

100972 Ngaruawahia Wastewater Sewage Treatment Discharge. 2007-08

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 titled "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 an 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. The maximum average daily flow was 2398 cubic metres per 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 fortnightly of the treatment system and any potential problems noted. There have been no potential issues identified during the 2007-08 year relating to this condition. No concerns have been raised from adjacent property owners.
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	Erosion control works are undertaken as and when necessary. Some metalling maintenance work has been done at the site. The pipe between pond and wetland was re-routed and renewed as a

	Conditions	Comply Yes/No	Comments
			consequence of the cessation of use of the south-eastern wetland cells 1 and 2.
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 1 in five year storm event.	No	The wetland requires to be designed, operated, and maintained in accordance with the management plan approved by Environment Waikato. Leakage of the wetlands occurred in April 2007 and remedial action was taken. Significant maintenance of the gravel beds was required to be undertaken. Some remedial works to the gravel bed were done with little improvement achieved. Therefore further works have been deferred until the final NIWA report and recommendations are received. These are due in the 2008-09 reporting period.
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	Site maintenance and stock control improvements have been improved. The water quality parameters were not being met and these are being addressed in the upgrade project.
10	The consent holder shall implement landscape and screen planting as designed by Bernard Brown, and as shown in the diagram titled "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.
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	The following limits shall apply to the discharge to the Waikato River prior to, and including, 30 April 2001 (refer Note 2). a) The five day biochemical oxygen demand of the discharge shall not exceed 75 kilograms per day. b) The five day biochemical oxygen demand shall not exceed 50 grams per cubic metre for 90 percent of samples taken over a year. c) The suspended solid load of the discharge shall not exceed 225 kilograms per day.	Yes	Condition is now superseded by condition 13 and no longer applicable.

	Conditions	Comply Yes/No	Comments
	<p>d) The mean suspended solid load of the discharge shall not exceed 150 grams per cubic metre for 90 percent of samples taken over a year.</p> <p>e) The median faecal coliform bacteria density shall not exceed 5×10^4 per 100 ml based on not fewer than five samples taken over not more than a 30 day period.</p> <p>Not withstanding 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>		
13	<p>The following limits shall apply to the discharge to the Waikato River after 30 April 2001 (refer Note 2):</p> <p>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.</p> <p>b. Not more than one sample in each preceding ten 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</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>Partially compliant BOD. The 90th Percentile value was 21 g/m³ Minimum 9 g/m³, Mean 16.9 g/m³, median value for the 2007-08 year was 17 g/m³ Maximum recorded value was 25 g/m³ in March 2008</p> <p>Compliant SS. The 90th Percentile value was 24 g/m³ Minimum 8.4 g/m³, Mean 24 g/m³, median value for the 2007-08 year was 22 g/m³ Maximum recorded value was 39 g/m³.</p>

	<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. The median shall be determined from five samples collected during 30 consecutive days, or from any other 5 consecutive samples taken as per condition 15 and 16 of this consent.</p>	<p>No</p>	<p>Non-compliant FC. The 90th Percentile value was 227,000 Minimum 9000, Mean 217,000, median value for the 2007-08 year was 26,000 MPN per 100mL Maximum recorded value was 2,000,000.</p> <p>Large numbers of wildfowl were present in the wetland through the summer period and the results may reflect this, however this WWTP is also subject to short-circuiting between inlet and outlet of the pond. This is being addressed in the current upgrade works begun in the 2007-08 year.</p>
	<p>d. Not more than one sample in each preceding ten samples shall exceed 5 grams per cubic metre Dissolved Reactive Phosphorus, with a maximum in any one sample being 10 grams per cubic metre.</p>	<p>No</p>	<p>Non-compliant DRP The 90th Percentile value was 9.98 g/m³ Minimum 4.96 g/m³, Mean 7.3 g/m³, median value for the 2007-08 year was 7.7 g/m³ Maximum recorded value was 10 g/m³</p>
	<p>e. Not more than one sample in each preceding ten samples shall exceed 5 grams per cubic metre Nitrate Nitrogen (NO₃), with a maximum in any one sample being 8 grams per cubic metre.</p>	<p>Yes</p>	<p>Compliance NO₃-N Results indicate that NO₃ within the treatment system are at near trace levels.</p>
	<p>f. Not more than one sample in each preceding ten samples shall exceed 10 grams per cubic metre Total Ammoniacal Nitrogen (NH₄-N), with a maximum in any one sample being 15 grams per cubic metre.</p>	<p>No</p>	<p>Non-compliance NH₄-N The 90th Percentile value was 30 g/m³ Minimum 20 g/m³, Mean 25 g/m³, median value for the 2007-08 year was 25.2 g/m³. Maximum recorded value was 33 g/m³</p> <p>WWTP is subject to short-circuiting between inlet and outlet of the pond reducing treatment residence time. This is being addressed in the current upgrade works begun in the 2007-08 year</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>No/Yes</p>	<p>Yes</p> <p>Yes</p>	<p>Compliant. The range recorded was between 7 and 7.4</p> <p>The plant is being upgraded, physical works began during the 2007-08 year</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 and of any accidental discharge, plant breakdown, or other circumstances which are likely to result in the limits of this resource consent being exceeded.</p>	Yes	No raw wastewater has been released															
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="141 1114 1059 1401"> <thead> <tr> <th>Frequency</th> <th>Sample Type</th> <th>Parameter</th> </tr> </thead> <tbody> <tr> <td>Daily</td> <td>Daily total outflow from oxidation ponds.</td> <td>Volume.</td> </tr> <tr> <td>Weekly</td> <td>Single sample/test in oxidation ponds.</td> <td>Dissolved oxygen.</td> </tr> <tr> <td>Monthly</td> <td>Single sample/test in outlet from oxidation Ponds.</td> <td>Biochemical Oxygen Demand, Suspended Solids, Dissolved Reactive Phosphorus, Total Phosphorus, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen,</td> </tr> <tr> <td>PH,</td> <td></td> <td>Temperature, Faecal Coliform, 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 Phosphorus, Total Phosphorus, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen,	PH,		Temperature, Faecal Coliform, 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>	Partial	<p>Data is recorded for Environment Waikato, however collation and supply of data on time has been erratic. All the recorded data is supplied with this annual report in complete form.</p>						
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Monthly	Single sample/test in outlet from rock filter/wetland	Biochemical Oxygen Demand Suspended Solids, Dissolved Reactive Phosphorus, Total Phosphorus, Total Ammoniacal Nitrogen Total Kjeldahl Nitrogen Nitrate Nitrogen, PH, Temperature, Faecal Coliform, E-coli.							
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Quarterly	Single sample/test in Outlet from oxidation ponds	Biochemical Oxygen Demand Suspended Solids, Dissolved Reactive Phosphorus, Total Phosphorus, Total Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Nitrate Nitrogen, PH, Temperature, Faecal Coliform, E-coli.							
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during March
– February, in
discharge from rock
filter/wetland.

Dissolved Reactive Phosphorus,
Total Phosphorus,
Total Ammoniacal Nitrogen,
Total Kjeldahl Nitrogen
Nitrate Nitrogen,
PH, Temperature,
Faecal Coliform, E-coli.

17	<p>In conjunction with consent number 100973, the consent holder shall provide the Waikato Regional Council a management plan which details the operational procedures that will be implemented to achieve compliance with the conditions of this resource consent. This plan shall be lodged with the Waikato Regional Council by 30 September 1999 for written approval, and shall be reviewed and updated as a minimum by 30 September 2002 and 30 September 2006. The plan shall address, but may not be limited to, the following:</p> <ul style="list-style-type: none">a. A description of the entire treatment system facility.b. A description of routine inspection and maintenance procedures to be undertaken with respect to the treatment plant and discharge structure.c. An outline of the methods to be utilised to monitor the treatment plant in an operational sense including:<ul style="list-style-type: none">(i) monitoring of influent waste water(ii) monitoring of treatment performance specific management procedures for the efficient functioning of thed. Oxidation ponds and constructed wetland.e. Procedures for recording routine maintenance and all repairs that are undertaken.	Partial	<p>An updated Management plan was submitted to Environment Waikato in 2004.</p> <p>An upgrade project currently underway is expected to create a revised management plan.</p>
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	<p>f. Contingency measures in place to deal with unusual events including odour events.</p> <p>g. Other actions necessary to comply with the requirements of this resource consent procedures for improving and/or reviewing the management plan.</p> <p>A copy of the management plan shall be supplied to the Waikato Raupatu Lands Trust and submitters to the consent application, E Finlay and P & A O'Sullivan, within one month of its completion.</p>	Yes	Copies of the completed management plan will be supplied to the stated parties within one month of its completion.
18	The consent holder shall manage the wastewater treatment and discharge in accordance with the management plan referred to in condition 17 above. Any changes to the management plan shall be advised to the Waikato Regional Council in writing after consultation between the consent holder and the Waikato Regional Council.	Yes	The sewage treatment system is managed according to the management plan approved by Environment Waikato in 2004.
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 & 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 up-coming 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 2007 to June 2008 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>
20	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 & A O'Sullivan, two Nutrient Reports, the first to be completed by 30 September 2003, and the second by 30 September 2008, detailing the	N/A	<p>Adequate information has been provided to Environment Waikato to satisfy this condition requirement due in 2003.</p> <p>A nutrient report was prepared and forwarded to Environment Waikato on 28 June 2006. The report did not meet the required standard acceptable to Environment Waikato. A further report due to</p>

	<p>following:</p> <ul style="list-style-type: none"> a A detailed analysis of nutrient loads (nitrogen and phosphorus) discharged to the Waikato River from the Huntly and Ngaruawahia Wastewater Treatment Plants, over the time of the respective discharge consents. 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 (January-May), together with an assessment of progress made towards reducing nutrients in the Huntly and Ngaruawahia wastewater discharges by 30% during the growing season. c An assessment of the need for further nutrient reduction in the Huntly and Ngaruawahia wastewater discharges based on a) and b) above. d A review of current developments in nutrient reduction technology that could be appropriate for the Huntly and Ngaruawahia Wastewater Treatment Plants. 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. f Recommendations for action in the light of a) to e) above. <p>The Nutrient Reports are to be completed to a standard acceptable to the Waikato Regional Council.</p>		<p>be submitted by September 2008 has not been completed. An exemption has been granted by EW due to the proximity of the consent renewal.</p>
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 & 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, but did not address the Huntly site requirements. The upgrade projects now underway for Ngaruawahia and Huntly WWTPs will address these requirements.</p>
22	<p>In conjunction with consent number 100973, the consent holder shall maintain</p>	Yes	<p>Complaints register maintained by Corporate Services Customer First</p>

	<p>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> <ul style="list-style-type: none"> a The date, time and duration of the incident that has resulted in a complaint. b The location of the complainant when the incident was detected. c The possible cause of the incident. 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). e Any corrective action undertaken by the consent holder in response to the complaint. <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>		<p>Team. No formally recorded complaints relating to the treatment system have been received during the reporting period.</p> <p>One homeowner opposite the main gates has verbally complained to staff that she has noticed bad smells periodically. On closer questioning it seems this may be around dawn and when Septic tanker trucks discharge at the site. The person was instructed to use the formal complaints process promptly in the next case. No complaint has been received. Also the trucks have mostly been diverted to Huntly WWTP for a large part of the 2007-08 year and this possible cause thereby minimised.</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> <ul style="list-style-type: none"> 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. 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. c To review the adequacy of and the necessity for monitoring undertaken by the consent holder. 	N/A	<p>The Waikato District Council potentially may review the conditions of the resource consent on 1 December 2008.</p>
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>