resource consents for year ending 30 June</p> <p>A critical assessment of the monitoring data collected and comment on any emerging trends</p> <p>Commentary on compliance with the conditions of this resource consent</p> <p>Any reasons for non-compliance or difficulties in achieving compliance with the conditions of this resource consent and a description and a summary of the effectiveness of any remedial works undertaken,</p> <p>Details of any Mātauranga Maori monitoring work developed and/or implemented in response to liaison work undertaken in accordance with condition 23, and</p> <p>Any other issue considered relevant by the consent holder.</p>	
Evidence	This report, the attached spreadsheet and the consent summary report are submitted in compliance with this condition. Ngāti Naho Liaison Meetings were held during August and September 2021.	
Status Reasoning		
Action Required		Full Compliance
15	The consent holder shall notify the Waikato Regional Council, Watercare Services Limited, Mercer Rowing Club, West End Rowing Club, Counties Manukau Rowing Club and Ngāti Naho Trust within 24 hours (where practicable) of the consent holder becoming aware of the limits specified in conditions 11 and 12 of this resource consent being exceeded, or any accidental discharge, plant breakdown or other circumstance which is likely to result in the limits of this consent being exceeded. The consent holder shall, within 10 working days of the incident occurring, provide a written report to the Waikato Regional Council, identifying the breach, possible causes and any remedial actions and steps to ensure future compliance.	
Evidence	Waikato Regional Council and relevant stakeholders have been advised of all instances of major non-compliance.	
Status Reasoning		
Action Required		Full Compliance
16	The consent holder shall prepare an Operations and Management Plan (OMP). The objective of	

	<p>the OMP is to provide a framework for the operation and management of the wastewater treatment and discharge systems to ensure compliance with the conditions of consent. The OMP shall be lodged with Waikato Regional Council within 12 months of commencement of these consents, and shall be reviewed and updated every three years and as required as a result of any changes to the Wastewater Treatment Plant (WWTP) operation or management.</p> <p>As a minimum the OMP shall include:</p> <p>A description of the Meremere WWTP;</p> <p>A description and schedule of the routine inspection, monitoring and maintenance procedures to be undertaken;</p> <p>A description of the sampling location/s and methodology for sampling the treated wastewater discharge;</p> <p>An Avian Botulism Management Plan (ABMP). The objective of the ABMP shall be to provide a framework to be adopted to remedy or mitigate any adverse effects associated with an outbreak of avian botulism at the Meremere WWTP. The ABMP shall include (as a minimum) the monitoring methods and response actions that will be adopted in the event of an outbreak of avian botulism at the Meremere WWTP site;</p> <p>A schedule of the critical aspects of the Meremere WWTP and the detailed response and contingency plans to remedy any possible variations from normal plant operation that could potentially affect the quality of the discharges to air, land and water;</p> <p>Details of contingency plans and procedures to address power or equipment failure at the treatment plant;</p> <p>Procedures for recording routine maintenance and all major repairs that are undertaken;</p> <p>Details of the chain of command, responsibility and notification protocols;</p> <p>Full contact details for a nominated liaison person(s) who will manage the public information system and be the point of contact for enquiries relating to the WWTP; and</p> <p>The contact details of the nominated liaison person(s) shall be identified on the Waikato District Council website.</p>		
Evidence	The O&M Plan will be submitted to WRC during 2021/22 as required by the consent condition		
Status Reasoning			
Action Required	<table border="1"> <tr> <td data-bbox="418 1341 1177 1397">Please submit an Operations and Management Plan (OMP) for the site by 1 December 2022</td> <td data-bbox="1177 1341 1382 1397">Not assessed</td> </tr> </table>	Please submit an Operations and Management Plan (OMP) for the site by 1 December 2022	Not assessed
Please submit an Operations and Management Plan (OMP) for the site by 1 December 2022	Not assessed		
17	<p>The consent holder shall maintain a Complaints Register for any complaints made about the treatment and discharge operations received by the consent holder. The Register shall record:</p> <p>The date, time and duration of the alleged event/incident that has resulted in the complaint</p> <p>The location of the complainant when the complaint was detected by the complainant</p> <p>The possible cause of the complaint including any relevant event/incident and its duration</p> <p>In relation to odour, the weather conditions and wind direction at the site when the odour was detected by the complainant, and</p> <p>Any remedial action undertaken by the consent holder in response to the complaint</p>		
Evidence	Council's CRM database records all complaints from the public. There were no complaints from the public during the consent year regarding the Meremere WWTP - please see Appendix Two		
Status Reasoning			


Action Required		Full Compliance
18	The Complaints Register shall be made available to the Waikato Regional Council at all reasonable times. Complaints which may indicate noncompliance with the conditions of this permit shall be forwarded to the Waikato Regional Council within five working days of the complaint being received.	
Evidence	Council's CRM database records all complaints from the public. There were no complaints from the public during the consent year regarding the Meremere WWTP - please see Appendix Two	
Status Reasoning		
Action Required		Full Compliance
19	<p>The consent holder shall prepare an Odour Management Plan. The objective of the Odour Management Plan is to provide a framework for the operation and management of the wastewater treatment to ensure compliance with condition 8. The Odour Management Plan shall be lodged with Waikato Regional Council within 12 months of commencement of these consents, and shall be reviewed and updated every three years and as required as a result of any changes to the Wastewater Treatment Plant (WWTP) operation or management.</p> <p>As a minimum the Odour Management Plan shall include:</p> <p>The identification of all fugitive and point sources for discharges of odour into air, including a map showing the location of each source</p> <p>Procedures to minimise discharges of contaminants into air, including details of the inspection, maintenance, monitoring and contingency procedures in place for all emissions control equipment at the site</p> <p>Details of management and monitoring practices in place to minimise discharges of odour into air, and</p> <p>The methodologies for routine odour monitoring</p>	
Evidence	The Odour Management Plan will be submitted to WRC during 2021/22 as required by the consent condition	
Status Reasoning		
Action Required		Not assessed
20	The consent holder shall maintain the existing sign in the vicinity of the discharge to the Waikato River, in such a way that it is conspicuous to river users, advertising of the presence of the treated wastewater discharge.	
Evidence	Signs in Place however in the dive report survey undertaken in March 2021 the report states that the sign is partially hidden by vegetation making it difficult to see from the river.	
Status Reasoning		
Action Required	Please ensure all signage is made visible to the river users	Low Risk Non-Compliance
21	The consent holder shall manage and maintain the integrity of the oxidation pond and wetland and other structures that form any part of the wastewater treatment process so as to minimise the volume of seepage from such structures as far as practicable.	

Evidence	No seepage from the ponds and structures was recorded	
Status Reasoning		
Action Required		Not assessed
22	<p>Within six months of the commencement of this consent, the consent holder shall invite Ngāti Naho Trust to establish and retain for the duration of this consent the Ngāti Naho Liaison Group. The consent holder shall provide reasonable organisation and administrative support to facilitate the development and ongoing role of the Ngāti Naho Liaison Group.</p>	
Evidence	The meetings were held as required per the consent condition	
Status Reasoning		
Action Required		Full Compliance
23	<p>The Ngāti Naho Liaison Group shall establish its own meeting protocols but shall be invited to meet at least twice annually (or as otherwise required) to exercise the functions set out within this condition. The functions of the Ngāti Naho Liaison Group shall include, but not be limited to, the following matters:</p> <p>Reviewing the general performance of the Meremere WWTP and the treated wastewater discharge including any changes to the operation of the WWTP</p> <p>Reviewing the results of monitoring and the associated assessment of monitoring information carried out in accordance with the conditions of this consent</p> <p>Receiving and commenting on the Annual Report</p> <p>Receiving and commenting on the Operations and Management Plan</p> <p>Receiving and commenting on the Complaints Register</p> <p>Receiving and commenting on the Odour Management Plan</p> <p>Discussion of any physical measures and initiatives further needed to address actual or potential effects of the WWTP discharge, including cultural/Mātauranga Maori monitoring and the development/provision of cultural markers</p> <p>Considering any other issues of concern to the Ngāti Naho Trust relating to the WWTP</p>	
Evidence	The meetings were held as required per the consent condition	
Status Reasoning		
Action Required		Full Compliance
24	<p>The consent holder shall provide minutes of each Ngāti Naho Liaison Group meeting to the Waikato Regional Council and the members of the Ngāti Naho Liaison Group within four weeks of each meeting which will include but not be limited to:</p> <p>A record of the discussions at the meeting</p> <p>A record of any suggestions/issues provided or raised by the members of the Ngāti Naho Liaison Group including:</p> <p>What actions are proposed by the consent holder to respond to suggestions made by the Ngāti Naho Liaison Group, and Where no actions are proposed to respond to suggestions, the reasons why not</p>	

Evidence	The meetings were held as required per the consent condition. Current discussion around Poe concept design	
Status Reasoning		
Action Required		Not assessed
	Authorisation Compliance:	Low Risk Non-Compliance

AUTH142286.03.01 - Bed - structure

Activity Authorised: Continued occupation of the Wastewater Treatment Plant outfall structure in the Waikato River		
Condition No.	Description	
2	The consent holder shall be responsible for all sub-contracted operations related to the exercise of this consent and must ensure sub-contractors are made aware of the conditions of this consent.	
Evidence		
Status Reasoning		
Action Required		Full Compliance
4	<p>The consent holder shall maintain the outfall diffuser in an operational state such that the discharge is uniform along the operational length of the diffuser and is providing effective dispersion of the treated wastewater in the river flow.</p> <p>Advice note: No earthworks or riverbed disturbance authorisation is conferred as part of this resource consent.</p>	
Evidence	<p>See dive report March 2021 doc ref 20272741</p> <p>On the 4 th and 5th of March 2021, New Zealand Diving and Salvage conducted inspections at the Huntly, Meremere, Ngaruawahia, Raglan and Te Kauwhata locations for Watercare.</p> <p>Meremere WWTP effluent discharge diffuser inspection, clean and report.</p> <p>The pipeline was found buried after the first concrete block, so this section including the diffusers could not be inspected. The pipeline from surface to the first concrete block appeared in good condition, apart from previously reported impact damage. Also as previously reported, one of the flanges just below the waterline still has loose bolts due to wear in the flange bolt holes. The pump was turned on in an attempt to find any flow from the diffusers, however no flow could be identified. The warning sign was found partially obscured by vegetation.</p>	

		
Status Reasoning		
Action Required	Please ensure the signage is clear of vegetation and visible to river users	Low Risk Non-Compliance
5	The consent holder shall undertake a survey of the diffuser once within six months of the commencement of this consent and thereafter at annual intervals, to demonstrate compliance with condition 4. The results of each survey and any recommendation as to the frequency of future surveys shall be provided to the Waikato Regional Council within 30 working days of each survey.	
Evidence	Dive surveys have been reduced to annually	
Status Reasoning		
Action Required		Full Compliance
	Authorisation Compliance:	Low Risk Non-Compliance

4 SUMMARY OF COMPLIANCE

Based on the conditions selected for monitoring, compliance has been assessed as:

Authorisation	Authorisation Description	Compliance Status
AUTH105031.01.03 Now expired	Discharge up to 480 c/m p/d of treated wastewater effluent (up to 160 c/m p/d dry weather flow) from a new constructed sub-surface flow wetland (planted rock filter) to the Waikato River, in the vicinity of SH 1, Meremere	Low Risk Non-Compliance
AUTH105032.01.01 Now expired	Discharge incidental contaminants to air from a wastewater treatment plant comprising Imhoff tank, oxidation pond and wetland rock filter in the vicinity of SH 1, Meremere	Not assessed

AUTH105033.01.01 Now expired	Construct a wastewater outfall, and disturb the bed and banks of the Waikato River in association with the construction works, in the vicinity of SH 1, Meremere	Not assessed
AUTH142286.01.01	Discharge treated municipal wastewater to the Waikato River, with associated operational discharge to land	Low Risk Non-Compliance
AUTH142286.03.01	Continued occupation of the Wastewater Treatment Plant outfall structure in the Waikato River	Low Risk Non-Compliance

Overall Site Compliance:

Low Risk Non-Compliance

5 DISCUSSION AND CONCLUSIONS

The consent holder was in recent years in moderate non-compliance for many determinants and had been issued formal warnings and an abatement notice for this level of non-compliant activity. The most recent period of non-compliance coincided with the consent holder undertaking a significant upgrade of the WWTP with MBR instillation and other improvements to the site. The upgrade has now shown significant improvements to the performance of the plant and only suspended solids remains non-compliant post December 2020.

	pH	CBOD5	Ammoniacal Nitrogen	TKN	Total Phosphorus	Suspended Solids	OutflowMin	OutflowAvg	OutflowMax
Jul-20	7.600	6.000	4.680	8.200	2.200	10.000	192.4	363.6	1081.8
Aug-20	7.600	8.000	10.800	14.600	3.160	11.000	0.0	250.5	1381.0
Sep-20	7.300	14.000	5.200	9.800	2.180	49.000	27.2	124.4	271.9
Oct-20	7.400	22.000	15.000	20.000	4.500	59.000	16.0	114.8	213.2
Nov-20	7.500	33.000	17.000	24.000	4.800	90.000	43.1	43.1	136.7
Dec-20	7.400	16.000	11.700	19.300	3.440	121.000	upgrade complete		109.7
Jan-21	7.700	7.100	0.200	5.400	1.800	88.800			470.7
Feb-21	8.100	9.900	3.190	8.600	0.808	82.800	0.0	52.2	187.8
Mar-21	7.600	8.600	4.730	9.800	1.010	83.600	39.9	74.8	130.0
Apr-21	7.400	10.000	0.200	6.490	1.480	117.000	13.8	107.6	151.3
May-21	7.300	10.000	0.200	7.030	1.340	118.000	0.0	150.7	480.0
Jun-21	7.500	9.000	1.030	6.040	0.920	80.000	0.0	186.0	1233.4
Key	Median limit exceeded								
	90 th percentile limit exceeded/max value exceeded								
Note:	Results presented in this table are preliminary and subject to change								

The inflows from the village remain high due to Ingress & Infiltration, and this will continue however the site now has a higher discharge volume allowance in the conditions and the restrictive discharge window has been removed. Once the treatment process has been fine-tuned and settled in to the optimum performance it is expected that the suspended solids in the discharge will reduce to within consented limits.

Once the site is fully compliant with the new consent conditions the consent holder can apply to have the abatement notice cancelled.

6 SUMMARY OF ACTIONS REQUIRED

The following actions are required to be undertaken:

Resource consent	Condition	Action Required
AUTH105031.01.03	15 (Table)	Take action to reduce the suspended solids being discharged to within the new AUTH142286 consented limits.
AUTH105031.01.03	12	Ensure that consented volumes discharge limits are complied with –

		no longer valid
AUTH142286.01.01	5	Please investigate and take action to reduce the levels of suspended solids in the discharge to within compliant levels.
AUTH142286.01.01	6	Please investigate and take action to reduce the suspended solids in the discharge to within compliance limits. Also make sure all required data is provided in the monthly and annual reports.
AUTH142286.01.01	16	Please submit an Operations and Management Plan (OMP) for the site by 1 December 2022
AUTH142286.01.01	20	Please ensure all signage is made visible to the river users

7 RECOMMENDATIONS FOR WAIKATO REGIONAL COUNCIL

I recommend for the Meremere WWTP the following:

- The site remains as a Focus Area 1 Site for the next compliance year
- No further action for the non-compliant suspended solids discharge at this time to allow the new MBR system to settle in.
- Undertake a site visit to inspect the new MBR treatment system
- The abatement notice will remain in force until full compliance is achieved



Edward Prince
**Senior Resource Officer - Infrastructure
Resource Use**

Date: 23 December 2021

7.1 Decision

I have reviewed this audit report and agree with the recommendations.



Hugh Keane
**Team Leader - Infrastructure
Resource Use**

Date: 23 December 2021

APPENDIX 1
Compliance Rating System

Compliance Status	Compliance Grade
	Not Assessed
	<p>Full Compliance Full compliance with <u>all relevant consent conditions</u>, plan rules, regulations and national environmental standards.</p>
	<p>Low Risk Non-Compliance Non-compliance with <u>some</u> of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects <u>or</u> is technical in nature (e.g. failure to submit a monitoring report).</p>
	<p>Moderate Non-Compliance Non-compliance with <u>most</u> of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are some environmental consequences and/or there is a moderate risk of adverse environmental effects.</p>
	<p>Significant Non-Compliance Non-compliance with <u>many</u> of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are significant environmental consequences and/or a high risk of adverse environmental effects.</p>