

Clause No.	Condition	Compliance Review
<p><b>General Conditions</b>  <b>In Accordance with The Application</b></p>		
<p><b>Clause 1</b></p>	<p>The activity consented by this permit shall be carried out in general accordance with the consent applications dated 30 September 2005 and the applications for variations to these permits dated 7 December 2008 and 19 December 2014.</p>	<p>The activity is considered to currently be operating in accordance with the consent application. This clause will be reviewed on completion of the compliance review.</p>
<p><b>Upgrading of the Wastewater Network</b></p>		
<p><b>Clause 2</b></p>	<p>The permit holder shall undertake pipe network improvement works to limit flows to the treatment plant to 33,000 m<sup>3</sup>/day except in extreme events. The extent of improvement works shall be determined using computer modelling of the network and in accordance with the best practicable option requirements of the Resource Management Act 1991 (RMA), and subject to review by the Independent Review Panel (IRP). The permit holder shall report on progress in 2012 and shall provide a report to the consent authority setting out a programme for the completion of any works outstanding at that time.</p>	<p>The IRP reviewed this clause in 2008. As part of the above review, the outcomes of the computer modelling carried out in compliance with clause 2 showed that a flow of 400 l/s was appropriate for the characterisation of extreme events, that the 33,000m<sup>3</sup> daily threshold would be achieved if flows &gt; 400 l/s were bypassed, and that this would be achieved in implementation of the project as designed. This led to the following recommendation by the WMC to Council:</p> <p>2. That the Conditions of Consent (general conditions 1 and 2 and the definition of “extreme event”) are satisfied by the following:</p> <ul style="list-style-type: none"> <li>a. The peak instantaneous flow rate to the wastewater treatment plant shall be 400 l/s. The wastewater treatment plant maximum daily capacity shall be 33,000m<sup>3</sup>/d.</li> <li>b. An extreme event shall be any flow of domestic wastewater arriving at the inlet to the screening plant which exceeds 400 l/s.</li> </ul> <p>The WWTP, constructed afterwards in 2010, was designed to satisfy the above performance standard. No further pipe network improvements were therefore required after construction of the plant in 2010 to satisfy this condition.</p> <p>The following references apply to this work:</p> <ul style="list-style-type: none"> <li>• 08/104 Nominations for Independent Review Panel: Gisborne Wastewater Treatment Project</li> <li>• 08/064 Wastewater Consent Clarifications : Discharge Flow Rate.</li> </ul> <p>In 2012, the project team reported to Council on compliance matters (report references 12/083, 12/284, 12/422, 12/606). However, compliance with</p>

		clause 2 was not reported on, although the necessary infrastructure was in place.
<b>Clause 3</b>	The permit holder shall submit to the consent authority by 31 December 2017 a report confirming that all practicable steps have been taken to ensure compliance with condition 2.	A report was submitted by 31 December 2017, confirming compliance with this condition.
<b>Installation, Monitoring and Investigation of Wastewater Treatment Plant</b>		
<b>Clause 4</b>	The permit holder shall: <u>(a) Use its best endeavours to ensure that the Single BTF Plant Commissioning occurs by 31 December 2010; and Wastewater Disinfection by 31 December 2012 and in any event no later than 31 December 2014.</u>	The plant was commissioned on time.
	<u>b) Undertake further feasibility work to confirm the most appropriate long-term management option for Gisborne’s wastewater, including the feasibility and level of community acceptance of an alternative wastewater management system, which may involve a range of alternative, use and disposal (AUD) options, to wastewater disinfection, provided that any alternative wastewater management system to wastewater disinfection must meet or exceed the standards for wastewater discharge set out in clauses 40 – 62 of this consent; and</u>	Feasibility work was undertaken, as guided by the WMC and WTAG, with extensive trials and optioneering carried out.  This is part of the review that the Independent Review panel is carrying out.
	<u>c) By 31 December 2016, confirm the feasibility of an alternative wastewater management system and commit to undertaking the further consultation, detailed design, and consenting processes in order to implement this system; and</u>	An alternative wastewater management system was confirmed as technically feasible by 31 December 2016, and there was a commitment to undertaking the further consultation, detailed design, and consenting processes in order to implement this system.
	<u>d) By 31 December 2018, lodge the necessary applications and/or notices required under the RMA to implement the preferred alternative wastewater management system with the intention for construction to commence by 31 December 2019 and in any event no later than 12 months after the commencement of all necessary authorisations.</u>	This is relevant to the current consenting process, and these milestones have not yet been reached.
	<u>e) If at any of the milestones in b), c) and d) above, the permit holder decides not to further investigate, seek consent for or implement an alternative wastewater management system as the preferred long-term option to manage Gisborne’s wastewater, the permit holder must notify the consent authority in writing and shall install wastewater disinfection within 24 months of the date of that notice.</u>	This has not yet eventuated.
	<u>f) If the permit holder fails to confirm feasibility of an alternative system by 31 December 2016 or fails to lodge the necessary applications and/or notices by 31 December 2018 in accordance with clauses 4(c) and (d) above, the permit holder</u>	This is relevant to the current consenting process, and the 31 December 2018 milestone has not yet been reached.

	shall install wastewater disinfection within 24 months of those relevant milestone dates.	
<b>BTF Plant Monitoring and Investigation Study</b>		
<b>Clause 4A</b>	(a) The permit holder shall establish and retain by appointment of suitably qualified persons, the Wastewater Technical Advisory Group (WTAG), to initiate the BTF Plant Monitoring and Investigation Study and provide advice and peer review for the Wastewater Alternative Use and Disposal (AUD) Programme.	This was delivered.  The WTAG was formed. They initiated the BTF plant monitoring and investigation study; provided advice and peer review for the AUD programme.
	(b) The permit holder shall provide resources for organisational and administrative support to facilitate the development, role and function of the WTAG.  The WTAG shall comprise representatives of: <ul style="list-style-type: none"> <li>• Medical Officer of Health</li> <li>• Tairāwhiti District Health Board</li> <li>• Department of Conservation</li> <li>• Te Runanga O Turanganui A Kiwa</li> <li>• Ngāti Oneone</li> <li>• Environmental Groups</li> <li>• Gisborne District Council staff</li> <li>• Others who may have a particular contribution to make to the workings of the group.</li> </ul> The WTAG may appoint, or invite, other persons to participate in an advisory capacity. The composition of the WTAG is subject to invitees' willingness to participate.	This was delivered.
	(c) (i) The permit holder shall initiate the BTF Plant Monitoring and Investigation Study within 3 months of the issue of this permit.	This was delivered.
	(ii) Within six months of the issue of this permit the WTAG shall formulate the scope and methodology of the study, which is: a study into the scientific rationale and relevance of existing permit conditions 36, 37, 42, 43 and 44 and will have reviewed work to date on the AUD Programme.	This was delivered.

<p>(iii) The WTAG shall report at least annually and at such other times as may be necessary to the Wastewater Management Committee (WMC) and consent authority, and present such reporting to any public forum that the WMC considers appropriate. The report shall review progress on the BTF Plant Monitoring and Investigation Study, permit conditions 36, 37, 42, 43 and 44, and advice provided on the AUD Programme.</p>	<p>The WTAG did not provide annual reports except for the Third Annual Reports, but did regularly report back to the WMC regularly through WMC meetings.</p>
<p>(iv) The third annual report from the WTAG, (3 years after Single BTF Plant Commissioning) shall report and recommend to the WMC and Council in regard to:</p> <ol style="list-style-type: none"> <li>a) Summaries of monitoring results of the BTF Plant Monitoring and Investigation Study.</li> <li>b) The extent of biotransformation being achieved by the BTF Plant.</li> <li>c) Appropriate parameters and a monitoring programme for ongoing assessment of biotransformation.</li> <li>d) Appropriate parameter limits to ensure biotransformation is being achieved.</li> <li>e) Review of existing permit conditions: 37, 42 and 43 and recommend any changes to these.</li> <li>f) Recommend what additional treatment steps (if any) are required to achieve biotransformation and other requirements that may be necessary to improve the quality of the discharge to avoid adverse effects.</li> <li>g) In the event of the WTAG being unable to make a recommendation to the permit holder as per f) above, or the permit holder refusing to implement any recommendations as per f) above, then clause 37 and clause 43 shall take effect.</li> </ol>	<p>A third annual report, including a supplementary report and recommendations, were provided.</p> <p>This is part of the review that the Independent Review panel is carrying out.</p>
<p>(d) The BTF Plant Monitoring and Investigation Study shall:</p> <ul style="list-style-type: none"> <li>• Investigate the extent of biotransformation achieved by the Single BTF plant, <del>including the disinfection plant once it is installed:</del> <ul style="list-style-type: none"> <li>- Define biotransformation</li> <li>- Determine the relevance of BOD as a measure of biotransformation</li> <li>- Determine the relationship between Suspended Solids and biotransformation of wastewater</li> </ul> </li> </ul>	<p>The study requires to be evaluated to confirm if all of these matters were complied with.</p> <p>This is part of the review that the Independent Review panel is carrying out.</p>

	<ul style="list-style-type: none"> <li>- Determine through monitoring, data analysis and research relevant parameters to be used in assessing biotransformation</li> <li>• Investigate the extent of micro-organism reduction achieved by the BTF plant and wastewater disinfection plant.</li> <li>• Investigate through surveys, literature reviews and research the importance of social, cultural and environmental components of biotransformation in the treatment of wastewater.</li> <li>• Determine the relationship if any between the BTF plant BOD loading and micro-organism reduction.</li> <li>• Investigate the relationship between wastewater treatment processes and their carbon footprint.</li> </ul>	
	(e) Peer review of the AUD Programme shall – ensure that the appropriate range of advice is being received by the WMC and that the advice is presented in a timely and transparent manner.	This relates to the WTAG self-audit process.
<b>Alternative Use and Disposal</b>		
<b>Clause 5</b>	The permit holder shall initiate a research/study programme (“the programme”) within three months of the issue of this permit to investigate AUD of wastewater trials and undertake trials designed to identify feasible options for AUD <del>after Installation of Wastewater Disinfection.</del>	This is part of the review that the Independent Review panel is carrying out.
<b>Clause 6</b>	The permit holder shall invite individuals or organisations who could be directly affected by particular alternative use or disposal trials, or subsequent works that arise from them, to participate in relevant parts of the programme. Such parties shall include, but not necessarily be limited to, larger waste producing industries, Federated Farmers and relevant tangata whenua groups on any matters relating to the use of productive land.	Individuals or organisations who could be directly affected by particular alternative use or disposal trials were included.  This may be part of the review that the Independent Review panel is carrying out.
<b>Clause 7</b>	The programmes required under condition 4A and condition 5 shall be developed having regard to the Best Practicable Option principles set out in the RMA and shall include consideration of: <ul style="list-style-type: none"> <li>a) The alternative management options available to avoid, remedy or mitigate adverse effects of the discharge of treated wastewater on the marine environment and the financial implications of the alternatives, and their effects on the environment compared to discharge to the marine environment;</li> </ul>	This is part of the review that the Independent Review panel is carrying out.

	<p>b) The state of technical and scientific knowledge and the likelihood that the alternatives can be successfully implemented;</p> <p>c) The effects of alternatives on existing land uses and the options available to ensure compatibility.</p>	
<b>Clause 8</b>	The permit holder shall use its best endeavours to adopt those AUD options that are identified as feasible and which will enable the progressive removal of the treated human sewage from the discharge, via the marine outfall, with the objective of complete removal by 2020.	<p>Feasible AUD options have not yet been identified, and therefore adoption of options is not possible.</p> <p>This is part of the review that the Independent Review panel is carrying out.</p>
<b>Industrial Treatment</b>		
<b>Clause 9</b>	<p>The permit holder shall take all practicable steps to ensure that any industrial wastewater entering the wastewater network, after 31 December 2012, will not result in the combined discharge of wastewater from the Council's wastewater system to the marine environment failing to meet the requirements of section 107 of the RMA.</p> <p>As a minimum, the permit holder shall seek the advice of the IRP described in condition 21 on the adequacy of existing or future industrial wastewater management methods to ensure this condition will be met.</p>	<p>There have been no plumes since BTF was installed.</p> <p>The review by the Independent Review Panel was not carried out in 2012, but the 2018 review is currently being carried out.</p> <p>In the absence of confirmed plumes, this may not require further action. However, the IRP may provide recommendations to Council.</p> <p>Current methods to mitigate this risk include specific trade waste consents issued under the Trade Waste Bylaw, which appear to have been effective.</p>
<b>Clause 10</b>	The permit holder shall investigate the feasibility of minimising, reusing or further beneficially treating the separated industrial component of the wastewater stream and shall use its best endeavours to secure the co-operation of local industry for this purpose.	<p>This is part of the review that the Independent Review panel is carrying out.</p> <p>There is a project in the Long Term Plan that deals with mining of the industrial wastewater to use for wash water at the wastewater treatment plant.</p> <p>There is a project lead by industry in the industry separated line, encouraged by Council, to obtain funding for finding use for solid and liquid wastes and scope implementation of the option. Ongoing work with industries to minimise the water use and therefore wastewater production and to ensure compliance is done every year as part of the consenting process.</p>
<b>Clause 11</b>	The permit holder shall use its best endeavours to identify partial or possible complete reuse or further beneficial treatment of the industrial discharge.	This is part of the review that the Independent Review Panel is carrying out.
<b>Wastewater Management Committee</b>		
<b>Clause 12</b>	The permit holder shall establish, and retain, a Wastewater Management Committee (WMC) as a standing committee of the Gisborne District Council under clause 30 of the Seventh Schedule of the Local Government Act 2002 within three months of the issue of this permit, or as soon as practical thereafter.	The WMC was established and are currently still in operation.

<b>Clause 13</b>	The permit holder shall provide organisational and administrative support to facilitate the development, ongoing role and function of the WMC.	Council is providing ongoing support.
<b>Clause 14</b>	The membership of the WMC shall comprise four Councillors and four Tangata Whenua representatives and other members that the WMC itself shall determine from time to time.	The membership requirement has maintained its compliance.
<b>Clause 15</b>	<p>The WMC may appoint, or invite participation in an advisory or consultative capacity, other persons from:</p> <ul style="list-style-type: none"> <li>• Gisborne District Council staff</li> <li>• Tairāwhiti District Health Board</li> <li>• Department of Conservation</li> <li>• Industry</li> <li>• Recreational groups</li> <li>• Environmental groups</li> <li>• Federated Farmers</li> <li>• Others who may have a particular contribution to make to the workings of the WMC.</li> </ul>	This is noted. The WMC has collaborated with numerous external parties, such as those listed in this condition.
<b>Clause 16</b>	<p>The functions of the WMC shall include, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Monitoring the implementation and commissioning of the Wastewater Treatment Plant (WWTP) including the development of a WWTP operating manual.</li> <li>• Monitoring the BTF Plant Monitoring and Investigation Study.</li> <li>• Monitoring AUD research.</li> <li>• Recommending AUD trials.</li> <li>• Monitoring the AUD trials.</li> <li>• Recommending AUD implementation.</li> <li>• Monitoring compliance with permit conditions and separated industry wastewater standards.</li> <li>• Ensuring the development of appropriate educational information to encourage reductions in domestic and industrial wastewater.</li> <li>• Ensuring the development of appropriate educational information to encourage AUD.</li> </ul>	The WMC has not provided annual reports every year, but has provided updates through Council staff papers as required.

	<ul style="list-style-type: none"> <li>Developing and administering the Turanganui A Kiwa Water Quality Enhancement Project.</li> <li>Recommending the membership of and receiving reports from the IRP.</li> <li>Providing an annual report on the exercise of its activities and functions, including where appropriate a report on the effectiveness of measures undertaken by the Turanganui A Kiwa Water Quality Enhancement Project.</li> </ul> <p>This report shall be provided to the Chief Executive of the Gisborne District Council during the month of June of each year for the duration of this permit.</p>	
<b>Clause 17</b>	The WMC shall be convened by the permit holder and shall meet four times annually until 31 December <del>2015</del> <u>2020</u> and thereafter at least twice a year for the remainder of the duration of the permit, or as determined by the WMC.	The WMC have met at least four times per year.
<b>Turanganui a Kiwa Water Quality Enhancement Project</b>		
<b>Clause 18</b>	The permit holder shall establish, administer, retain and be responsible for the Turanganui A Kiwa Water Quality Enhancement Project within three months of the issue of this permit, or as soon as practical thereafter.	This is part of the review that the Independent Review panel is carrying out. Regular updates have been provided by the KIWA group.
<b>Clause 19</b>	The project shall be defined and developed by the WMC as a vehicle for integrated research, monitoring, planning and specific projects that will aim to improve the mauri and the water quality of Turanganui A Kiwa.	This is part of the review that the Independent Review panel is carrying out.
<b>Clause 20</b>	Removed by Variation of Consent Conditions, June 2009.	This consent condition was removed by the variation, so compliance no longer required.
<b>Independent Review Panel</b>		
<b>Clause 21</b>	The permit holder shall appoint an IRP to undertake reviews as set out in condition 22 and report to the WMC. The IRP shall comprise two to four members, depending on the subject of the particular review. IRP members shall have expertise of direct relevance to the subject of the review and shall generally include one person with expertise in wastewater management, including treatment, and one person with expertise in resource management. For reviews undertaken in accordance with condition 22 (d) and (e), the IRP shall include a person with expertise in kaupapa Maori.	The appointment of an IRP in 2012 was not done. This is part of the review that the Independent Review panel is carrying out.
<b>Reviews to be Undertaken</b>		
<b>Clause 22</b>	The permit holder shall ensure the following reviews are undertaken: a) Review of industrial wastewater discharges in terms of condition 10.	This is part of the review that the Independent Review panel is carrying out.

	<p>b) Review of progress of:</p> <ul style="list-style-type: none"> <li>• the wastewater upgrade, including pre-tender reviews for the Single BTF Plant, <del>Wastewater Disinfection</del>, and additional plant requirements if any, that are recommended by the WTAG in their 3<sup>rd</sup> Annual Report in 2013;</li> <li>• the Odour Management Plan;</li> <li>• and performance reviews of the WWTP one year after the commissioning of the initial BTF and one year after the commissioning of the disinfection system <u>(if installed pursuant to Clauses 4 (e) or (f))</u>.</li> </ul> <p>c) Review of the AUD Programme one year after it is initiated in 2012 and in 2018, or as otherwise determined by the permit holder, taking into account recommendations from the WMC.</p> <p>d) Six yearly reviews, co-ordinated with the timing of the Long Term Council Community Plan (LTCCP) reviews, starting in 2012 or as otherwise necessary to suit LTCCP timeframes. The purposes of the six yearly reviews shall include to the extent appropriate, but not be limited to:</p> <ul style="list-style-type: none"> <li>• Review of progress in relation to sewer network improvement works as required by condition 2.</li> <li>• Review of monitoring and compliance of the coastal permit.</li> <li>• Review and recommend any necessary changes to consent conditions.</li> <li>• Review of the BTF Plant Monitoring and Investigation study as per 22 b).</li> <li>• Review and recommend any necessary changes to the Turanganui A Kiwa Water Quality Enhancement Project.</li> <li>• Recommend additional experts and any necessary changes to the functions of the IRP.</li> <li>• Address any other matters identified by the WMC as requiring review.</li> <li>• Adequacy of spares kept in store in Gisborne to ensure the wastewater treatment plant can be maintained in full operating condition at all times, except during normal maintenance and replacement of spares.</li> </ul> <p>e) Review the recommendations of the BTF Plant Monitoring and Investigation Study.</p>	
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<b>Clause 23</b>	The IRP may consult with parties it considers can provide information that may assist the review process, subject to the approval of the WMC.	This is noted.
<b>Clause 24</b>	The IRP shall report to the WMC within one month of the completion of each review, and send a copy to the permit holder and to the consent authority and the Minister of Conservation.	This is part of the review that the Independent Review panel is carrying out.
<b>General Review Clause</b>		
<b>Clause 25</b>	The consent authority may review the conditions of this permit by serving notice of its intention to do so on the permit holder pursuant to section 128 and section 129 of the RMA in the month of June at yearly intervals for the duration of the permit.	This is a standard review clause for noting only.
<b>Clause 26</b>	<p>There shall be general reviews undertaken by the consent authority of the consent conditions as follows:</p> <ul style="list-style-type: none"> <li>(a) Review conditions in clauses 4, 37, 41, 42, 43, 44 and 45 of this permit by serving notice of its intention to do so on the permit holder pursuant to section 128 and section 129 of the RMA. The review will be notified to all submitters to consent applications CP20516, CP205017, CP205018, CP205019, CP205020, CP205021, CP205022, CP205023 and CP205024.</li> <li>(b) To require the permit holder to adopt the best practicable option to remove or reduce any adverse effect on the environment resulting from the discharge.</li> <li>(c) To modify the monitoring programme if the record of monitoring to date indicates that it is appropriate to do so, including in order to meet the environmental outcomes required of the permit.</li> <li>(d) To deal with any adverse effect on the environment which may arise from inadequate biotransformation of waste.</li> <li>(e) To implement, as appropriate, recommendations of the WTAG contained in its BTF Monitoring and Investigation Study Report.</li> <li>(f) To require amendments to plant configuration (including the number of BTF filters) necessary to achieve appropriate levels of biotransformation, where the review indicates the level of biotransformation being achieved is not what could be expected in terms of considerations of Part II of the RMA.</li> <li>(g) To review the appropriateness of conditions if there are changes to relevant national standards, regulations and guidelines, and the Council's relevant regional and district level plans.</li> </ul>	This condition allows for General Review. No General reviews have been undertaken.

	<p>(h) To consider any new technological changes in assessing micro-organisms where relevant to monitoring of the WWTP and the receiving environment.</p> <p>(i) To assess the Single BTF Plant and <del>Wastewater Disinfection and the need for further treatment stages</del> <u>the Preferred Long-term Management Option.</u></p> <p>(j) <u>To consider any unreasonable delays in the investigation and consenting process of alternative treatment options and to determine alternative timeframes for the implementation and commissioning of alternative treatment options.</u></p> <p>The review of conditions shall allow for:</p> <p>(i) The deletion or amendment of any of the conditions of these consents; and/or</p> <p>The addition of new conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including any unforeseen adverse environmental effects and to take into account recommendations of the WMC.</p> <p>Actual and reasonable costs associated with the undertaking of each review shall be borne by the permit holder.</p>	
<b>Specific Review Clause</b>		
<b>Clause 27</b>	<p>The consent authority <del>shall</del> <u>may</u> review conditions of this permit by serving notice of its intention to do so on the permit holder pursuant to section 128 and section 129 of the RMA during the month of June <del>2015</del> <u>2016</u> and June <del>2021</del><u>2020</u> to review the following specific matters:</p> <p>(a) To review progress in relation to condition 2, and in particular to consider the report from the IRP required under condition 22 (d) and to set a date for completion of any outstanding works.</p> <p>(b) To review progress in relation to AUD as set out in conditions 5 to 8 and to require the permit holder to undertake such other work identified by the IRP in accordance with condition 22 (c) and accepted as appropriate by the WMC as being reasonably necessary to satisfy the “best endeavours” requirements of condition 8.</p> <p>(c) To review, in 2018, the “Best Practicable Option” based on the outcomes of the AUD Trials and the requirements of the RMA and to determine what changes to the conditions of this consent, if any, are required.</p> <p>(d) To implement, as appropriate, recommendations of the WTAG contained in its BTF Plant Monitoring and Investigation Study report.</p>	<p>This condition allows for Specific Review. No Specific Reviews have been undertaken.</p>

	(e) To require amendments to plant configuration (including the number of BTFs) necessary to achieve appropriate levels of biotransformation, consistent with achieving the RMA's purpose.	
<b>Term of Consents</b>		
<b>Clause 28</b>	The Term of Consents is 35 years from 2007 when the consents were granted. Note: CP-2008-1208-01 and CP-2008-1210-01 expire 21 September 2042 CP-2008-1202-01 to CP-2008-1207-01 (inclusive) and CP-2008-1209-01 expire 2 July 2042.	The expiry date is July 2042.
<b>Specific Conditions CP-2008-1208-01 (ex CP205022)</b>		
<b>Clause 29</b>	This permit shall be carried out in accordance with the consent application and supporting documentation except to the extent that these are required to be modified to comply with the terms and conditions of the permit.	This clause is a repeat of Clause 1. From Clause 1 - The activity is considered to currently be operating in accordance with the consent application. This clause will be reviewed on completion of the compliance review.
<b>Clause 30</b>	The conditions of this permit shall be read in conjunction with the conditions of the designations from the Notices of Requirement for Designation, PZ-103653-00 and the conditions of consents: DA-103680-00, CP-1202-01, CP-1203-01, CP-1204-01, CP-1205-01, CP-1206-01, CP-1207-01, CP-1208-01, CP-1209-01 and CP-1210-01.	The consents are holistically viewed with regard to conditions and management plans.
<b>Discharge to Outfall Monitoring Up Until Single BTF Plant Commissioning</b>		
<b>Clause 31</b>	The permit holder shall install and operate at a point beyond the existing milliscreens, at Location 4 in Figure 2, such systems and measuring devices as are necessary, to monitor, analyse and record wastewater discharge in cubic metres per second for maximum and average daily flow rates from the discharge point.	Until the installation of the BTF in 2010, monitoring was undertaken at location 4. This condition has been superseded with the installation of the BTF.
<b>Clause 32</b>	The permit holder shall sample, analyse and record from a composite flow proportional sample the following from the wastewater discharge beyond the existing milliscreens, at Location 4:-  (i) Floatable oil and grease in terms of g/m <sup>3</sup> and kg/day. (ii) Total oil and grease in g/m <sup>3</sup> and kg/day. (iii) Suspended solids in g/m <sup>3</sup> and kg/day. (iv) 5-day carbonaceous BOD and COD in g/m <sup>3</sup> and kg/day. (v) Particles retained by a 1-mm x 25 mm screen in g/m <sup>3</sup> and kg/day. (vi) Particles retained by a 1-mm 2-dimensional sieve in g/m <sup>3</sup> and kg/day (vii) Enterococci in cfu/100 ml.	This is held in the Council water quality database called Hilltop.

<p><b>Clause 33</b></p>	<p>Based upon weekly sampling taken thereafter until Single BTF Commissioning, at Location 4:</p> <p>(i) There shall be no particles retained on a test section of a 1 mm screen; and</p> <p>(ii) The following standards shall be met:</p> <table border="1" data-bbox="320 383 1263 638"> <thead> <tr> <th>Parameter</th> <th>Sample Type</th> <th>Concentration Limit (g/m<sup>3</sup>)</th> <th>Mass Load Limit (kg/day)</th> </tr> </thead> <tbody> <tr> <td>Total Oil and Grease</td> <td>Composite</td> <td>60</td> <td>1080</td> </tr> <tr> <td>Floatable Oil and Grease</td> <td>Composite</td> <td>20</td> <td>360</td> </tr> <tr> <td>Suspended Solids,</td> <td>Composite</td> <td>900</td> <td>16,200</td> </tr> </tbody> </table> <p>Until <del>Wastewater Disinfection</del> <u>commissioning of Preferred Long-Term Management Option</u></p> <table border="1" data-bbox="320 718 1263 798"> <tbody> <tr> <td>Suspended Solids,</td> <td>Composite</td> <td>600</td> <td>10,800</td> </tr> </tbody> </table> <p>After <del>Wastewater Disinfection</del> <u>Preferred Long-Term Management Option</u> commissioning</p> <p>Compliance with the concentration and mass load based limits shall be determined on the basis of there being no more than 3 exceedances of the concentration and mass load limits in any discrete period of 26 consecutive samples.</p>	Parameter	Sample Type	Concentration Limit (g/m <sup>3</sup> )	Mass Load Limit (kg/day)	Total Oil and Grease	Composite	60	1080	Floatable Oil and Grease	Composite	20	360	Suspended Solids,	Composite	900	16,200	Suspended Solids,	Composite	600	10,800	<p>This is held in the Council water quality database called Hilltop. Council has had some technical difficulties accessing this data, which it is working on.</p> <p>The first part of this condition has been superseded with the installation of the BTF. The second part of this condition will not come into effect until the Preferred Long-Term Management Option has been commissioned.</p>
Parameter	Sample Type	Concentration Limit (g/m <sup>3</sup> )	Mass Load Limit (kg/day)																			
Total Oil and Grease	Composite	60	1080																			
Floatable Oil and Grease	Composite	20	360																			
Suspended Solids,	Composite	900	16,200																			
Suspended Solids,	Composite	600	10,800																			
<p><b>Clause 34</b></p>	<p>Once every three months separate 'grab' samples shall be taken from Location 4, on a randomly selected day and the same day in that week as the flow proportional sample and analysed for the following parameters:</p> <ul style="list-style-type: none"> <li>• Suspended Solids</li> <li>• Total Oil and Grease</li> <li>• Floatable Oil and Grease</li> <li>• 5-day carbonaceous BOD</li> </ul> <p>These 'grab' samples shall be taken at 1100 and 1500 NZST.</p>	<p>These samples are being taken on a three-monthly basis.</p>																				
<p><b>Wastewater Treatment Plant Monitoring Subsequent to Single BTF Plant Commissioning and up Until <del>Wastewater Disinfection</del> <u>commissioning of Preferred Long-Term Management Option.</u></b></p>																						

<p><b>Clause 35</b></p>	<p>(a) The permit holder shall install and operate such systems and measuring devices as are necessary to monitor, analyse and record wastewater discharge in cubic metres per second for maximum and average daily flow rates from the following discharge points:</p> <ul style="list-style-type: none"> <li>(i) Immediately after the discharge leaves the WWTP and prior to it mixing with the industrial flow, at Location 2.</li> <li>(ii) The industrial flow prior to mixing with the discharge from the BTF, at Location 3.</li> </ul> <p>(b) The permit holder shall install and operate such systems and measuring devices as are necessary to monitor, analyse and record wastewater BOD (soluble and total) and suspended solids (volatile and total) characteristics from influent immediately prior to the BTF, at Location 1.</p> <p><u>Advice Note</u></p> <p>The total discharge flow shall be calculated by adding the flows at Location 2 (Clause 35 (a) (i)) and Location 3 (Clause 35 (a) (ii)), see Figure 2 for Locations 2 and 3.</p>	<p>The flow monitoring is installed and data is entered into Hilltop.</p> <p>Auto-samplers are installed to allow samples to be taken for measurement.</p>
<p><b>Clause 36</b></p>	<p>The permit holder shall sample, analyse and record from a composite flow proportional sample the following parameters from the wastewater discharge at:</p> <p>(a) Location 1 and Location 2 for:-</p> <ul style="list-style-type: none"> <li>(i) Floatable oil and grease in terms of g/m<sup>3</sup> and kg/day.</li> <li>(ii) Total oil and grease in g/m<sup>3</sup> and kg/day.</li> <li>(iii) Suspended solids in g/m<sup>3</sup> and kg/day.</li> <li>(iv) 5-day carbonaceous BOD and COD in g/m<sup>3</sup> and kg/day.</li> <li>(v) Enterococci in cfu/100 ml (<u>by 'grab' sample, not composite flow proportional sample</u>)</li> <li>(vi) Further parameters as agreed in the BTF Plant Monitoring and Investigation Study.</li> </ul> <p>(b) Location 3 for:</p> <ul style="list-style-type: none"> <li>(i) Floatable oil and grease in terms of g/m<sup>3</sup> and kg/day.</li> <li>(ii) Total oil and grease in g/m<sup>3</sup> and kg/day.</li> <li>(iii) Suspended solids in g/m<sup>3</sup> and kg/day.</li> <li>(iv) 5-day carbonaceous BOD and COD in g/m<sup>3</sup> and kg/day.</li> <li>(v) Enterococci in cfu/100 ml (<u>by 'grab' sample, not composite flow proportional sample</u>)</li> </ul>	<p>Initially the sampling was time-based. On review, the sampling was changed to flow-proportional sampling.</p> <p>The screen and sieve test were carried out until the amendment in 2014. Up to this date, nothing was retained on the screen or sieve.</p> <p>Enterococci sampling until the 2014 amendment was taken with the 24 hour sample. Best practise is to take microbiological samples by 'grab' samples, this was changed in the 2014 amendment.</p>

	<p>(c) And additionally at Location 1 and Location 3 for:</p> <p>(i) Particles retained by a 1 mm x 25 mm screen in g/m<sup>3</sup> and kg/day.</p> <p>(ii) Particles retained by a 1 mm x 2 dimensional sieve in g/m<sup>3</sup> and kg/day</p> <p>(c) Location 4 for:</p> <p>(i) Floatable oil and grease in terms of g/m<sup>3</sup> and kg/day.</p> <p>(ii) Total oil and grease in g/m<sup>3</sup> and kg/day.</p> <p>(iii) Suspended solids in g/m<sup>3</sup> and kg/day.</p> <p>(iv) 5-day carbonaceous BOD and COD in g/m<sup>3</sup> and kg/day.</p> <p>(v) Enterococci in cfu/100 ml (by 'grab' sample, not composite flow proportional sample)</p>										
<b>Clause 37</b>	<p>This condition is to be implemented only if required as set out in condition 4A (c) (iv).</p> <p>The permit holder shall sample, analyse and record BOD in g/m<sup>3</sup> and kg/day prior to the initial BTF at Location 1. Based on the results of analyses of weekly sampling the annual average daily loading of the BOD on the BTF or BTFs shall not exceed 0.4 kg per cubic metre of media.</p>	This is part of the review that the Independent Review panel is carrying out.									
<b>Clause 38</b>	<p>Based upon twice weekly sampling, taken over the first six months after the Single BTF Plant Commissioning and weekly sampling thereafter until 31 December 2012, all industrial wastewater discharged at Location 3, shall meet the following standards:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Sample Type</th> <th>Concentration Limit</th> </tr> </thead> <tbody> <tr> <td>Suspended Solids</td> <td>Composite</td> <td>600 g/m<sup>3</sup></td> </tr> <tr> <td>Total Oil and Grease</td> <td>Composite</td> <td>60 g/m<sup>3</sup></td> </tr> </tbody> </table> <p>Compliance with the concentration and mass load based limits shall be determined on the basis of there being no more than 3 exceedances of the concentration and mass load limits in any discrete period of 26 consecutive samples.</p> <p>All other parameters in condition 36 (b) shall also be sampled at the same frequency.</p>	Parameter	Sample Type	Concentration Limit	Suspended Solids	Composite	600 g/m <sup>3</sup>	Total Oil and Grease	Composite	60 g/m <sup>3</sup>	<p>This sampling was required until December 2012.</p> <p>In 2011 and 2012 we were non-compliant with this level, having over 3 samples over the limit in 26 consecutive samples.</p> <p>We have continued the monitoring to better inform the consent process for the future.</p> <p>Since 2012, we were above the limit in 2013 and 2014, and then again in 2018 when we were also just above this limit.</p>
Parameter	Sample Type	Concentration Limit									
Suspended Solids	Composite	600 g/m <sup>3</sup>									
Total Oil and Grease	Composite	60 g/m <sup>3</sup>									
<b>Grab Samples</b>											
<b>Clause 39</b>	<p>Once every three months separate 'grab' samples shall be taken from monitoring points at Location 2 and Location 3 on a randomly selected day of the week and the</p>	These samples are being taken on a three-monthly basis.									

	<p>same day in that week as the flow proportional sample and analysed for the following parameters:</p> <ul style="list-style-type: none"> <li>• Suspended Solids</li> <li>• Total Oil and Grease</li> <li>• Floatable Oil and Grease</li> <li>• 5 day carbonaceous BOD</li> </ul> <p>These 'grab' samples shall be taken at 1100 and 1500 NZST.</p>	
<p><b>Subsequent to <del>wastewater disinfection</del> commissioning of Preferred Long-Term Management Option and for the Remaining Duration of the Permit</b></p>		
<b>Clause 40</b>	<p>The permit holder shall continue to operate such systems and measuring devices as are necessary, to monitor, analyse and record wastewater discharge in cubic metres per second for maximum and average daily flow rates from Location 2 and Location 3.</p>	<p>The flow monitoring is installed and data is entered into Hilltop.</p>
<b>Clause 41</b>	<p>(a) The permit holder shall sample, analyse and record from a composite flow proportional sample the following from the wastewater discharge at Location 2 and Location 3:</p> <ul style="list-style-type: none"> <li>(i) Floatable oil and grease in terms of g/m<sup>3</sup> and kg/day.</li> <li>(ii) Total oil and grease in g/m<sup>3</sup> and kg/day.</li> <li>(iii) Suspended solids in g/m<sup>3</sup> and kg/day.</li> <li>(iv) 5-day BOD or COD equivalent in g/m<sup>3</sup> and kg/day.</li> <li>(v) Enterococci in cfu/100 ml (<u>by 'grab' sample, not composite flow proportional sample</u>)</li> </ul> <p>And immediately beyond the milliscreens:</p> <ul style="list-style-type: none"> <li>(i) <del>Particles retained by a 1 mm x 25 mm screen in g/m<sup>3</sup> and kg/day.</del></li> <li>(ii) <del>Particles retained by a 1 mm x 2 dimensional sieve in g/m<sup>3</sup> And kg/day.</del></li> </ul> <p>(b) The permit holder shall maintain and operate such systems and measuring devices as necessary to sample, analyse and record the following parameter from the wastewater at Location 1 for :-</p> <ul style="list-style-type: none"> <li>(i) BOD in g/m<sup>3</sup> and kg/day.</li> </ul>	<p>These samples are being taken on a weekly basis.</p>
<b>Clause 42</b>	<p>Stipulates enterococci limit on wastewater discharge to Poverty Bay.</p>	<p>This clause is yet to take effect.</p>

	<p>Enterococci shall be sampled on a daily basis for the first 100 days immediately subsequent to <del>wastewater disinfection</del> commissioning of <u>Preferred Long-Term Management Option</u> and thereafter at weekly intervals for the duration of this permit. The discharge shall meet the following standards:</p> <table border="0"> <thead> <tr> <th>Parameter</th> <th>Sample Type</th> <th>Parameter limit as cfu/100 ml sample</th> </tr> </thead> <tbody> <tr> <td>Enterococci</td> <td>Grab</td> <td>1000</td> </tr> </tbody> </table> <p>Compliance with this condition shall initially be determined on the basis of there being no more than 8 exceedances of the specified number limit within the initial 100 day period of operation and, thereafter no more than 3 exceedances of the concentration based limit in any discrete period of 26 consecutive samples.</p>	Parameter	Sample Type	Parameter limit as cfu/100 ml sample	Enterococci	Grab	1000				
Parameter	Sample Type	Parameter limit as cfu/100 ml sample									
Enterococci	Grab	1000									
<p><b>Clause 43</b></p>	<p>This condition is to be implemented only if required as set out in condition 4A (c) (iv).</p> <p>Based upon weekly sampling after <del>wastewater disinfection</del> commissioning of <u>Preferred Long-Term Management Option</u> from a composite flow proportional sample taken over a period of 24 hours on a randomly selected day of the week for the term of the permit, all wastewater discharged beyond the wastewater treatment plant at Location 2 shall meet the following standards:</p> <table border="0"> <thead> <tr> <th>Parameter</th> <th>Sample Type</th> <th>Parameter Limit Concentration Limit</th> </tr> </thead> <tbody> <tr> <td>Suspended Solids</td> <td>Composite</td> <td>30 g/m3</td> </tr> <tr> <td>Total Oil and Grease</td> <td>Composite</td> <td>10 g/m3</td> </tr> </tbody> </table> <p>Compliance with the concentration based limits shall be determined on the basis of there being no more than 16 exceedances of the concentration limit in any discrete period of 26 consecutive samples.</p>	Parameter	Sample Type	Parameter Limit Concentration Limit	Suspended Solids	Composite	30 g/m3	Total Oil and Grease	Composite	10 g/m3	<p>No changes to clause 37, 42 and 43 were recommended by the WTAG in their third annual report (2014), pending conclusion to investigative work being undertaken yet not sufficiently advanced to formulate recommendations for change.</p>
Parameter	Sample Type	Parameter Limit Concentration Limit									
Suspended Solids	Composite	30 g/m3									
Total Oil and Grease	Composite	10 g/m3									
<p><b>Clause 44</b></p>	<p>Stipulates enterococci limit on separated industrial wastewater stream</p> <p>Based upon daily sampling immediately subsequent to <del>wastewater disinfection</del> commissioning of the <u>Preferred Long-Term Management Option</u> for the first 100 days and sampling weekly thereafter, all industrial wastewater discharged at Location 3 shall meet the following standards:</p> <table border="0"> <thead> <tr> <th>Parameter</th> <th>Sample Type</th> <th>Parameter limit (as cfu/100 ml) Sample</th> </tr> </thead> <tbody> <tr> <td>Enterococci</td> <td>Grab</td> <td>1000</td> </tr> </tbody> </table>	Parameter	Sample Type	Parameter limit (as cfu/100 ml) Sample	Enterococci	Grab	1000	<p>This clause is yet to take effect.</p>			
Parameter	Sample Type	Parameter limit (as cfu/100 ml) Sample									
Enterococci	Grab	1000									

	Compliance with this condition shall initially be determined on the basis of there being no more than 8 exceedances of the specified number within the initial 100 day period of operation and, thereafter no more than 3 exceedances of the concentration based limit in any discrete period of 26 consecutive samples.										
<b>Clause 45</b>	<p>Based upon twice weekly sampling for 6 months subsequent to installation of <del>wastewater disinfection</del> <u>of the Preferred Long-Term Management Option</u> and sampling weekly thereafter for the term of the consent, all industrial wastewater discharged at Location 3 shall meet the following standards:</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Sample Type</th> <th>Concentration Limit</th> </tr> </thead> <tbody> <tr> <td>Suspended Solids</td> <td>Composite</td> <td>600 g/m<sup>3</sup></td> </tr> <tr> <td>Total Oil and Grease</td> <td>Composite</td> <td>60 g/m<sup>3</sup></td> </tr> </tbody> </table> <p>Compliance with the concentration and mass load based limits shall be determined on the basis of there being no more than 3 exceedances of the concentration and mass load limits in any discrete period of 26 consecutive samples.</p>	Parameter	Sample Type	Concentration Limit	Suspended Solids	Composite	600 g/m <sup>3</sup>	Total Oil and Grease	Composite	60 g/m <sup>3</sup>	This clause is yet to take effect.
Parameter	Sample Type	Concentration Limit									
Suspended Solids	Composite	600 g/m <sup>3</sup>									
Total Oil and Grease	Composite	60 g/m <sup>3</sup>									
<b>Plume Monitoring</b>											
<b>Clause 46</b>	<p>The permit holder shall collect samples at hourly intervals from the wastewater beyond the existing milliscreens (Location 4) and store these samples for a minimum of 24 hours. If a “conspicuous” plume or slick attributable to the outfall discharge is identified (by a suitably trained person), sample analysis for suspended solids and total oil and grease shall be carried out on those samples coinciding with the observance of the “conspicuous” plume or slick. After 24 hours subsequent to samples being collected, samples not required for sample analysis may be discarded.</p> <p>The permit holder shall inform the consent authority within 24 hours of a “conspicuous” plume or slick being identified and samples being analysed and shall provide the sample analysis results within 10 working days of the samples being collected.</p> <p>This condition shall apply until Single BTF Plant Commissioning or an approved methodology as described in condition 47 is in place.</p>	This clause has been superseded with the installation of the BTF.									
<b>Clause 47</b>	The permit holder shall provide a methodology to the approval of the consent authority, within 24 months from the date of issue of the consent, to investigate the possible relationship between the occurrence of a conspicuous plume or slick, as identified by the relevant authority, and the concentrations of suspended solids and oil and grease in the discharge, as referred to in condition 46.	This study was undertaken but no relationship was found.									

**Grab Samples**

**Clause 48** Once every three months separate ‘grab’ samples shall be taken from monitoring points at Location 2 and Location 3, on a randomly selected day and the same day in that week as the flow proportional sample and analysed for the following parameters:

- Suspended Solids
- Total Oil and Grease
- Floatable Oil and Grease
- 5-day carbonaceous BOD

These ‘grab’ samples shall be taken at 1100 and 1500 NZST.

These samples are being taken on a three-monthly basis.

**Additional Monitoring For The Duration Of This Permit  
Heavy Metals & Organic Compounds**

**Clause 49** The permit holder shall carry out heavy metal and organic compound analysis of the combined wastewater stream, at Location 4, at intervals not exceeding six months for heavy metals and not exceeding 12 months for organic compounds, or at such other occasions that the consent authority considers circumstances so require or as required by the WMC. A copy of each analysis report shall be forwarded to the consent authority within 30 days of samples being collected. The following parameters are to be tested for:-

Parameter(s)	Units
Cadmium	g/m <sup>3</sup> , g/d
Chromium	g/m <sup>3</sup> , g/d
Copper	g/m <sup>3</sup> , g/d
Lead	g/m <sup>3</sup> , g/d
Mercury	g/m <sup>3</sup> , g/d
Zinc	g/m <sup>3</sup> , g/d
Semi Volatile Organic Compounds	g/m <sup>3</sup> , g/d
Volatile Organic Compounds	g/m <sup>3</sup> , g/d

The sample is to be taken from a 24-hour flow proportional composite sample and the results are to be given in both g/m<sup>3</sup> and g/day.

These samples are being taken at a six month frequency for heavy metals and annually for organic compounds.

**Clause 50** The levels of heavy metals in the combined wastewater stream shall not be greater than:

Parameter(s)	Parameter Limits (g/m <sup>3</sup> )
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The samples taken for these parameters have all been within the limits for the entirety of the consent period to date.

	<p>Cadmium 0.8 g/m<sup>3</sup>  Chromium 2.0 g/m<sup>3</sup>  Copper 0.2 g/m<sup>3</sup>  Lead 0.2 g/m<sup>3</sup>  Mercury 0.004 g/m<sup>3</sup>  Zinc 2.0 g/m<sup>3</sup></p> <p>If on any sampling occasion, any sample exceeds any of the above limits, the permit holder shall resample the discharge for the non-compliant parameter as soon as practical after the exceedance is found, notify the consent authority as soon as possible and as a maximum within 24 hours and shall carry out investigations into the likely cause of that exceedance. The permit holder shall forward an investigation report to the consent authority within 30 days of that sampling occasion.</p>															
<b>Nutrients</b>																
<b>Clause 51</b>	<p>The permit holder shall monitor the combined wastewater stream at Location 4 for the following nutrients:</p> <table border="0"> <thead> <tr> <th><u>Nitrogen</u></th> <th><u>Units</u></th> </tr> </thead> <tbody> <tr> <td>Total Kjeldahl Nitrogen</td> <td>g/m<sup>3</sup></td> </tr> <tr> <td>Ammonium Nitrogen</td> <td>g/m<sup>3</sup></td> </tr> <tr> <td>Nitrate Nitrogen</td> <td>g/m<sup>3</sup></td> </tr> <tr> <td>Dissolved Inorganic Nitrogen</td> <td>g/m<sup>3</sup></td> </tr> <tr> <td colspan="2"><u>Phosphorus</u></td> </tr> <tr> <td>Total Phosphorus</td> <td>g/m<sup>3</sup></td> </tr> </tbody> </table> <p>The permit holder shall carry out nutrient analysis for nitrogen compounds, as outlined above and phosphorus from the combined wastewater stream at intervals not exceeding 3 months or at such other occasions when the consent authority considers circumstances so require. A copy of each analysis report shall be forwarded to the consent authority within 30 days of samples being collected.</p> <p>The samples shall be taken from a 24-hour flow proportional composite sample and results provided in both grams per cubic metre (g/m<sup>3</sup>) and kilograms per day (kg/d).</p>	<u>Nitrogen</u>	<u>Units</u>	Total Kjeldahl Nitrogen	g/m <sup>3</sup>	Ammonium Nitrogen	g/m <sup>3</sup>	Nitrate Nitrogen	g/m <sup>3</sup>	Dissolved Inorganic Nitrogen	g/m <sup>3</sup>	<u>Phosphorus</u>		Total Phosphorus	g/m <sup>3</sup>	These samples are being taken on a three-monthly basis.
<u>Nitrogen</u>	<u>Units</u>															
Total Kjeldahl Nitrogen	g/m <sup>3</sup>															
Ammonium Nitrogen	g/m <sup>3</sup>															
Nitrate Nitrogen	g/m <sup>3</sup>															
Dissolved Inorganic Nitrogen	g/m <sup>3</sup>															
<u>Phosphorus</u>																
Total Phosphorus	g/m <sup>3</sup>															
<b>Pathogens</b>																

<b>Clause 52</b>	<p>The permit holder shall sample, analyse and record the following from wastewater samples taken at Location 2 and Location 3:</p> <ul style="list-style-type: none"> <li>(i) Bacteria, sample for the species Salmonella and Campylobactor.</li> <li>(ii) Viruses, sample for human enterovirus and adenovirus.</li> <li>(iii) Protozoa, sample for the species Giardia and Cryptosporidium.</li> <li>(iv) Sample for Enterococci.</li> </ul>	Samples are being tested for these pathogens.
<b>Clause 53</b>	<p>Subsequent to and within one month of Single BTF Plant Commissioning the wastewater discharge shall be sampled at the locations and for the species outlined in conditions 52 (i), (ii), (iii) and (iv). Monitoring shall continue at six monthly intervals for two years and annually thereafter until superseded by condition 54.</p>	The sampling frequency was done as required by the consent and is now on an annual basis.
<b>Clause 54</b>	<p>Subsequent to and within one month of <del>wastewater disinfection</del> commissioning of the Preferred Long-Term Management Option, including ultraviolet disinfection, the wastewater discharge shall be sampled at the locations and for the species outlined in conditions 52 (i), (ii), (iii) and (iv). Monitoring shall continue at six monthly intervals for two years and annually thereafter for the duration of this permit.</p>	This clause is yet to take effect.
<b>Clause 55</b>	<p>Sample analysis results shall be provided to the consent authority within 60 days of samples being collected. Sample analysis results shall include a ratio of indicator organisms with each pathogen sampled in conditions 53 and 54.</p>	Reports reflect the ratios of indicator organisms.
<b>Whole Effluent Toxicity</b>		
<b>Clause 56</b>	<p>The permit holder shall commission a programme of effluent toxicity testing and reporting. The programme shall include a 24-hour flow weighted composite sample of the combined discharge taken once every three months and tested for toxicity using standard protocols for <u>suitable toxicity testing species for the following three organisms</u> <del>three test species</del>:</p> <ul style="list-style-type: none"> <li>(i) Marine Algae <del>(<i>Minutellus polymorphus</i>)</del></li> <li>(ii) Blue-Mussel Embryo <del>(<i>Mytilus galloprovincialis</i>)</del></li> <li>(iii) <del>Amphip</del>Wedge Shell <del>(<i>Macmona liliana</i>)</del> Amphipod</li> </ul> <p>The frequency shall be changed to once <del>each</del> <u>every two years</u> if no toxicity is demonstrated in four successive <u>summer peak load</u> samples. No toxicity is defined as: "TEC (threshold effect concentration) value for the most sensitive of the three test organisms shall represent a dilution in uncontaminated near shore water of no more than 200 times."</p> <p>Results for testing and analysis shall be reported to the consent authority, within three months of testing. The programme shall also identify the management</p>	<p>Prior to the 2014 amendment, the requirement was to test every three months in the first year and if compliant move to testing every 2 years.</p> <p>In the version of the consent prior to the 2014 amendment had organisms that weren't able to be tested in New Zealand due to being a native of a different country.</p> <p>In 2014 prior to the amendment, it was decided to undertake the WET tests with the common organisms that other wastewater treatment plants were using in New Zealand.</p> <p>The first four tests were compliant, however, the 2014 amendment was in effect and the condition changed to requiring four successive peak summer loads.</p>

	<p>response to be undertaken by the permit holder in the event that more than 200 times dilution is required for no toxicity.</p>	<p>2015 and 2017 had compliant results.</p> <p>2016 had the laboratory change the methodology and found that we were just above the limit.</p> <p>2018 was just above the limit. Further work will be undertaken in 2019 testing to find whether the reaction is to Domestic, Industrial or Mixed wastewater.</p>
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**Monitoring of the Receiving Environment for the Duration of the Permit**

**Indicator Organisms**

<p><b>Clause 57</b></p>	<p>The permit holder shall carry out monitoring of the indicator organisms Enterococci and Faecal Coliforms, and provide results as colony forming units per 100 ml samples, from the following sites:</p> <p>(a) Up until 31 December 2015 or commissioning of <del>wastewater disinfection</del> <u>the Preferred Long-Term Management Option</u>, whichever occurs sooner :</p> <ul style="list-style-type: none"> <li>• The Outfall Mid-Diffuser</li> <li>• Any Visible Plume at 250 metres and 500 metres from the Outfall Diffuser</li> <li>• 250 metres Northwest of the Diffuser</li> <li>• 250 metres North of the Diffuser</li> <li>• 250 metres Northeast of the Diffuser</li> <li>• 250 metres Southwest of the Diffuser</li> <li>• 250 metres South of the Diffuser</li> <li>• 250 metres Southeast of the Diffuser</li> <li>• 500 metres Northwest of the Diffuser</li> <li>• 500 metres North of the Diffuser</li> <li>• 500 metres Northeast of the Diffuser</li> <li>• 500 metres Southwest of the Diffuser</li> <li>• 500 metres Southeast of the Diffuser</li> <li>• Background Site.</li> </ul>	<p>These samples were taken under the prescribed frequency until June 2018 but were not required under the consent after December 2015</p>
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	<p>Sample analysis shall occur twice monthly during the months November to March inclusive and monthly during the months April to October inclusive and shall coincide with state of the environment monitoring of beach and coastal river sites.</p>	
	<p>(b) <del>Subsequent To Installation of Wastewater Disinfection</del> <u>the Preferred Long-Term Management Option:</u></p> <ul style="list-style-type: none"> <li>• The Outfall Mid-Diffuser</li> <li>• Any Visible Plume at 250 metres and 500 metres from the Outfall Diffuser</li> <li>• 250 metres Northwest of the Diffuser</li> <li>• 250 metres North of the Diffuser</li> <li>• 250 metres Northeast of the Diffuser</li> <li>• 250 metres Southwest of the Diffuser</li> <li>• 250 metres South of the Diffuser</li> <li>• 250 metres Southeast of the Diffuser</li> <li>• Background Site.</li> </ul> <p>Sample analysis shall occur twice monthly during the months November to March inclusive and monthly during the months April to October inclusive and shall coincide with state of the environment monitoring of beach and coastal river sites.</p>	<p>This clause is yet to take effect.</p>
<b>Clause 58</b>	<p>A benthic survey shall be carried out by the permit holder:</p> <p>(i) More than six months but less than one year subsequent to <del>31 December 2015</del> or commissioning of the <del>wastewater disinfection</del> <u>Preferred Long-Term Management Option, whichever comes sooner.</u></p> <p>(ii) Thereafter at no more than 10-year intervals for the duration of this permit.</p> <p>(iii) There shall be a minimum of four benthic surveys during the 35-year duration of this permit.</p> <p>The survey shall be comparable with former benthic surveys of Poverty Bay (Cawthron), as outlined in Figure 1, unless otherwise approved by the consent authority.</p>	<p>This clause is yet to take effect.</p>
<b>Clause 59</b>	<p>Transects shall be sampled, as outlined on Figure 1:</p> <p>(i) SW orientation at the following intervals: 50W, 100W, 200W, 300W, 400W, 800W, 1200W, 1600W, 2000W and 2400W</p> <p>(ii) SE orientation at the following intervals:</p>	<p>This is noted.</p>

	<p>0 (outfall), 50SE, 100SE, 200SE, 300SE, 400SE, 800SE and 2400SE.</p> <p>The following parameters shall be sampled and analysed at each site outlined in sub-clauses (i) and (ii):</p> <ul style="list-style-type: none"> <li>• Grain size</li> <li>• Heavy metals,</li> <li>• Organic matter,</li> <li>• Stable isotopes,</li> <li>• Infauna</li> </ul>	
<b>Clause 60</b>	<p>The following parameters sub-clause (i) shall be sampled and analysed at each of the sites outlined in sub-clause (ii) for the species outlined in subclause (iii)</p> <p>(i) Parameters:</p> <ul style="list-style-type: none"> <li>• Stable isotopes,</li> <li>• Heavy metals,</li> <li>• Poly Aromatic Hydrocarbons,</li> </ul> <p>(ii) From rocky reef communities, species as sampled during the Cawthron survey:</p> <ul style="list-style-type: none"> <li>• Tokomaru Rock.</li> <li>• Te Moana Rock.</li> <li>• Waihora Rock.</li> </ul> <p>(iii) Species</p> <ul style="list-style-type: none"> <li>• Crayfish tissue for trace metals and polyaromatic hydrocarbons</li> <li>• Crayfish gut content and red macro algae for stable isotopes.</li> </ul>	This is noted.
<b>Clause 61</b>	<p>Suspended solids shall be monitored continually on-line by a suspended solids meter which shall continue to be maintained at an agreed location after mixing of all wastewater streams prior to discharge from the outfall. When the suspended solids meter records a sustained result exceeding the concentration limits specified in conditions 33 or 38 or 43 and 45, whichever are relevant and appropriate, for a period exceeding 5 minutes duration the permit holder shall visually inspect the bay from Kaiti Hill/Titirangi either on-site or using the on-site digital camera if weather conditions allow use of the camera.</p> <p>A camera with focal length, field of vision, magnification and image quality (as defined by an independent suitably qualified and experienced professional) and approved by the consent authority shall continue to be maintained at the existing</p>	<p>The suspended solids meter is installed and operational.</p> <p>There have been no plumes since the commissioning of the BTF.</p> <p>The camera is in place and operational with storage of the images on the Council network.</p> <p>The study was undertaken and no relationship between suspended solids and plumes were found.</p>

	<p>vantage point on Kaiti Hill /Titirangi and directed at the outfall zone. The camera shall be operated and maintained by a suitably trained person employed by the consent authority permit holder to provide a permanent and ongoing automated photographic log of the outfall to <del>maintain a complaints log of any reports of conspicuous plume/or slick from the outfall, to visually inspect the reported</del> determine the occurrence of any <del>an</del>conspicuous plume/or slick <del>and to determine and record the likelihood of this being attributed to the discharge from the marine outfall.</del> . The automated photographic log shall record photographs at a minimum of 30 minute intervals during daylight hours or at any other interval agreed between the consent authority and the consent holder.</p> <p>Should a conspicuous plume/or slick be identified that may be attributable to the discharge from the Outfall Pump Station then twice daily manual surveillance at 11.00 am and 1.00 pm from Kaiti Hill /Titirangi shall commence and shall continue for the ensuing week with appropriate inspection notes and additional photographic images to be recorded. Surveillance photographs shall also continue to be taken by the camera at half hourly intervals during daylight hours over the same period. Images of surveillance photographs shall be forwarded to the consent authority within five working days of being taken. The images shall be stored for the duration of the seasonal horticultural processing season.</p> <p>This condition shall apply until an approved methodology as described in condition 47 is in place.</p>	
<b>Sampling and Analysis</b>		
<b>Clause 62</b>	<p>Sampling and analysis shall be carried out by a IANZ registered laboratory or equivalent and procedures shall be in accordance with Standard Methods for the Examination of Water and Wastewater prepared and published jointly by:</p> <p>American Public Health Association  American Water Works Association  Water Pollution Control Federation, twentieth or newer edition.</p> <p><u>Note:</u> Procedures for sieve and screen tests have been developed by the Gisborne District Council and are not registered procedures. These tests have proven very useful in determining effective operation of the existing milliscreens and are considered an effective procedure for use in this permit. Consequently, these tests can continue to be used in terms of these permit conditions.</p> <p>Sample analysis results shall be provided to the consent authority within 10 days of samples being collected for micro-organism, oil and grease, suspended solids, biochemical oxygen demand, sieve and screen tests or as specifically required in</p>	<p>Laboratories used in monitoring have been checked for relevant accreditation prior to using their services.</p> <p>Sieve and screen tests are no longer carried out.</p> <p>Monitoring results are forwarded to the Consent Authority.</p>

conditions 49 to 61. Any non-compliant results shall be reported to the consent authority as soon as practicable after the sample analysis reveals a non-compliant result, and in any event within 24 hours.

Note: Monitoring frequency and parameters sampled may be reviewed by the WMC, taking advice from the IRP, where appropriate. In the event that the WMC considers changes to monitoring frequency and parameters sampled should be made, it may request the consent authority to consider proposed changes as part of the next review of consent conditions.

Further advice note: In the event of clarification processes being implemented, further conditions are recommended to be sought and amended by way of variation to this permit.