


## 100972 Ngaruawahia Wastewater Sewage Treatment Discharge 2009-2010


**This consent authorises the Consent Holder to:** discharge up to 5000 cubic metres per day of treated domestic wastewater from oxidation ponds and newly constructed wetland and gravel bed filter treatment system into the Waikato River, in the vicinity of the Waikato River and Old Taupiri Road, Ngaruawahia, at or about map reference S14:002-935

	Conditions	Comply Yes/No	Comments
1	The discharge shall be in general accordance with the application for this resource consent and the document entitled "Assessment of Environmental Effects – Ngaruawahia Oxidation Ponds" prepared by Beca Steven, dated April 1998, and as identified in the resource consent conditions below.	Yes	The discharge is in general accordance with the details submitted with the consent application.
2	The consent holder shall be responsible for all sub-contracted operations and must ensure sub-contractors are made aware of the relevant conditions of this resource consent and ensure compliance with those conditions.	Yes	It is normal procedure that any contracted organisations be advised of the relevant conditions of the resource consent if it is deemed their work may potentially negatively affect the capacity of the plant to meet conditions of the consent.
3	The treatment plant shall be managed and operated by an appropriately trained operator.	Yes	The treatment plant is managed and operated by appropriately trained and experienced engineers and operators.
4	The maximum discharge rate shall not exceed 5000 cubic metres per day.	Yes	Data supplied indicates compliance with this condition. Maximum recorded daily total out flow was 4079 m <sup>3</sup> /day in Dec 2009. The 90 <sup>th</sup> Percentile Maximum was 3444 m <sup>3</sup> /day The 90 <sup>th</sup> Percentile Average Daily flow was 2508 m <sup>3</sup> /day The Median maximum daily flow was 2987m <sup>3</sup> /day The Median Average daily flow was 1594 m <sup>3</sup> /day over the reporting period.
5	The consent holder shall provide easy access for the measurement of flow and quality of the discharge to the constructed wetland and from the constructed wetland.	Yes	Good access is provided to enable measurements and samples to be collected.
6	The consent holder shall ensure that the wetlands do not support populations of plant or animal pests (including insects) at levels that may cause nuisance or annoyance to neighbouring property owners.	Yes	Checks are made at least fortnightly of the treatment system and any potential problems noted.  There have been no potential issues identified during the 2009-10 year relating to this condition.  No concerns have been raised from adjacent property owners about plant or animal pests.

	Conditions	Comply Yes/No	Comments
7	Any erosion control works that become necessary as a result of the exercise of this consent shall be undertaken as directed at the expense of the consent holder to the satisfaction of the Waikato Regional Council.	Yes	<p>Minor erosion control works are undertaken as and when necessary.</p> <p>A failure of a wetland bund embankment occurred in early July 2009. The problem was discovered, reported to Environment Waikato and repaired promptly. There have been no further problems during the reporting period.</p> 

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8	The wetland system shall be designed, operated and maintained to the satisfaction of the Waikato Regional Council. The design and operation shall be in accordance with accepted wastewater engineering practise and shall be capable of treating 5000 cubic metres of sewage per day during a one in five year storm event.	Yes	<p>A NIWA assessment report was received in December 2008. A plan for the retention or replacement of the wetlands has been discussed during the consultation process for the application for a new discharge consent. The submitters have all agreed to the wetland being removed.</p> <p>The Wetland and Rock filter continue to contribute to the overall improvement of the oxidation pond discharge quality. The attached data tables demonstrate there is a general quality improvement from the pond outlet through the wetland outlet sample values recorded for BOD, SS and to some extent Faecal Coliforms.</p> <p>The wetland also contributes to buffering of the final discharge pH. Ongoing maintenance of the wetland plants and bund plus sludge removal remains problematic due to the physical limitations of the site. Removal and replacement of old biomass and desludging are required if the wetlands are to remain long term.</p>																																				
9	The consent holder shall operate and maintain the two-stage oxidation pond to the satisfaction of the Waikato Regional Council (refer Note 1).	No	<p>The water quality discharge parameters are not being achieved and these are being addressed in the oxidation pond upgrade project. The civil works of the oxidation pond upgrade were largely complete by June 2009. Pond outlet ammonia has reduced to very low levels showing the new curtains are preventing short circuiting. Total nitrogen removal has improved by better than 40% as a consequence.</p> <table border="1" data-bbox="1265 973 2049 1316"> <thead> <tr> <th>Pond Outlet</th> <th>2007-08 Median</th> <th>2008-09 Median</th> <th>2009-10 Median</th> </tr> </thead> <tbody> <tr> <td>cBOD5</td> <td>23</td> <td>22.5</td> <td>21</td> </tr> <tr> <td>SS</td> <td>64</td> <td>81.5</td> <td>100</td> </tr> <tr> <td>DRP</td> <td>7.1</td> <td>4.65</td> <td>4.6</td> </tr> <tr> <td>TP</td> <td>8.2</td> <td>5.95</td> <td>5.9</td> </tr> <tr> <td>Total Ammonia</td> <td>25.3</td> <td>15</td> <td>0.088</td> </tr> <tr> <td>TKN</td> <td>32.5</td> <td>24</td> <td>13</td> </tr> <tr> <td>Nitrate NO3-N</td> <td>0.006</td> <td>0.099</td> <td>1.2</td> </tr> <tr> <td>Faecal Coli</td> <td>74500</td> <td>34000</td> <td>18000</td> </tr> </tbody> </table>	Pond Outlet	2007-08 Median	2008-09 Median	2009-10 Median	cBOD5	23	22.5	21	SS	64	81.5	100	DRP	7.1	4.65	4.6	TP	8.2	5.95	5.9	Total Ammonia	25.3	15	0.088	TKN	32.5	24	13	Nitrate NO3-N	0.006	0.099	1.2	Faecal Coli	74500	34000	18000
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10	The consent holder shall implement landscape and screen planting as designed by Bernard Brown and as shown in the diagram entitled "Waikato District Council Ngaruawahia Waste Water Treatment Visual Analysis – Appendix 3", with such plantings as described to be completed by 30 September 1999.	Yes	Landscaping and screen planting was carried out at the site in accordance with the specified plan. Screen plantings are well established. Additional roadside planting screen enhancement was completed in May 2009 to fill in gaps where die off had occurred in earlier plantings. These plants will establish with time.
11	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 and warning against the use of the location for swimming.	Yes	A sign is located in the vicinity of the discharge that alerts and warns people of the presence of the wastewater discharge.
12	<p>The following limits shall apply to the discharge to the Waikato River prior to, and including, 30 April 2001 (refer Note 2)</p> <ul style="list-style-type: none"> <li>a) The five day biochemical oxygen demand of the discharge shall not exceed 75 kilograms per day.</li> <li>b) The five day biochemical oxygen demand shall not exceed 50 grams per cubic metre for 90 percent of samples taken over a year.</li> <li>c) The suspended solid load of the discharge shall not exceed 225 kilograms per day.</li> <li>d) The median suspended solid load of the discharge shall not exceed 150 grams per cubic metre for 90 percent of samples taken over a year.</li> <li>e) The median faecal coliform bacteria density shall not exceed <math>5 \times 10^4</math> per 100 ml based on not fewer than five samples taken over not more than a 30 day period.</li> </ul> <p>Notwithstanding the stated limits, the consent holder shall make all reasonable and practical efforts to ensure that final effluent quality is maximised within the capabilities of the current treatment system.</p>	Yes	Condition is now superseded by condition 13 and no longer applicable.
13	<p>The following limits shall apply to the discharge to the Waikato River after 30 April 2001 (refer Note 2):</p> <ul style="list-style-type: none"> <li>a) Not more than one sample in each preceding ten samples shall exceed 20 grams per cubic metre Biochemical Oxygen Demand, with a maximum in any one sample being 50 grams per cubic metre.</li> </ul>	No	<p>Non-Compliant BOD. Substantially improved on the 2008-09 when upgrade works affected results, similar to 2007-08.</p> <p>Maximum was 27 g/m<sup>3</sup> in Feb 2010, down from 60 g/m<sup>3</sup> in 2008-09.</p>

	Conditions	Comply Yes/No	Comments
			<p>The 90<sup>th</sup> Percentile value was 20.8 g/m<sup>3</sup> down from 26 g/m<sup>3</sup> in 2008-09  Median value was 13 g/m<sup>3</sup> down from 16 g/m<sup>3</sup> in 2008-09.  Average was 15.0 g/m<sup>3</sup> down from 19.7 in 2008-09.</p>
	<p>b) Not more than one sample in each preceding 10 samples shall exceed 30 grams per cubic metre Suspended Solids,   with a maximum in any one sample being 50 grams per cubic metre.</p>	<p>No   No</p>	<p>Non-Compliant SS.  Substantially improved on the previous period.  The 90<sup>th</sup> Percentile value was 46 g/m<sup>3</sup>, down from 112 g/m<sup>3</sup> in 2008-2009.</p> <p>Maximum recorded value was 79 g/m<sup>3</sup> in Feb 2010 down from 120 g/m<sup>3</sup> in Nov 2008 and Feb 2009.</p> <p>Median value for the 2009-10 year was 29 g/m<sup>3</sup> down from 39 g/m<sup>3</sup> 2008/2009.</p> <p>The high Suspended Solids are originating in the oxidation pond and the wetlands are reducing the final discharge level.</p>  <p>It is assumed the main cause of the increases in 2008-09 were due to the disturbance of the pond floor during the upgrade process or the influence of the powerful new aspirating style influent aerators. The 2009-10 results are now similar to the 2007-08 period. The periodic ragging blockages of the new aspirating style inlet aerators diminished as expected in the reporting period 2009-2010. High algal levels in summer are also thought to contribute to the suspended solids levels.</p>

	Conditions	Comply Yes/No	Comments
	<p>c) The concentration of faecal coliforms in the discharge shall not exceed a daily median of 3000 MPN (Most Probable Number) per 100 ml.</p> <p>The median shall be determined from 5 samples collected during 30 consecutive days, or from any other 5 consecutive samples taken as per condition 15 and 16 of this consent.</p>	No	<p>Non-compliant FC. Improvement due to curtains that have stopped the short circuiting.</p> <p>The Median for six consecutive samples through the period 25 Feb – 31 Mar 2010 was 17,500 MPN per 100mL. .</p> <p>The Median for the entire reporting period was 10,000 MPN per 100mL</p> <p>The 90<sup>th</sup> Percentile value was 22,600, down from 46,000 MPN/100mL in 2008-09 and 217000 in 2007-08.</p> <p>Minimum was 120 MPN per 100mL.</p> <p>Average was 11472 MPN per 100mL.</p> <p>Maximum recorded value was 37,000 MPN per 100mL, down from 104,000 MPN per 100mL on the previous period 2008-2009.</p>
	<p>d) No more than one sample in each preceding 10 samples shall exceed 5 grams per cubic metre Dissolved Reactive Phosphorous,</p> <p>with a maximum in any one sample being 10 grams per cubic metre.</p>	<p>No</p> <p>Yes</p>	<p>Partially-compliant DRP. Ongoing improvement. Substantially improved on the previous reporting period.</p> <p>The 90<sup>th</sup> Percentile value was 5.7 g/m<sup>3</sup> similar to 6.1 g/m<sup>3</sup> in 2008-09.</p> <p>Maximum recorded value was 6.10 g/m<sup>3</sup>, down from 6.5 g/m<sup>3</sup> in 2008-09.</p> <p>Average 4.8 g/m<sup>3</sup>.</p> <p>Median value for the 2009/10 year was 4.9 g/m<sup>3</sup>, down from 5.4 g/m<sup>3</sup> in 2009-10 and 7.7 g/m<sup>3</sup> in 2007-08.</p>
	<p>e) Not more than one sample in each preceding ten samples shall exceed 5 grams per cubic metre Nitrate Nitrogen (NO<sub>3</sub>),</p> <p>with a maximum in any one sample being 8 grams per cubic metre.</p>	<p>Yes</p> <p>No</p>	<p>Partially Compliant NO<sub>3</sub>-N Results indicate that good denitrification is generally occurring. The 90<sup>th</sup> Percentile value was 1.1 g/m<sup>3</sup></p> <p>There was an unusually high result of 29g/m<sup>3</sup> measured in September 2009</p>

	Conditions	Comply Yes/No	Comments
	<p>f) Not more than one sample in each preceding ten samples shall exceed 10 grams per cubic metre Total Ammoniacal Nitrogen</p> <p>with a maximum in any one sample being 15 grams per cubic metre.</p>	<p>No</p> <p>No</p>	<p>Non-compliant.</p> <p>Oxidation pond results substantially improve after October 2009. The 90<sup>th</sup> Percentile value was 18 g/m<sup>3</sup>, down from 26.2 g/m<sup>3</sup> in 2008-09. The 90<sup>th</sup> percentile from October 2009 – June 2010 was 8.34 g/m<sup>3</sup></p> <p>Maximum recorded value was 26 g/m<sup>3</sup>, in Sept 2009.</p> <p>Average 8.1 g/m<sup>3</sup>.</p> <p>Median value for the 2009-2010 year was 5.4 g/m<sup>3</sup>, down from 15 g/m<sup>3</sup> in 2008-2009. A 150% improvement.</p>
	<p>g) The pH of the discharge shall not be less than 6 and no greater than 9 pH units.</p> <p>Notwithstanding the stated limits, the consent holder shall make all reasonable and practical efforts to ensure that final effluent quality is maximised within the capabilities of the current treatment system.</p>	<p>Yes</p> <p>Yes</p>	<p>Compliant.</p> <p>The plant has been upgraded, physical works began during the 2007-08 year and were largely completed in autumn 2009.</p> <p>The 2009-2010 period saw the day-to-day activity adapting to the new equipment and operating requirements.</p>
14	<p>The consent holder shall notify the Waikato Regional Council as soon as practicable and as a minimum requirement - within 24 hours of the consent holder becoming aware of the limits specified in conditions 12 and 13 of this resource consent being exceeded - of any accidental discharge, plant breakdown, or other circumstances which are likely to result in the limits of this resource consent being exceeded.</p>	<p>Yes</p>	<p>No raw wastewater has been released in the reporting period.</p> <p>A failure of wetland cell 3 embankment occurred on 3rd July 2009.</p> <p>The outflow average at that time was approximately 65m<sup>3</sup>/hr so we estimated we may have lost 750-1000m<sup>3</sup> of secondary treated effluent over 12 hours where no discharge flow through the final flow meter was recorded.</p> <p>The problem was discovered, reported to Environment Waikato and repaired promptly. There have been no further problems during the reporting period.</p> <p>The unauthorised discharge of contaminants to water is an offence under section 15(1)(a) of the Resource Management Act. However, under the circumstances it was considered by Environment Waikato that Waikato District Council had available to it a defence under s341(2)(b) of the</p>

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			<p>Resource Management Act:</p> <p>That being that the discharge was due to an event beyond the control of Waikato District Council and the event could not reasonably have been foreseen and the effects of the event were adequately mitigated or remedied after it occurred. Subsequently Environment Waikato decided not to take any enforcement action in relation to this event.</p>												
15	<p>Prior to and including 30 April 2001, and subject to condition 23, the consent holder shall characterise the quality, quantity and variability of the discharge to the satisfaction of the Waikato Regional Council. To this end, the consent holder shall, unless otherwise required to do so by the Waikato Regional Council in writing following consultation with the consent holder, characterise, and report to the Waikato Regional Council at least in 3 monthly intervals, on the discharge as follows:</p> <table border="1" data-bbox="161 775 1072 1294"> <thead> <tr> <th data-bbox="161 775 353 842">Frequency</th> <th data-bbox="353 775 714 842">Sample Type</th> <th data-bbox="714 775 1072 842">Parameter</th> </tr> </thead> <tbody> <tr> <td data-bbox="161 842 353 914">Daily</td> <td data-bbox="353 842 714 914">Daily total outflow from oxidation ponds</td> <td data-bbox="714 842 1072 914">Volume</td> </tr> <tr> <td data-bbox="161 914 353 986">Weekly</td> <td data-bbox="353 914 714 986">Single sample/test in oxidation ponds</td> <td data-bbox="714 914 1072 986">Dissolved oxygen</td> </tr> <tr> <td data-bbox="161 986 353 1294">Monthly</td> <td data-bbox="353 986 714 1294">Single sample/test in outlet from oxidation ponds</td> <td data-bbox="714 986 1072 1294">Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.</td> </tr> </tbody> </table>	Frequency	Sample Type	Parameter	Daily	Daily total outflow from oxidation ponds	Volume	Weekly	Single sample/test in oxidation ponds	Dissolved oxygen	Monthly	Single sample/test in outlet from oxidation ponds	Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.		Condition now superseded by Condition 16 and no longer applicable.
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16	<p>After 30 April 2001, and subject to condition 23, the consent holder shall characterise the quality, quantity and variability of the discharge to the satisfaction of the Waikato Regional Council. To this end, the consent holder shall, unless otherwise required to do so by the Waikato Regional Council in writing following consultation with the consent holder, characterise, and report to the Waikato Regional Council at least in 3 monthly intervals, on the discharge as follows:</p> <table border="1" data-bbox="161 432 1077 1420"> <thead> <tr> <th data-bbox="161 432 371 499">Frequency</th> <th data-bbox="371 432 674 499">Sample Type</th> <th data-bbox="674 432 1077 499">Parameter</th> </tr> </thead> <tbody> <tr> <td data-bbox="161 499 371 566">Daily</td> <td data-bbox="371 499 674 566">Daily total outflow from oxidation ponds</td> <td data-bbox="674 499 1077 566">Volume</td> </tr> <tr> <td data-bbox="161 566 371 633">Weekly</td> <td data-bbox="371 566 674 633">Single sample/test in oxidation ponds</td> <td data-bbox="674 566 1077 633">Dissolved oxygen</td> </tr> <tr> <td data-bbox="161 633 371 895">Monthly</td> <td data-bbox="371 633 674 895">Single sample/test in outlet from rock filter wetland</td> <td data-bbox="674 633 1077 895">Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.</td> </tr> <tr> <td data-bbox="161 895 371 1157">Quarterly</td> <td data-bbox="371 895 674 1157">Single sample/test in outlet from oxidation ponds</td> <td data-bbox="674 895 1077 1157">Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.</td> </tr> <tr> <td data-bbox="161 1157 371 1420">Annual</td> <td data-bbox="371 1157 674 1420">5 tests over 30 day continuous period during Feb-March in discharge from rock filter/wetland</td> <td data-bbox="674 1157 1077 1420">Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.</td> </tr> </tbody> </table>	Frequency	Sample Type	Parameter	Daily	Daily total outflow from oxidation ponds	Volume	Weekly	Single sample/test in oxidation ponds	Dissolved oxygen	Monthly	Single sample/test in outlet from rock filter wetland	Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.	Quarterly	Single sample/test in outlet from oxidation ponds	Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.	Annual	5 tests over 30 day continuous period during Feb-March in discharge from rock filter/wetland	Biochemical Oxygen Demand, Suspended solids, Dissolved reactive phosphorous, Total phosphorous, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, pH, Temperature, Faecal Colliform, E-coli.	Yes	<p>Data is recorded and supplied to Environment Waikato. All the recorded data is supplied with this annual report in complete form.</p> <p>Oxidation pond sampling taken at monthly intervals throughout the year results in significantly more sample collection and analysis of the treatment plant performance than would be available otherwise.</p> <p>Where temporary failure of the SCADA telemetry has prevented daily totalisation of the discharge volumes, daily estimates have been provided from the manual site visit record.</p> <p>The 5 tests over 30 days were completed.</p> <p>The summer period is clearly the more difficult period to achieve compliance with the performance conditions for BOD, SS and Faecal Coliforms. These are associated with high algae levels during summer.</p>
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	Conditions	Comply Yes/No	Comments
19	<p>The consent holder shall provide to the Waikato Regional Council, the Waikato Raupatu Lands Trust, and submitters to the consent application, E Finlay and P &amp; A O'Sullivan, a written monitoring report by 31 March 2000, and 31 March each year thereafter while this consent is current. As a minimum this report shall include the following:</p> <p>a) A summary of the monitoring results required by conditions 15 and 16 of this resource consent and a critical analysis of the information in terms of compliance and environmental effects.</p> <p>b) A comparison of data with previously collected data identifying any emerging trends.</p> <p>c) Comment on compliance with the conditions of this resource consent.</p> <p>d) Any reasons for non-compliance or difficulties in achieving compliance with the conditions of this resource consent.</p> <p>e) Any works that have been undertaken to improve the environmental performance of the treatment system or that are proposed to be undertaken in the upcoming year to improve the environmental performance of the treatment system.</p> <p>f) Recommendations on alterations to the monitoring required by conditions 15 and 16 of this resource consent.</p> <p>g) Any other issues considered important by the consent holder.</p>	Yes	<p>Report for period July 2009 to June 2010 attached. Copies to be sent to the parties specified in the condition.</p> <p>A change of reporting date to 30 September, after end of financial year was granted under s127 of the Resource Management Act 1991.</p> <p>This report compares current period data with the previous period.</p> <p>This report and the attached data tables clearly describes compliance results.</p> <p>The application for a new consent has been under discussion with EW and Iwi representatives and is ongoing</p>
20	<p>In conjunction with consent number 100972 (authorising discharge of treated domestic wastewater from the Ngaruawahia Wastewater Treatment Plant) the consent holder shall provide to the Waikato Regional Council and the Waikato Raupatu Lands Trust, and submitters to the consent application, E Finlay and P &amp; A O'Sullivan, two Nutrient Reports, the first to be completed by 30 September 2003, and the second by 30 September 2008, detailing the following:</p> <p>a) A detailed analysis of nutrient loads (nitrogen and phosphorous) discharged to the Waikato River from the Huntly and Ngaruawahia Wastewater Treatment Plants, over the time of the respective discharge consents.</p>	N/A	<p>A nutrient report was submitted during the consent application process</p> <p>The data table annual summary shows the nutrient load discharge average monthly values for Total Nitrogen and Total Phosphorous released to the Waikato River from the Ngaruawahia WWTP during the reporting period.</p> <p><b>Total Nitrogen;</b></p> <ul style="list-style-type: none"> <li>▪ Median value for the 2009-10 year was 19.1 kg/day.</li> <li>▪ Median summer value Dec-May for the 2009-2010 year was 13 kg/day</li> <li>▪ The Maximum for the December to May period was 21.6 kg/day.</li> <li>▪ The 90<sup>th</sup> Percentile value was 55 kg/day.</li> </ul>

	Conditions	Comply Yes/No	Comments
	<p>b) An analysis of trends detailed in a) in relation to the Waikato Regional Council target for a 30% reduction in nutrients in the Waikato River in the growing season (Jan-May), together with an assessment of progress made towards reducing nutrients in the Huntly and Ngaruawahia wastewater discharges by 30% during the growing season.</p> <p>c) An assessment of the need for further nutrient reduction in the Huntly and Ngaruawahia wastewater discharges based on a) and b) above.</p> <p>d) A review of current developments in nutrient reduction technology that could be appropriate for the Huntly and Ngaruawahia Wastewater Treatment Plants.</p> <p>e) A review of potential for reduction of nutrient discharge to the Waikato River from the Huntly and Ngaruawahia Wastewater Treatment Plants, including, but not limited to an assessment of the land disposal option, which shall include identification of possible sites for land disposal and environmental and economic cost/benefit analyses of the land disposal option.</p> <p>f) Recommendations for action in the light of a) to e) above.</p>		<p><b>Total Phosphorous;</b></p> <ul style="list-style-type: none"> <li>▪ Median value for the 2009-10 year was 8.58 kg/day.</li> <li>▪ Median summer value Dec-May for the 2009-2010 year was 8.9 kg/day.</li> <li>▪ The Maximum for the December to May period was 12.43 kg/day.</li> <li>▪ The 90<sup>th</sup> Percentile value was 11.63 kg/day.</li> </ul>
21	<p>The consent holder shall retain suitably qualified person(s) to investigate and report on feasibility, technology and economics of alternative collection, treatment and disposal systems for sewage and wastewater, including land based options. The consent holder shall forward to the Waikato Regional Council and the Waikato Raupatu Lands Trust, and submitters to the consent application, E Finlay and P &amp; A O'Sullivan, a report on a yearly basis covering the period to the 31 December of each year that details the investigations of such alternatives undertaken and the involvement of tangata whenua in those investigations in the previous year. This report shall be provided by the 31 March 2000, and 31 March each year thereafter while this consent is current. The reports shall be to a standard acceptable to the Waikato Regional Council.</p>	Yes	<p>A report was submitted on 30 June 2006 that suitably addressed the requirements of the Ngaruawahia site.</p>
22	<p>In conjunction with consent number 100973, the consent holder shall maintain and keep current a complaints register for complaints regarding all aspects of operations at the wastewater treatment plant site, and the discharge of treated wastewater to the Waikato River, received by the consent holder. The register shall record:</p>	Yes	<p>Complaints register maintained by Stakeholder Relationship Customer Delivery Team. No formally recorded complaints relating to the treatment system have been received during the reporting period.</p>

	<b>Conditions</b>	<b>Comply Yes/No</b>	<b>Comments</b>
	<p>a) The date, time and duration of the incident that has resulted in a complaint.</p> <p>b) The location of the complainant when the incident was detected.</p> <p>c) The possible cause of the incident.</p> <p>d) The weather conditions and wind direction at the site when the incident allegedly occurred, if significant to the complaint (for example if an odour incident occurs).</p> <p>e) Any corrective action undertaken by the consent holder in response to the complaint.</p> <p>The register shall be available to the Waikato Regional Council at all reasonable times. Complaints which may indicate non-compliance with the conditions of this resource consent shall be forwarded to the Waikato Regional Council within 5 days of the complaint being received.</p>		
23	<p>The Waikato Regional Council may in the period of six months ending 1 December, 2002 and 1 December every two years thereafter, while this consent is current, serve notice on the consent holder under section 128 (i) of the Resource Management Act 1991, of its intention to review the conditions of this resource consent for the following purposes:</p> <p>a To review the effectiveness of the conditions of this resource consent in avoiding or mitigating any adverse effects on the environment from the exercise of this resource consent and if necessary to avoid, remedy or mitigate such effects by way of further or amended conditions.</p> <p>b If necessary and appropriate, to require the holder of this resource consent to adopt the best practicable option to remove or reduce adverse effects on the surrounding environment due to the discharge.</p> <p>c To review the adequacy of and the necessity for monitoring undertaken by the consent holder.</p>	N/A	
24	<p>The consent holder shall pay to the Waikato Regional Council any administrative charge fixed in accordance with section 36 of the Resource Management Act 1991, or any charge prescribed in accordance with regulations made under section 360 of the Resource Management Act.</p>	Yes	<p>A fee is paid to Environment Waikato for the administration and auditing of the resource consent.</p>