TAUPO DISTRICT COUNCIL
Received - 9 AUG 2010

Environment Waikato
REGIONAL COUNCIL

Resource Consent Certificate

PO Box 4010
Hamilton East
Hamilton 3247
New Zealand

ph +64 7 859 0999
fax +64 7 859 0998
www.ew.govt.nz

Resource Consent: 116596

File Number: 60 55 42A

Pursuant to the Resource Management Act 1991, the Waikato Regional Council hereby grants consent to:

Taupo District Council
Private Bag 2005
TAUPO 2730

(hereinafter referred to as the Consent Holder)

Consent Type: Discharge permit

Consent Subtype: Discharge to land

Activity authorised: Discharge up to 15,000 cubic metres per day of treated wastewater from the Taupo Pollution Control Plant to land via surface irrigation, and associated discharges to air

Location: Taupo Urban Sewage - Taupo

Map Reference: NZMS 260 U18:848-781

Consent duration: Granted for a period expiring on 31 December 2032

Subject to the conditions overleaf:

CONDITIONS

General

1. The discharge of treated sewage shall be undertaken in general accordance with the principles contained in the application document "Taupo land Treatment Project Expansion View Road Site, Assessment of Environmental Effects", prepared by AWT and dated May 2007, in general accordance with any other supporting information provided to the Waikato Regional Council in support of the application for this permit, and in full accordance with the consent conditions below.

2. 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 the regulations made under Section 360 of the Resource Management Act.

3. This resource consent is granted by the Waikato Regional Council subject to its officers or agents being permitted access to the property at all reasonable times for the purpose of carrying out inspections, surveys, investigations, tests, measurements or taking samples.

Limits

4. Notwithstanding any other conditions of this permit and in particular condition 6(b), the effluent hydraulic loading rate shall not exceed 45mm depth per week, and no more than 15mm in any 24 hour period. The irrigation equipment shall be capable of being adjusted to apply a hydraulic application rate of no more than 5 mm/hr.

5. The disposal area shall be managed to ensure that the renovation of contaminants and uptake of nutrients from the wastewater is maximised and the extent of nutrient, and in particular nitrogen, leaching to groundwater is minimised. To this end:

   (a) The nitrogen loading rate, as a consequence of:
   (i) the exercise of this permit; and/or
   (ii) the application of nitrogen based fertiliser; and/or
   (iii) the disposal of any other waste
   shall not exceed a maximum of 550 kilograms per hectare per year, or any limit set under condition 5(b).

   (b) From the date of exercise of this consent and until 1 June 2013 the consent holder may apply up to 650 kilograms nitrogen per hectare per year (kg N/ha/yr), on no more than 15% of the total irrigated area, as a trial to demonstrate an acceptable higher loading rate. Prior to commencement of the trial the consent holder shall forward a proposed monitoring programme for the trial area, especially relating to nitrogen leaching rates.

   (c) No later than 30 July 2013 the consent holder shall forward a report to the Waikato Regional Council which details the outcome of the irrigation in the period 2008 to 2013 under the nitrogen limits imposed by condition 5(a) and 5(b), in terms of nitrogen losses, nitrogen yields, and estimated impact on groundwater and surface water. The report shall provide a recommendation to the Waikato Regional Council on the proposed nitrogen application rate which should apply for the remainder of the term of the consent. After consultation between the consent holder and the Waikato Regional Council, the nitrogen application load shall be reset by the Waikato Regional Council to that load which ensures that the nitrogen leaching rate shall not exceed 30 kg N/ha/yr on average, but in any event the nitrogen load shall not be less than 550 kg N/ha/yr.

   (d) Wastewater shall be spread as evenly as practicable over the irrigation area.

Management

6. The disposal area shall be managed to ensure sustainability of the soil resource. To this end, and to the extent that it is practicable to do so, the consent holder shall maintain the soil's natural infiltration capacity and structure.

   (a) The soil/pasture treatment system shall be managed in a way that prevents organic nitrogen mobilisation in the soil. To this end, ploughing or ripping extensive areas of the disposal area should be avoided except during extended periods of cold, dry weather. Limited ploughing or ripping of the disposal area may be undertaken at any time to alleviate localised areas of ponding or poor permeability.

   (b) Significant ponding is to be avoided. For the purpose of this permit significant ponding is deemed to occur where waste water remains on an area of more than 10 square metres after 24 hours of being irrigated or causes an adverse effect on grass growth.

7A. At all times the consent holder shall maintain a specified irrigation free buffer zone from areas of sensitive development (housing, gardens, play areas, intakes to drinking water supplies and crops for human consumption). The size of the irrigation free buffer zone will be determined by the quality of the irrigated waste water determined by median faecal coliform concentrations. Buffer zone distances will apply as detailed below:

Disinfection Standard, median values	**Buffer Zone Distance**	**With 10 m width of tree planting, >5m high**	**Roads and water courses**
No Disinfection	150m	150m	50
10,000 cfu/100 ml	100m	75m	50
1,000 cfu/100 ml	50m	40m	30
200 cfu/100 ml	40m	30m	30
25 cfu/100 ml	20m	20m	20

7B. For amenity reasons a separation distance of 150 metres will be maintained between irrigation areas and existing neighbouring residences. The separation distance may be reduced with the prior written approval of both the owner and occupier of that residence or property.

At no time will the amenity separation distance be less than the buffer zone distance, as detailed in Condition 7A.

8. The consent holder shall notify the Waikato Regional Council as soon as practicable and, as a minimum requirement, within 48 hours of any accidental discharge, plant breakdown or other contingency which is likely to result in an exceedance of the limits of this consent.

9. The consent holder shall maintain and keep a complaints register for all aspects of all operations at the site. The register shall detail the date, time, duration and type of complaint, cause of the complaint, and action taken by the consent holder in response to the complaint. The register shall be available to the Waikato Regional Council at all reasonable times. The consent holder shall forward to the Waikato Regional Council a copy of all complaints received as soon as practicable but in any event within 48 hours of receipt.

10. Irrigation of effluent shall not commence until the View Road site has been planted with a suitable pasture cultivar (as recommended by AgResearch Ltd or other organisation with recognised expertise in crop management in relation to intensive wastewater irrigation), to the satisfaction of the Waikato Regional Council.

11. To the satisfaction of the Waikato Regional Council, the consent holder shall make available to the owners of any neighbouring bore water supply an alternative supply of potable water in the event that the exercise of this permit causes the groundwater nitrate nitrogen concentrations, from those bores, to consistently exceed 10 grams per cubic metre or to become otherwise affected such that, in the opinion of the Council, the water is unsuitable for potable purposes. It must be proven, on balance of probability, that the adverse effect is due to the effluent disposal activities and not the bore owners own activities (for example, land uses, poor wellhead sealing).

12. To the satisfaction of the Waikato Regional Council the consent holder shall prepare a Management Plan for the wastewater disposal operation. In particular the plan shall address (but not necessarily be limited to):
    (a) operational management of the irrigation system;
    (b) on-site responsibilities, including operation and maintenance of the transfer pipeline to the site;
    (c) how the system will be operated and maintained to meet the requirements of the conditions of this consent;
    (d) contingency measures in the event of irrigation equipment or pipeline failures;
    (e) identification of individual paddocks;
    (f) record keeping.
    (g) procedures to be taken in the event that faecal coliform counts significantly exceed the accepted numbers for each disinfection scenario (refer to condition 7A).

    The Management Plan shall be submitted to, and accepted as satisfactory by the Waikato Regional Council, prior to commencement of irrigation on the View Road site. The consent holder shall advise the Waikato Regional Council of any subsequent changes to the plan.

13. The irrigation system shall be operated, maintained and managed by the consent holder in accordance with the Management Plan required by condition 12 above.

14. There shall be no odour as a result of the activities authorised by this resource consent that causes an objectionable or offensive effect beyond the boundary of the site.

15. Should an emission of odour occur that has an objectionable or offensive effect, the consent holder shall provide a written report to the Waikato Regional Council within five days of being notified of such by the Waikato Regional Council. The report shall specify:

    (a) the cause or likely cause of the event and any factors that influenced its severity;
    (b) the nature and timing of any measures implemented by the consent holder to avoid, remedy or mitigate any adverse effects; and
    (c) the steps to be taken in future to prevent recurrence of similar events.

    Note: For the purpose of condition 14 of this resource consent, the Waikato Regional Council will consider an effect that is objectionable or offensive to have occurred if any appropriately experienced officer of the Waikato Regional Council deems it so after having regard to:
    (i) the frequency, intensity, duration, offensiveness and location of the odour; and/or
    (ii) receipt of complaints from neighbours or the public; or
    (iii) relevant written advice or a report from an Environmental Health Officer of a territorial authority or health authority.

16. There shall be no overland flow of wastewater to any neighbouring property, flowing watercourse, drainage ditch which contains water, or permanent pond. To this end wastewater shall not be discharged at times which include when frost conditions exist in the

disposal area and when the rainfall intensity in the disposal area exceeds 0.5 millimetre per minute.

17. Irrigation of wastewater shall be with equipment such that aerosols and spraydrift are minimised, such that there shall be no detectable spraydrift beyond the boundaries of the property. To this end, there shall be no effluent irrigation on site when the wind speed exceeds 12 metres per second.

18 The disposal area shall not be grazed by stock, and crop grown in the disposal area shall be harvested and removed from the disposal area.

Monitoring

19. All sample analyses shall be undertaken in accordance with the methods detailed in the "Standard Methods For The Examination Of Water And Waste Water, 2005" 21st edition by A.P.H.A. and A.W.W.A. and W.E.F., or any other method approved in advance by the Waikato Regional Council.

20. Sample collection, storage, and reporting of results shall be carried out to an approved standard. Sample results shall be forwarded to the Waikato Regional Council at quarterly intervals. Results shall be provided in an electronic format.

21. To the satisfaction of Waikato Regional Council the consent holder shall characterise the quality, quantity and variability of the discharge. To this end the consent holder shall, unless otherwise required in writing by the Council following consultation with the consent holder, characterise the discharge as follows:

Frequency	Sample type	Parameter
Daily		Volume irrigated, rainfall
Weekly	Representative sample*	pH, Total Nitrogen, E coli, BOD_5, suspended solids, nitrate-N, ammoniacal-N, total phosphorus
Annually	Representative sample*	Sodium, calcium, chloride, potassium, conductivity, Enterococci.

* Samples shall be representative of the effluent which is irrigated.

22. (a) To the satisfaction of the Waikato Regional Council the consent holder shall characterise the quality and variability of the groundwater in the vicinity of the disposal area. To this end the consent holder shall, unless otherwise required in writing by the Waikato Regional Council following consultation with the consent holder, undertake monitoring and reporting to satisfy at least the following requirements for bores

Frequency	Sample type	Parameter
Monthly for first 12 months then quarterly	Grab sample	Water level, total oxidised nitrogen, conductivity, dissolved reactive phosphorus, E coli, chloride.
Annually	Grab sample	Soluble iron, ammoniacal-N, pH.

The onsite bores which shall be sampled are MW1, MW2, MW3, MW5, 364, 365, ~~374~~. The offsite bores which shall be sampled are MW4, 373, 376. 04/08/10

In addition the following offsite bores shall be monitored quarterly for nitrate-N and E coli: 371, 375, 366, ~~18, 19~~, 377. 04/08/10

Note 1: This consent condition does not provide authority to enter any offsite property nor take any water sample, without the approval of that property owner.

~~Note 2: The monitoring bore positions are as described in Figure 8 and Tables 1, 2, and 8 of Appendix 5 of the AEE.~~

Note 2 The monitoring bore positions are as described in the View Road Land Disposal Site Monitoring Plan, July 2010 provided by Taupo DC and electronically registered by Environment Waikato as Document #1735281 on 04/08/10. 04/08/2010

23. To the satisfaction of the Waikato Regional Council the consent holder shall characterise the quality and variability of the physical and chemical properties of the soil resource in the vicinity of the disposal area. To this end the consent holder shall, unless otherwise required in writing by the Waikato Regional Council following consultation with the consent holder, undertake soil monitoring during June or July of each year. In this respect a composite soil sample shall be taken from representative locations on each of the Atiamuri and Whenuaroa series soils and the following parameters reported upon:
    (a) infiltration capacity, bulk density.
    (b) soil moisture, pH, exchangeable sodium, Olsen phosphorus, total nitrogen%, organic carbon%, C:N ratio, anion storage capacity, cation exchange capacity. Analyses shall be undertaken on composite samples for each soil type at sampling depths of: 0-75 mm and 75-150mm.

    In addition, prior to commencement of irrigation, then in 2017 and 2026 the consent holder shall test for the elements As, Cd, Co, Cr, Cu, Fe, Hg, Mn, Ni and Zn in both the irrigated and non-irrigated soils, within the 0-100mm soil depth.

24. To the satisfaction of the Waikato Regional Council the consent holder shall compile a monitoring report for the site, and forward that report to the Waikato Regional Council by 31 August each year. As a minimum the report shall:
    (a) summarise all the data collected as required under the conditions of those consent, and discuss any trends or changes in environmental effects evident from the monitoring data, both within the annual period and compared to previous years;
    (b) provide nitrogen application rates for any irrigated portion of the farm, in terms of kilograms nitrogen per hectare per annum, and crop yields removed from the farm, in kg N/ha/yr on a per paddock basis.
    (c) report and discuss any operational improvements undertaken at the View Rd site
    (d) make recommendations on alterations/additions to the monitoring programmes;
    (e) report and discuss any complaints received regarding the waste disposal operation;
    (f) report and discuss feedback received from any community liaison activities;
    (g) any other issue considered important by the Taupo District Council.

25. The consent holder shall keep records of the dates of irrigation of the wastewater, the location, the volume of wastewater applied to each block, and the rotation period between successive irrigation events. The records shall be made available to Waikato Regional Council at all reasonable times.

26. The consent holder shall inspect the property at monthly intervals and as soon as practicable after heavy rainfall events, to record the presence or not of erosion rills or gullies, tomos, seepages, or any other physical change to the property which may impact on the irrigation or accelerate nutrient losses, and shall keep records of those inspections.

27. Following commencement of irrigation on the site, the consent holder shall undertake quarterly inspections of the property and immediate surrounds, to determine whether any springs exist which are likely to be sourced from shallow groundwater flows on the

property. The consent holder shall take grab samples of any such springs identified, and shall test for conductivity and nitrate-nitrogen. After completion of 8 quarterly inspections and sampling rounds, the consent holder shall commence a monitoring programme of any springs identified which meet the criteria listed below. The monitoring programme shall consist of a minimum of six-monthly sampling, and testing for conductivity, nitrate-N, chloride, and E coli. The selection criteria for the monitored springs are:

(a) The spring flow shall be permanent, except in very dry weather.

116596

(b) The spring water is likely to be sourced predominantly from under the irrigated site

(c) The spring water is likely to be sourced from shallow groundwater or perched water zones above the normal water table.

In the event that no springs are identified which meet the above criteria, then no spring monitoring need be carried out after completion of the 8 quarterly sampling rounds.

Buffer distances to High Voltage Power Lines and Pylons

28 In accordance with the NZ Code of Practice for Electrical Safe Distances (NZECP 34:2001), the Electricity (Hazards from Trees) Regulations 2003, and Transpower NZ's Corridor Management Policy, the consent holder shall undertake the following actions and observe the following set back distances in relation to the irrigation:

(a) The effluent irrigators shall be operated and located to ensure that spray discharge will not directly contact the transmission lines or support structures. This shall be achieved by ensuring that all equipment is located and operated so that a 20 metres buffer (no spray zone) is maintained at all times. The buffer distance shall apply 20 metres either side of the centre line drawn directly underneath the transmission line.

(b) No part of any plumbing related to the wastewater irrigation shall be installed within 12 metres of the visible foundations of any High Voltage transmission line support structure.

(c) All irrigation machinery and mobile plant shall maintain a minimum clearance of 4 metres at all times from the High Voltage transmission lines.

(See also Advice Note 7 attached to this consent schedule)

Notification of limits being exceeded

29. The consent holder shall notify the Waikato Regional Council as soon as practicable and as a minimum requirement within 48 hours, of the consent holder becoming aware of the limits specified in conditions 4 and 5 of this resource consent being exceeded and/or of any accidental discharge, plant breakdown, or other circumstances which are likely to result in the limits of this resource consent being exceeded. In the event of wastewater entering surface water the consent holder shall notify the Waikato Regional Council as soon as practicable of the consent holder becoming aware of the event. The consent holder shall, within seven days of the incident occurring, provide a written report to the Waikato Regional Council, identifying the exceedance, or the runoff incident, possible causes, steps undertaken to remedy the effects of the incident and measures that will be undertaken to ensure future compliance.

Construction

30 In the event that any archaeological remains are discovered during construction activities, those activities shall cease immediately and a representative of Ngati Tahu and Ngati Tuwharetoa shall be notified; in addition the Waikato Regional Council shall be notified within 48 hours. Works may recommence with the written approval of the Waikato Regional Council. Such approval shall be given after the Waikato Regional Council has considered:

(a) Tangata Whenua interests and values,

(b) the consent holder's interests, and
(c) any archaeological or scientific evidence.

Warning signs

31 A warning sign shall be placed on the boundaries to View Road and to Broadlands Road which shall be legible to a person on those roads during daylight hours, warning that partially treated sewage may be present at the site.

Review (s128)

32. The Waikato Regional Council may in July 2013, July 2018, July 2023 and July 2028 serve notice on the consent holder under section 128 (1) of the Resource Management Act 1991, of its intention to review the conditions of this resource consent for the following purposes:

(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; or

(b) If necessary and appropriate, to require the holder of this resource consent to remove or reduce adverse effects on the surrounding environment due to groundwater nitrate or other parameter concentrations exceeding potable water standards offsite.

(c)To review the adequacy of and the necessity for monitoring undertaken by the consent holder, including but not limited to any monitoring which may be required of Lake Rotokawa, its wetland, and associated geothermal features.

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.

In terms of S116 of the Resource Management Act 1991, this consent commences on 11th March 2008

Dated at Hamilton this ***20th*** *day of* ***March 2008***

For and on behalf of the
Waikato Regional Council

.....

Advice notes

1. In accordance with section 125 RMA, this consent shall lapse five (5) years after the date on which it was granted unless it has been given effect to before the end of that period.
2. Where a resource consent has been issued in relation to any type of construction (e.g. dam, bridge, jetty) this consent does not constitute authority to build and it may be necessary to apply for a Building Consent from the relevant territorial authority.
3. This resource consent does not give any right of access over private or public property. Arrangements for access must be made between the consent holder and the property owner.
4. This resource consent is transferable to another owner or occupier of the land concerned, upon application, on the same conditions and for the same use as originally granted (s.134-137 RMA).
5. The consent holder may apply to change the conditions of the resource consent under s.127 RMA.
6. The reasonable costs incurred by Waikato Regional Council arising from supervision and monitoring of this/these consents will be charged to the consent holder. This may include but not be limited to routine inspection of the site by Waikato Regional Council officers or agents, liaison with the consent holder, responding to complaints or enquiries relating to the site, and review and assessment of compliance with the conditions of consents.
7. NZECP 34:2001 land use activity safe distances: All land use activities, including earthworks, operation of mobile plant, construction of access, buildings and/or structures located on the Rakaunui Road LDS and View Road LDS must comply with the New Zealand Code of Practice for Electrical Safe Distances (NZECP 34:2001).