

## I05551 Matangi Wastewater Discharge to Ground 2008-09

This consent authorises the **Consent Holder** to: discharge up to 52 cubic metres per day of treated sewage effluent from Matangi township, into the ground in the vicinity of Tauwhare Rd – Matangi. NZMS 260 S14:210-751

	Conditions	Comply Yes/No	Comments
1	The volume of effluent discharged from the wastewater treatment and disposal system shall not exceed 52 cubic metres per day.	Partial	<p>Partial-Compliance</p> <p>During July and August 2008 the North Island experienced significant and unusually heavy wet weather storm events that contributed to high winter influent levels.</p> <p>Daily flows are calculated from manual readings of the totaliser during regular site visits. As this is not calculated daily it may not accurately report the daily peaks. The flowmeters are mechanical and periodically subject to organic build up and wear. They have not been calibrated.</p> <p>The Median averaged daily out flow was 33.5 cubic metres per day over the total reporting period.</p> <p>Maximum average recorded daily total flow was 59.9 m3/day for the period 26 August through 2 September 2008</p> <p>The 90<sup>th</sup> Percentile average daily flow was 50.7 m3/day, just below the consent limit</p> <p>The Mean of the averaged daily flow was 36.9 cubic metres per day over the reporting period.</p> <p>The sand filter media was replaced in June-July 2008 and this has interrupted flow totals recoded for July 2008. Also in October the flow meter became blocked and records were not available.</p>
2	The consent holder shall retain appropriately experienced personnel to operate the treatment and disposal system	Yes	The treatment plant is managed and operated by an appropriately trained and experienced engineers and operators.

3	The wastewater treatment plant and disposal system shall be operated and maintained in a manner that is consistent with the document titled "Matangi Township, Wastewater treatment System – Management Manual (revised July 2008)"	Yes	<p>Innoflow Technologies supplied an operation manual for the 1999 upgrade. Reflection Treatment Systems provided an amended manual for the 2008 upgrade.</p> <p>In the 2007-08 period degraded performance of the sand contactor led to a remediation project. The remediation project was begun in June 2008 and a new management and operation manual was created by Reflection Treatment Systems in July 2008 that amended the original document.</p> <p>The remediation project completed three main changes to the plant</p> <ol style="list-style-type: none"> <li>1. Replaced the sand filter media and increased the sand filter underdrain diameter</li> <li>2. Constructed a new disposal field of dripper irrigation pipe on approximately 750m<sup>2</sup> of adjacent land</li> <li>3. Installed a high level overflow pump to discharge to the existing 'bottomless' disposal bed that is under the recirculating sand filter but hydraulically separate from it.</li> </ol> <p>The manual provides a comprehensive description of the treatment system and servicing requirements.</p>
4	The wastewater treatment tanks shall be de-sludged as necessary and in particular following receipt of notice in writing from the Waikato Regional Council to do so. The sludge waste shall be disposed of in an approved wastewater sludge disposal area.	Yes	The tanks were de-sludged prior to the remediation project in June 2008.
5	There shall be no overland flow of effluent from any part of the wastewater treatment or effluent disposal system.	No	<p>Non-Compliant.</p> <p>The newly installed disposal field consisting of a 33x25m dripper irrigation field had problems with surface ponding in some areas. An additional drain was installed to capture this.</p> <p>The existing disposal area remains undersized. The Waikato District Council has negotiated a land purchase with the neighbour so that the area can be extended. The disposal field will be extended by approximately an extra 1500m<sup>2</sup> in the summer of 2009/2010.</p> <p>Problems with the disposal field and steps taken to mitigate were reported regularly to Environment Waikato.</p>



7	<p>The consent holder shall retain an appropriately experienced person to compile an annual monitoring report that shall include the following:</p> <p>(i) Analyses of all samples that have been taken at three monthly intervals throughout the year.</p> <p>(ii) Sample analyses, which shall be provided to the Waikato Regional Council in an agreed data form.</p> <p>(iii) The total mass of nitrogen, stated as kilograms per hectare per year that has been discharged into ground during the year.</p> <p>(iv) The total volume of wastewater discharged per week.</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>Sampling frequency was increased beyond that required, so that a clear picture of performance subsequent to the sand filter renovation and new disposal field could be evaluated.</p> <p>The Median discharge rate for Total Nitrogen was 1.24 kg/day for the reporting period.</p> <p>The Median application rate for Total Nitrogen was 11.44 kg/ha.day for the reporting period. The Median Total Nitrogen and the Median averaged daily flow of 33.5 m3/day give an estimated Total Nitrogen application rate of 4176 kg/Ha.yr for 2008-09.</p> <p>Estimated Total Nitrogen was reported as 387 kg/yr for the 2007-2008 period. This was calculated from a calculated average TN of 36.8 mg/L and an average flow of 29 m3/day. This represents an application rate of 3710 kg/Ha.yr</p> <p>Using the same method for 2008-09 the average TN was 34.5 mg/L and an average flow of 36.9 m3/day gives an estimated Total Nitrogen discharge of 465 kg/yr or an application rate of 4429 kg/Ha.yr</p> <p>The nutrient mass load has not changed greatly despite the treatment quality performance improvement. In the previous period the greater proportion of the Total Nitrogen was comprised of the Total Kjeldahl Nitrogen and in the current period it is now largely comprised of Nitrate Nitrogen.</p> <p>NB: The discharge area used is changed from the previous period. There are now two disposal areas: The original 16m x 16m disposal bed underneath the recirculating sand filter, plus a new dripper irrigation bed 24m x 33m, approximately 0.105 Ha total. The figure used previously for the total area was overstated.</p> <p>The total volume of flow was recorded during routine service visits and the flow for the period totalised and then the daily flows averaged. Data</p>
---	--	---	--

	The report shall be provided to the satisfaction of the Waikato Regional Council within two months of the fourth quarterly sample being taken.	No	attached.  The WDC may apply to Environment Waikato to change this condition to bring it in line with other consents that require an annual report by 30 September
8	<p>The Waikato Regional Council may review the conditions of this consent, every five years from the date of commencement this consent, for any of the purposes specified in s128 of the Resource Management Act, and specifically to:</p> <ul style="list-style-type: none"> <li>(i) Address any adverse effects on the environment which may arise from the exercise of this consent and which it is appropriate to deal with at a later stage,</li> <li>(ii) Require the consent holder to adopt the best practical option to remove or reduce any adverse effect on the environment,</li> <li>(iv) Take into account any changes to Waikato Regional Council Policy or Plans.</li> </ul> <p>Note: Costs associated with any review of the conditions of this resource consent will be recovered from the consent holder in accordance with the provisions of section 36 of the Resource Management Act 1991.</p>	Yes	
9	The consent holder shall pay 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 1991.	Yes	