

Schedule 1 – General Conditions for WAR120258 [31707, 32044, 32045, 33045]

1. The activity authorised by this Wastewater Discharge Permit shall be undertaken in general accordance with the application (including the Description and Assessment of Effects) lodged with the Wellington Regional Council on 7 April 2014 and further information received on:

- **2 June 2014; and**
- **An email dated 19 March 2015.**

Where there may be contradiction or inconsistencies between the application and further information or evidence provided by the applicant, the most recent information applies. In addition, where there may be inconsistencies between information provided by the applicant and conditions of the resource consent, the conditions apply. In particular, the environmental effects authorised by this permit are the effects as constrained and defined by the specific conditions of this permit excluding this general condition.

Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to Section 127 of the Resource Management Act 1991.

2. The consent holder shall engage in writing with the Manager Environmental Regulation, Wellington Regional Council, if any contingency works or variation from the present consent is required prior to undertaking any such activity. This is to ascertain whether the contingency work is within the scope of this consent, or whether a variation to the consent or additional resource consent will be required.

Upgrade Staging

3. The treatment system shall be upgraded in stages in accordance with the following table:

Stage Name	Stage Description	Stage to commence no later than:
Stage 1A	Plant Optimisation and minor capital works	Commencement of this consent
Stage 1B	Discharge of treated effluent to “MWWTP Adjacent” block during low-flow conditions	1 November 2017
Stage 2A	Discharge of treated effluent to Pain Farm (Stage 2A) <u>without</u> deferred storage	December 31, 2030
Stage 2B	Discharge of treated effluent to Pain Farm (Stage 2B) <u>with</u> deferred storage	December 31, 2035

Table 1: Land Management Stage Commissioning Programme

Management and Operations Plans

4. The consent holder shall prepare the Management and Operations Plans listed in Table 2 (below). The Plans
 - a) shall give effect to requirements in Schedule 1, 2, 3, and 4 (attached); and
 - b) may be prepared as separate plans; or
 - a)c) where approved in writing by the Manager, one or more plans may be combined as a single Plan.

5. The Plans in Table 2 (below), including any amendments, shall be approved by the Manager, Environmental Regulation, Wellington Regional Council. The consents shall thereafter be exercised in conformance with the endorsed Plans.
6. All Management Plans listed in Table 2 (below) are to be prepared by a suitably qualified and experienced person with expertise in the matters that the individual Management Plan is to address.

Management Plan	Due (time from commencement of consent)
MWWTP Operations and Maintenance Manual	6 Months
Tangata Whenua Values Monitoring Plan	12 Months
Inflow and Infiltration Reduction Management Plan	12 Months
Effluent Discharge Management Plan	12 Months
Land Discharge Management Plan	27 Months
Odour Management Plan	6 Months
Environmental Monitoring Plan	12 Months

Table 2: Management Plans

7. The content of the management plans shall be agreed with the Manager prior to being drafted and all management plans shall be reviewed and where necessary updated either:
 - a) annually within one month of the anniversary of the commencement date of this of consent or
 - b) Within three months of implementing a new stage as defined in Table 1, Condition 3; or
 - c) Where environmental monitoring supports a change. Any change shall be subject to the written approval of the Manager, Environmental Regulation, Wellington Regional Council

Advice Note: *The agreement with the Manager of content required before drafting of the required management plans required by Condition 7 above can be by way of a scoping activity during preliminary consideration. A comprehensive written document or outline is not intended or required to achieve compliance with this condition.*

Monitoring and Recording

8. The consent holder shall monitor and record wastewater flow and quality according to the frequency, and constituents specified in Schedule 6: Table 1, at
 - a) the locations specified in Schedule 6: Table 2 and Figure 1 (until such time as the Environmental Monitoring Plan is endorsed pursuant to Schedule 1: Condition 5); and
 - b) the monitoring locations specified in the Environmental Monitoring Plan (following its endorsement pursuant to Schedule 1: Condition 5).

Advice Note: *The intent of this condition is to confirm that the monitoring frequencies, constituents and locations will be those contained within Schedule 6 of this consent until such time as the Environmental Monitoring Plan is prepared and approved by the Manager. Following approval of the Environmental Monitoring Plan, all environmental monitoring would then be undertaken in accordance with the approved Environmental Monitoring Plan.*

9. To enable the sampling of the treated wastewater, easy and safe access, to a sampling port(s) shall be provided and maintained as close as is practicable to those sampling locations specified in Schedule 1: Condition 8.
10. The consent holder shall keep inspection records and operational logs which record regular inspections, identify changes in the operating procedures and record unusual events that occur at the plant. Copies of these records shall be supplied to the Manager, Environmental Regulation, Wellington Regional Council as required by Schedule 1: Condition 15, or within 20 working days of a written request by the Manager Environmental Regulation, Wellington Regional Council.
11. In respect of monitoring required by these consents, the following shall apply:
 - a) all monitoring techniques employed in respect of the conditions of this consent shall be carried out by suitably experienced and qualified persons;
 - b) all analytical testing undertaken in connection with these consents shall be performed by a laboratory that is IANZ accredited for the analytical tests;
 - c) all soil and water sample analyses shall be undertaken in accordance with the methods detailed in the "Standard Methods For The Examination Of Water And Waste Water, 2012" 22nd edition by A.P.H.A. and A.W.W.A. and W.E.F., or any other method approved in written advance by the Manager, Environmental Regulation, Wellington Regional Council; and
 - d) All macroinvertebrate sampling shall be undertaken as per Condition 13 Schedule 2.
12. Where an approved management plan or manual (including any review in accordance with Schedule 1:Condition 7) contains a monitoring, measurement, or recording methodology which differs from those specific methodologies contained within any condition of these resource consents, the management plan or manual methodology shall prevail.

Note: The intent of this condition is to ensure that appropriate industry methodologies can be applied over the term of consent without the need for an unnecessary variation to conditions (subject to the endorsement of the Manager).

Wastewater Volume Measurement

- 13A. The consent holder shall fit measuring equipment to monitor the wastewater flows at the following points and within the timeframes specified.
 - a) Inlet structure: ~~before~~ within one-nine months of commencement of this consent
 - ~~b) Discharge outflow: within one month of commencement of this consent~~
 - ~~b~~e) Land treatment volume: **prior** to any discharge of treated effluent to land (for Stage 1B and Stage 2A and 2B respectively)
- ~~13B. Flow volume measuring equipment (including inflow volume; outflow volume (as measured at or beyond the UV plant or beyond) and land discharge volume) shall be maintained in accordance with the Operations and Maintenance Manual (which shall include reference to manufacturer's specifications) for the duration of these consents. Measuring equipment shall be maintained to manufacturer's specifications for the duration of these consents.~~
14. Within one-three months of the commencement of this consent, the consent holder shall install a datalogger and flow measuring device at the discharge flow measurement point ~~to the~~

~~Ruamahanga River~~ that is compatible with the Welling Regional Council's Water Data Management System.

- a) The datalogger shall record the instantaneous treated wastewater discharge at a minimum of 15 minute intervals. The data shall be provided automatically on a daily basis in a format compatible with the Water Use Data Management System and;
- b) The datalogger unit and flow measuring device shall be installed and maintained by a suitably qualified person in accordance with manufacturer's specifications and industry best practice guidelines, and to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

Advice Note: discharge volume flow measurement is currently measured at the UV Plant prior to discharge. If the existing UV plant flow volume measurement device cannot be upgraded to include a data logger in accordance with this consent, an alternative flow recording and reporting process (manual or automated) shall be agreed with the Manager to achieve the intent of this condition. Such agreed alternative will constitute compliance with this condition.

15. Where the measuring equipment measures flow in a pipe, measurement error is to be no more than +/- 5%, and where installed at a weir or open channel, measurement error is to be no more than +/- 10% as an average across the flow range. The measuring equipment must:
 - a) be able to measure cumulative discharge;
 - b) be able to measure instantaneous flow rate;
 - c) be installed in accordance with the manufacturer's specifications; and
 - d) be calibrated annually.
16. The consent holder shall verify the accuracy of the measuring device/system required under condition(s) 14 and 15 by 30 June 2016 and a minimum of every five years thereafter, and as directed by the Manager, Environmental Regulation, Wellington Regional Council for the duration of this consent to determine if the actual volume of discharge is within +/- 5%.

Any verification of the measuring device/system under this condition must be performed by a suitably qualified person, and to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

Within **one month** of any verification being undertaken on the measuring device/system, the consent holder shall submit to the Manager, Environmental Regulation, Wellington Regional Council, a copy of the verification certificate/and or evidence documenting the calibration as completed by the person who undertook the verification.

Inflow and Infiltration

- ~~17. The consent holder shall minimise the volume of wastewater entering the WWTP by preventing, as far as is practicable, storm water inflow and infiltration into the wastewater reticulation network and treatment system. This shall include the prevention of stormwater run off from the land surrounding the treatment ponds.~~

Reporting

18. The consent holder shall provide a Quarterly Data and Exception Report for each three-month period ending 31 March, 30 June, 30 September and 31 December to the Manager, Environmental Regulation, Wellington Regional Council, within 30 working days of the end

of each three month period. The quarterly report shall be provided in hard copy and electronic format. The quarterly report shall include, but not be limited to, the following:

- a) The results of all monitoring undertaken in accordance with the conditions of this consent, with all monitoring data provided in a suitable electronic format;
- b) A brief commentary on any exceptions identified from the data and reasons for difficulties in achieving compliance with the conditions of this consent and/or any monitoring baselines included within a current Management Plan approved under this consent; and
- c) Subject to Schedule 1: Condition 26 a schedule summarising any complaints received during the quarter.

Where agreed in writing with the Manager, up to two quarterly reports may be combined into a single report for any such specified reporting period(s).

Advice Note: The Quarterly Data and Exception Report required under this condition on 30 September of any year may be incorporated into the Annual Report, but where it is shall be clearly identified for compliance monitoring purposes.

19. The consent holder shall provide to the Manager an Annual Report by 30 September each year, summarising compliance with the conditions of these consents for the previous compliance year (1 July to 30 June inclusive). The Annual Report shall be provided in hard copy and electronic format. This report shall include as a minimum:
 - a) a summary of all monitoring undertaken in accordance with the conditions of this consent, including analysis of the information in terms of compliance, comparison of performance against instream targets, and the potential significance of any identified adverse effects, carried out by a suitably qualified person;
 - b) a discussion on any trends or changes in environmental effects evident from the monitoring data, both within the annual period and compared to previous years;
 - c) any reasons for non-compliance or difficulties in achieving compliance with the conditions of this consent and/or any monitoring baselines included within a current Management Plan approved under this consent;
 - d) a discussion of the significance of any non-compliance and/or non-achievement with particular reference to whether that may be indicative of significant adverse effects on aquatic life after reasonable mixing, or any other significant adverse effect on the environment;
 - d) any measures that have been undertaken, or are proposed to be undertaken in the upcoming 12 months (or longer where relevant), to improve the environmental performance of the wastewater treatment and disposal system;
 - f) any recommendations on alterations/additions to the monitoring programmes and/or any changes to any of the Management Plans following any review in accordance with Schedule 1: Condition 7;
 - g) a schedule of any complaints recorded during the year and any follow up actions undertaken; and
 - i) any other issues considered important by the consent holder.

A copy of the Annual Report should be made available to the Community Liaison Group, Kahungunu ki Wairarapa and Rangitane o Wairarapa within 10 working days of submission to the Greater Wellington Regional Council.

Communications and Liaison

20. Within three months of the commencement of this consent, the consent holder shall establish a Community Liaison Group (CLG) in order to report to community members on the performance of the MWWTP, the long term strategy for wastewater treatment and discharge, progress with initiatives to reduce flow and load of contaminants to the MWWTP, improvements to MWWTP performance, and reductions to the volume and load of contaminants discharged to the Ruamahanga River. The consent holder shall invite Wellington Regional Council and all submitters to the application to attend the CLG meetings. The CLG shall be invited to meet at intervals as decided upon by the members of the CLG, but at least once per year, and records of the meetings shall be forwarded to the Manager Environmental Regulation, Wellington Regional Council, within two weeks of each meeting.
21. Within one month of commencement of this consent a WWTP liaison person shall be appointed by the consent holder to be the main and readily accessible point of contact. The consent holder shall take appropriate steps to seek to advise all stakeholders and interested persons of the stakeholder liaison person's name and contact details. If the liaison person will not be available for any reason, an alternative person shall be nominated by the consent holder and changes notified accordingly to those stakeholders/interested persons.

Resource Consent Compliance System

22. Within two months of commencement of this consent, the consent holder shall develop and implement a robust resource consent compliance management system, including the identification of the person responsible for monitoring compliance. The consent holder shall provide a written summary (including templates and examples as relevant) of the compliance system to the Manager, Environmental Regulation, Wellington Regional Council, by the end of the two month period. A copy of the summary shall also be provided to the members of the CLG, Kahungunu ki Wairarapa and Rangitane o Wairarapa.

Signage

23. For the duration of these consents, the consent holder shall:
- a) maintain signage on the true left and true right stream banks in the immediate vicinity of the treated wastewater outfall which shall at all times:
 - provide clear identification of the location and nature of the discharge; and
 - ~~state the width and downstream distance of the mixing zone authorised by this consent~~indicate the general frequency and duration of any direct discharges to water; and
 - provide a 24-hour contact phone number; and
 - be visible to the public visiting the area and legible from a distance of 20 metres without unnecessarily detracting from the visual amenity of the area.
 - b) maintain appropriate signage on the boundaries of the site which shall be legible to a person during daylight hours, warning that partially treated wastewater is discharged to land and may be present at the site.
24. The consent holder shall consult with Regional Public Health and provide a copy of their written approval regarding the wording of the signs prior to submitting them for approval to Wellington Regional Council. Written confirmation of the signage placement accompanied by photographs of the signage shall also be provided to the Manager, Environmental Regulation, Wellington Regional Council within one month of the commencement of this consent.

Access

25. The access gate to the site shall remain locked at all times that operational staff of the consent holder (which shall include authorised contractors) are not present on site, to prevent unauthorised access.
26. Stock access to the WWTP oxidation ponds and discharge channel shall be restricted, except that grazing of the pond embankment by stock shall be permitted under the management of the consent holder. All fences or other barriers shall be maintained by the consent holder to a suitable stock proof standard at all times.

On-site meeting with WWTP Operations Contractor

27. The consent holder shall arrange and conduct a consent information meeting within two months of the date of commencement of this consent. The purpose of the meeting shall be to confirm the conditions of the consents and the responsibilities of the contractor. The consent holder shall invite, with a minimum of 10 working days notice, the Wellington Regional Council and a representative from each key contractor operating the activity.

Complaints Register

28. The consent holder shall keep a record of any complaints that are received with respect to the operation of the WWTP and associated irrigation. The record shall contain the following details:
 - a) name and address of the complainant;
 - b) identification of the nature of the complaint;
 - c) date and time of the complaint and of the alleged event;
 - d) weather conditions at the time of the complaint; and
 - e) any measures taken to address the cause of the complaint.
29. The consent holder shall notify the Manager, Environmental Regulation, Wellington Regional Council of all complaints relating to the exercise of these consents, within 24 hours of being received by the consent holder, or the next working day. A schedule of all complaints shall be provided with the quarterly report.

System Failure

30. The system shall be maintained in an efficient operating condition at all times. In the event of any treatment failure that is likely to result in deterioration in the quality of the discharge which would affect the receiving environment, and potentially be in breach of any condition of this consent, the consent holder shall:
 - a) Take immediate steps to remedy and mitigate any adverse effects on the environment caused by the failure;
 - b) Notify the Manager, Environmental Regulation, Wellington Regional Council within 24 hours after the malfunction has been detected, detailing the manner and cause of that malfunction and the steps taken to mitigate its effects and to prevent recurrence. Notification can be sent to the Wellington Regional Council at notifications@gw.govt.nz. Please include the consent reference and the name and phone number of a contact person;

- c) The consent holder shall forward an incident report to the Manager, Environmental Regulation, Wellington Regional Council, within seven (7) working days of the incident occurring, unless otherwise agreed with the Manager, Environmental Regulation, Wellington Regional Council. The report shall describe the manner and cause of the incident, measures taken to mitigate/control the incident (and/or illegal discharge), and measures to prevent recurrence; and
- d) Notify Wairarapa District Health Board as soon as practicable after the malfunction has been detected.

Advice note: Compliance with this condition does not preclude Wellington Regional Council undertaking follow up enforcement investigations and actions against the consent holder.

31. Notification in accordance with Schedule 1: Condition 29(d) shall include but not be limited to:
 - The nature of the discharge,
 - Location of the discharge,
 - Start date and estimated time of the discharges,
 - End date and estimated time of the discharge (if known at the time of notification),
 - Estimated duration of the discharge (hours),
 - Maximum flow (litres/second) or estimate thereof,
 - Mean flow (litres/second) or estimate thereof,
 - Estimated volume (m³),
 - Cause of overflow/discharge,
 - Action taken (including signs, notification of interested parties, clean-up of stream etc.), and
 - The contact details of the person reporting the notification.

Review of Conditions

32. Wellington Regional Council may review any or all of the conditions of this consent by giving notice of its intention to do so pursuant to Section 128 of the Resource Management Act 1991, at any time within three months of the annual anniversary of the date of commencement of this consent for any of the following purposes:
 - to deal with 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;
 - to review the adequacy of any monitoring requirement(s) so as to incorporate into the consent any modification to any plan(s) or monitoring requirement(s) which may become necessary to deal with any adverse effects on the environment arising from the exercise of this consent;
 - to alter the monitoring requirement(s) in light of the results obtained from any previous monitoring;
 - to require remediation measures to be undertaken if adverse effects from the activity ~~are~~ greater than anticipated in the application are determined to be of sufficient significance as to reasonably warrant such intervention;
 - to incorporate Cultural Health Monitoring requirements; and/or
 - to enable consistency with relevant regional plans and NES requirements.

Resource Management Charges

33. A resource management charge, set in accordance with section 36(2) of the Resource Management Act 1991 shall be paid to Wellington Regional Council for the carrying out of its functions in relation to the administration, monitoring and supervision of the resource consents and for the carrying out of its functions under section 35 (duty to gather information, monitor and keep records) of the Act.

Schedule 2: WAR120258 [31707] - Discharge Permit to water: Discharge permit to discharge treated wastewater to the Ruamahanga River

Discharge Rate, Parameters and Regime

1. Subject to the additional restrictions during each Stage imposed by Schedule 2: Condition 2, this permit authorises the discharge of treated wastewater at:
 - a) An annual average daily flow of 650m³/day; and
 - b) A maximum daily rate of 4,300m³/day.

2. In addition to the maximum rates specified in Schedule 2: Condition 1, discharges to the Ruamahanga River shall be operated under the following conditions:
 - a) Discharge regime prior to the commissioning of Stage 1B land treatment
Until the commencement of the Stage 1 Land Treatment, treated wastewater shall be discharged to the River via the existing discharge channel at a rate not exceeding the maximum rates provided for in Schedule 2; Condition 1.

 - b) Stage 1B and 2A Discharge to Ruamahanga River
Following confirmation of commencement of Stage 1B Land Treatment in accordance with Schedule 2: Condition 6, discharges into the Ruamahanga River shall not exceed the following:

Flow in the Ruamahanga at Waihenga Bridge (L/s)	Max. Wastewater discharge (m ³ /day)	Max. Wastewater discharge rate (L/s)
Below 24,930 (< HMF)	Nil	Nil
24,930 to 49,860 (< median)	1350	11
49,860 to 99,720 (< 2 x median)	2700	21
99,720 to 149,580 (< FRE3)	3000	35
Above 149,580 (> FRE3)	4300	50

~~The discharge shall be managed in a way that is consistent with achieving the percentages outlined in the Assessment of Environmental Effects, 7 April 2014 refer Tables 2 and 3).~~ On an annual basis, the consent holder shall provide a report to Wellington Regional Council, assessing the discharge against the table above (including a monthly discharge volume breakdown), identifying any exceedances that have occurred, and identifying if/as required any improvements or changes to the discharge regime .

- c) Stage 2B Discharge to Ruamahanga River
Following confirmation of commencement of Stage 2B Land Treatment in accordance with Schedule 2: Condition 6, there shall be no discharge of treated effluent to Ruamahanga River when the flow in the Ruamahanga River at Waihenga Bridge is less than three times the median flow (149,580 L/s).

Advice Note: Contingency measures to manage pond storage volumes shall be included in the Effluent Discharge Management Plan to minimise, as far as practicable, any discharge to the Ruamahanga River during Stage 2B (i.e. land treatment shall be the priority where practicable and where the effects are less on the environment ~~to~~ of discharge to land are less than discharge directly to the river).

3. Any treated wastewater discharged to the Ruamahanga River shall meet the following standards:
- The concentration of BOD₅ shall not exceed ~~35g~~60g/m³ in more than 8 out of any 12 consecutive monthly test results;
 - The concentration of TSS shall not exceed ~~55g~~90g/m³ in more than 8 out of any 12 consecutive monthly test results;
 - The concentration of Total Ammonia-nitrogen (NH₄-N) shall not exceed ~~20g~~30g/m³ in more than 8 out of any 12 consecutive monthly test results; and
 - The concentration of TN shall not exceed ~~29mg~~35mg/l in more than 8 out of any 12 consecutive monthly test results.
 - The concentration of DRP shall not exceed ~~5g~~7g/m³ in more than 8 out of any 12 consecutive monthly test results.

Advice Note: Compliance will be demonstrated based on the monthly samples as set out in Schedule 6: Table 1.

4. The following UV treatment standards shall apply:
- For discharges up to ~~2,800~~3,000m³/day no more than 5 of 10 consecutive E.coli values shall exceed 100 cfu per 100 millilitres, and no more than 2 out of 10 consecutive values shall exceed 1,400 cfu per 100 millilitres; or
 - For discharges over ~~2,800~~3,000m³/day, UV treatment shall be applied to a minimum of ~~2,800~~3,000m³/day and the remaining flow may have no UV treatment.
5. All discharges to the Ruamahanga River shall be made via the existing surface discharge channel at the location identified in Schedule 6: Figure 1.

Advice Note: Instantaneous flows in the Ruamahanga River at the Waihenga Bridge site are measured by Wellington Regional Council and are available on the website at the following link <http://graphs.gw.govt.nz/ruamahanga-river-at-waihenga-bridge/>

Confirmation of Land Treatment

- The consent holder shall confirm in writing to the Manager, Environmental Regulation, Wellington Regional Council the commencement date of any land treatment in Stages 1B, 2A and 2B. This confirmation shall be provided no less than 20 working days prior to any irrigation on the respective land treatment site.
- A copy of the confirmation required by Schedule 2; Condition 6 shall also be provided to the members of the Community Liaison Group, Kahungunu ki Wairarapa and Rangitane o Wairarapa, no more than five working days after the Manager, Environmental Regulation, Wellington Regional Council, has been advised.

Stage 1B health and mixing zone investigation

- Within **three months** of commencement of Stage 1B, the consent holder shall develop a Monitoring Protocol to characterise mixing of the direct and indirect (land) discharge with river water-flows and to measure the instream river-health in at distances of 250m, 500m, and 1000m downstream of the discharge in a range of river and wastewater flow conditions relevant to Stage (1B). As a minimum, the survey shall be carried out in both winter and summer conditions, and include sampling during maximum wastewater discharge flows proposed for Stage 1B at no less than three river flows, including at river-about median flow.

~~and~~ at or ~~close just below to~~ half median flows (and where there is no direct discharge from the WWTP) on at least one sampling occasion and include monitoring of periphyton growth, macroinvertebrate communities, Ammoniacal-N, DO, DRP, and BOD. Periphyton and macroinvertebrate communities shall follow the protocols and methodologies set in Schedule 2: conditions 12 and 13 of this consent. The Monitoring Protocol shall be ~~developed in consultation with a water quality expert appointed~~prepared by the Consent Holder and submitted for the approval by of the Manager, Environmental Regulation, Wellington Regional Council, and approved by the Manager, Environmental Regulation, Wellington Regional Council, prior to the monitoring taking place.

9. Within **15 months** of commencement of Stage 1B of this consent, a Near Zone River Health and Mixing Report shall be submitted to the Manager, Environmental Regulation, Wellington Regional Council which outlines the investigation, analyses, and findings of the River Health Survey required by Schedule 2: Condition 8. ~~The Report shall include confirmation of the suitability of the reasonable mixing zone.~~

Environmental monitoring

Water Quality Sampling

10. Subject to Schedule 1: Condition 8, the consent holder shall collect representative grab samples from the Ruamahanga River according to the frequency, constituents and locations detailed in Schedule 6: Table 1, Table 2 and Figure 1.

Macroinvertebrate Sampling

11. The consent holder shall have an appropriately qualified and experienced ecologist undertake macroinvertebrate sampling annually in the period between January 1 and March 31 at surface water locations identified in Schedule 6: Table 2 and Figure 2, ~~each year until the second anniversary of the commencement of Stage 2B~~every year for two years before and after the commissioning of Stage 1B land discharge, and thereafter every second year until such time as a lesser frequency is approved in writing by the Manager, Environmental Regulation, Wellington Regional Council.

Advice Note: The timing of the invertebrate sampling is intended to reflect in-stream conditions under the discharge to water regime and under the discharge to land regime. In addition, for certainty, sampling locations are subject to change under Schedule 1: Condition 8.

12. The sampling and assessment required under Schedule 2: Condition 11 shall be undertaken following a period of at least three weeks without a significant flood event (defined as an instantaneous river flow exceeding three times the estimated median flow in Ruamahanga River at Waihenga and during a period of low flow.
13. The macroinvertebrate sampling shall follow Protocols C3 (Hard-bottomed quantitative), P3 (full count with subsampling option) and QC3 (Quality control for full count with subsampling option) from the Ministry for the Environment's "protocols for sampling macroinvertebrates in wadeable streams" (Stark et al. 2001). This shall involve:
 - a) collection of five replicate 0.1m² Surber samples at random within a 20m section of riffle habitat at each sampling site;

- b) full count of the macroinvertebrate taxa within each replicate sample to the taxonomic resolution level specified for use of the Macroinvertebrate Community Index (MCI); and
- c) enumeration of the results as taxa richness, MCI, QMCI, %EPT taxa and %EPT individuals.

Periphyton and Algae Assessment

14. The consent holder shall have an appropriately qualified and experienced freshwater ecologist undertake an assessment of the percentage cover, biomass and community composition of periphyton, filamentous algae and cyanobacterial mats in run habitat, as close as possible to the sites defined in Schedule 6: Table 2 and Figure 2. The periphyton assessment shall be undertaken every year to coincide with macroinvertebrate monitoring and reporting (refer Schedule 2: Condition 11).

The periphyton and algal assessment is to include:

- a) a visual assessment of the percentage cover of both filamentous algae and algal mats (to the nearest 5%) at five points across each of four transects encompassing run habitat and extending across the width of the river at each sampling site. Reported estimates shall include:
 - (i) Percentage cover of visible stream bed by bacterial and/or fungal growths (sewage fungus) visible to the naked eye;
 - (ii) Percentage cover of visible stream bed by filamentous algae more than 2cm long;
 - (iii) Percentage cover of visible stream bed by diatoms or cyanobacteria mats more than 0.3cm thick;
 - (iv) Percentage cover of visible stream bed by diatoms less than 0.3cm thick; and
 - (v) Percentage cover of visible stream bed that is clean.
- b) collection of a composite periphyton sample across each sampling site using method QM-1a from the Stream Periphyton Monitoring Manual (Biggs and Kilroy 2000) at the same established monitoring sites and transects as defined in Condition 10 above (a composite of scrapings from eight rocks, two from each transect), using method QM-1b from the Stream Periphyton Monitoring Manual (Biggs and Kilroy 2000). The composite sample shall be analysed for ash free dry weight and chlorophyll *a*.

15. The consent holder shall have an appropriately qualified and experienced freshwater ecologist undertake an assessment of the percentage cover of deposited sediment in run habitat, as close as possible to the sites identified in Schedule 6: Table 2 and Figure 1. The deposited sediment assessment shall be undertaken twice per year, including once annually to coincide with macroinvertebrate monitoring required by Schedule 2: Condition 11.

Receiving water standards

16. From the date of commencement of this consent, the consent holder shall ensure that the discharge does not cause or breach any one or more of the following in the Ruamahanga River at the distances downstream of the outfall set out in Table 3:
- a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
 - b) bacterial and / or fungal slime growths visible to the naked eye as plumose growths or mats; or
 - c) the receiving water to become unsuitable for consumption by farm animals; or
 - d) a reduction in horizontal visibility exceeding 30%; or

- e) the DO concentration to fall below 80% saturation; or
- f) a reduction in QMCI of greater than 20%; or
- g) the concentration of total ammoniacal nitrogen to exceed 0.400 mg/m³;
- h) the chlorophyll a concentration (mg/m²) to exceed 120 mg/m²;
- i) the maximum cover of visible streambed of periphyton as filamentous algae more than 2cm long to exceed 30%; or
- j) the maximum cover of visible streambed of periphyton as mat algae more than 0.3cm thick to exceed 60%.

Clause		Distance from outfall at which the limit applies			
		Stage 1A	Stage 1B	Stage 2A	Stage 2B
a) to e)	conspicuous oil or grease films, scums or foams, or floatable or suspended materials; bacterial and / or fungal slime growths the receiving water to become unsuitable for consumption by farm animals horizontal visibility reduction Dissolved oxygen	250m	250m	250m	250m
f)	QMCI	500m	250m	250m	250m
g)	Ammoniacal-N	250m	250m	250m	250m
h), i) and J)	Chlorophyll a, periphyton cover	500m	500m	250m	250m

Table 3: distance from the outfall at which the limit applies.

17. If the consent holder is unable to comply with Condition 16 d) e) or g) above, the consent holder shall use a Wilcoxon Signed Rank test to determine if there are any statistically significant increases or decreases. If it is determined that there are significant differences in accordance with the Wilcoxon Signed Rank occurring ($p = 0.05$ or lower), the permit holder shall undertake an investigation into the effects of the discharge from the Martinborough WWTP compared with upstream contamination. The findings shall be reported in the annual report required by Condition 19 (Schedule 1).

Advice Note: To perform the statistical test, analysis needs to be against a minimum of ten upstream and downstream paired results from the monthly sampling.

Comment [KG1]: It is recommended that these standards are included within the Effluent Discharge Management Plan as Environmental Monitoring Baselines, for the purpose of operational performance and comparative assessment of adverse effects on the receiving environment.

Reporting

18. The findings and results of investigations undertaken in accordance with Schedule 2: Conditions 10, 11, 14 and 15 shall be incorporated and submitted in annual reports, as required by Schedule 1: Condition 19. The reports must note any differences encountered with reference to the applicable discharge regime and assess compliance against the discharge quality standards listed in Schedule 2: Condition 3 and the water quality standards listed in Schedule 2, Condition 16.

Schedule 3: WAR120258 [32045] – Discharge permit to air – discharge permit to discharge odours from the oxidation ponds and odours and other contaminants from irrigation of treated effluent to land

Odour Management

1. There shall be no discharges of odour to air that are noxious, dangerous, offensive or objectionable resulting from the operation of the MWWTP, at or beyond the boundary of the WWTP site as designated (Ds065) in the Wairarapa Combined District Plan.
2. There shall be no discharges of odour to air that are noxious, dangerous, offensive or objectionable resulting from the irrigation of effluent from either the Stage 1B (MWWTP) or Stage 2A and 2B (Pain Farm) Land Treatment sites, at or beyond the boundary of the respective irrigation area site boundaries.
3. There shall be no spray drift that is noxious, dangerous, offensive or objectionable resulting from the irrigation of effluent from either the Stage 1B (MWWTP) or Stage 2A and 2B (Pain Farm) Land Treatment sites, at or beyond the boundary of the respective irrigation area site boundaries.
4. All irrigation of treated effluent under Schedule 4 shall be managed in general accordance with the relevant parts of the Effluent Discharge Management Plan (Schedule 1: Condition 4) relating to the land treatment discharge.
5. The management of odour from the scheme shall be in general accordance with the Odour Management Plan (Schedule 1: Condition 4).

Advice Note: The irrigation of treated wastewater to land is regulated by the Wairarapa Combined District Plan, including minimum buffer distances to property boundaries and operational parameters.

Schedule 4: WAR120258 [32044] – Discharge permit to land – discharge permit to discharge treated wastewater to land via an irrigation system

Discharge Rate and Quality

1. The discharge of treated wastewater to land shall not exceed the following rates:
 - a) Stage 1B Land Treatment: MWWTP 795 m³/day
 - b) Stage 2A and 2B Land Treatment: Pain Farm 4300 m³/day
2. The effluent hydraulic loading rate shall not exceed the following:
 - a) 35mm depth per week, and no more than 15mm in any 24 hour period during Stage 1B; and
 - b) 21mm depth per week, and no more than 9mm in any 24 hour period during Stage 2A or 2B and only when there is a corresponding soil moisture deficit.
3. Any treated wastewater discharged shall meet the following standards:
 - a) The concentration of BOD₅ shall not exceed 60g/m³ in 9 out of any 12 consecutive monthly test results;
 - b) The concentration of TSS shall not exceed 90g/m³ in 9 out of any 12 consecutive monthly test results;
 - c) The nitrogen loading rate shall not exceed a maximum of 300kg/ha/yr from any source and is to be determined from the average of 12 consecutive monthly test results and the average monthly flow collected in accordance with the Environmental Monitoring Plan and any applied rates of other sources (Schedule 1: Condition 4).

Advice Note (Compliance): The standards contained in Condition 1, 2, and 3 above shall apply only until such time as the relevant Land Discharge Management Plan for Stage 1B, or Stage 2A and/or Stage 2B is prepared and approved by the Manager. Following approval of the relevant Land Discharge Management Plan, relevant discharge rate and quality standards would then be those incorporated with the current approved Management Plan, not the standards and terms contained in Condition 1, 2, and/or 3 above, or any superceded management plan.

4. The detailed design of the land treatment irrigation proposed for Stage 1B shall be included in the Effluent Discharge Management Plan and Land Discharge Management Plan (Schedule 1: Condition 4).
5. Detailed design for Stage 2A and 2B Irrigation shall be included with a revision to the Effluent Discharge Management Plan and the Land Discharge Management Plan in accordance with Schedule 1: Condition 4.
6. ~~The design of the land treatment irrigation schemes for Stage 1B, 2A and 2B shall be undertaken to, where practicable, give effect to the following:~~
 - ~~a) Discharge of treated wastewater to the irrigation area shall be evenly distributed to the entire area being utilised for irrigation; not cause runoff or surface ponding; and not lead to the development of anaerobic soil conditions.~~
 - ~~b) Avoid the discharge of wastewater to land within 125m of the property boundary, except that wastewater may be discharged to land within 25m from the property boundary where: median E.coli concentrations are less than 100cfu/100ml; and irrigation is at low pressure (less than 1.4 bar); and,~~

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~~the irrigation boom does not exceed 1.52m from ground level and does not incorporate an "end gun";
wind speed does not exceed 12m/s (or 4m/s sustained for a period of 15 minutes or more) in a direction toward an existing dwelling (at the time of commencement of this consent) on an adjoining site within 300m of the irrigation area-~~

7. The discharge of treated wastewater to the irrigation area shall be in general accordance with the Effluent Discharge Management Plan (Schedule 1: Condition 4).

Monitoring

8. The consent holder shall continuously measure and maintain daily records of wastewater flows entering the treatment plant and the volume of the treated wastewater discharged to the land application area, to record the quantity of material being received and applied.
9. The consent holder shall record the location and volume applied to various irrigation areas within the land application system.
10. The consent holder shall record crop and pasture management practices across the site including:
 - a) Cultivation date;
 - b) Sowing date;
 - c) Fertiliser applications;
 - d) Harvesting; and
 - e) Any other management practices
11. The consent holder shall carry out groundwater sampling according to the constituents and frequency specified in the Environmental Monitoring Plan; and samples shall be taken in accordance with the most recent version of Wellington Regional Council's groundwater sampling protocol.
12. During Stage 1B, 2A and 2B, the consent holder shall undertake soil monitoring in accordance with the Environmental Monitoring Plan during the period of September and October every second year to assess soil health and performance of the land treatment scheme.

Reporting

13. The findings and results of investigations in Schedule 4: Conditions 11 and 12 shall be incorporated and submitted in the Annual Report (Schedule 1: Condition 19). The reports must note any differences encountered with reference to the applicable discharge regime and provide reasons where appropriate as to why irrigation has not been maximised.

Schedule 5: WAR120258 [33045] – Discharge permit to land – discharge permit to discharge treated wastewater to land via seepage from MWWTP oxidation ponds and the discharge channel

Discharge Rate

1. The rate of discharge to land (and subsequently groundwater) from the base and sides of the oxidation and maturation ponds and base and sides of the discharge channel via seepage is for 24 hours per day, 7 days per week, 52 weeks per year.

Monitoring

2. The consent holder shall:
 - a) carry out groundwater sampling according to the constituents and frequency in Schedule 6: Table 1, and at locations identified in Schedule 6: Table 2 and Figure 1; and
 - b) samples shall be taken in accordance with the most recent version of Wellington Regional Council's groundwater sampling protocol.

Reporting

3. The results of monitoring undertaken in accordance with Schedule 5: Condition 2 shall be incorporated and submitted in the Annual Report, as required by Schedule 1: Condition 15.

Schedule 6 - Monitoring Summary

Table 1: Sampling Parameters, Frequency and Location

Location	Inlet	Outlet	Land discharge area	Ruamahanga River	Groundwater sampling (pond seepage)	Groundwater sampling (land application area)
Constituent	Post inlet screening	Post UV		At locations in Table 2 and Figure 1	At locations in Table 2 and Figure 1	At locations in Table 2 and Figure 1
Flow	Every 15 minutes	Every 15 minutes	Daily		Water level below top of casing 6 monthly during summer and winter	Water level below top of casing 6 monthly during land application in summer and during winter rest period
Inspection	Daily	Daily	Daily		6 Monthly	Before and after land application season
Pond level		Daily				
Soil moisture and Rainfall			Daily			
UV Dosage			Daily			
Biological Oxygen Demand BOD	TBC	Monthly		Monthly	Annually	
Suspended Solids SS	TBC	Monthly		Monthly		
<i>E. coli</i>		Monthly		Monthly	Annually	Before and after land application season
Faecal Coliforms		Monthly		Monthly	Annually	
Ammoniacal Nitrogen NH3-N	TBC	Monthly		Monthly	Annually	
Nitrate Nitrogen NO3-N	TBC	Monthly		Monthly	Annually	Before and after land application season
Total Phosphorus TP	TBC	Monthly		Monthly	Annually	Before and after land application season

Total Nitrogen TN	TBC	Monthly		Monthly	Annually	Before and after land application season
Dissolved Reactive Phosphorus DRP	TBC	Monthly		Monthly	Annually	Before and after land application season
Particulate Organic Matter POM		Monthly		Monthly	Annually	
pH	TBC	Monthly		Monthly	Annually	
Conductivity	TBC	Monthly		Monthly	Annually	
Temperature	TBC	Monthly		Monthly	Annually	
Clarity (black disc)		Monthly		Monthly		
Dissolved Oxygen DO	TBC	Monthly		Monthly	Annually	

Note: Schedule 1 : Condition 12 applies to Schedule 6: Table 1 to the extent that where an approved management plan or manual (including any review in accordance with Schedule 1:Condition 7) contains a parameter, frequency, or detection limit which differs from those specific methodologies contained within this table, the management plan or manual methodology shall prevail. This is to ensure that current appropriate industry methodologies can be applied without the need for an unnecessary variation to conditions (subject to the endorsement of the Manager).



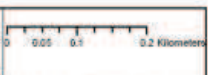
Table 2: Monitoring Sites

APPROXIMATE SAMPLING SITE LOCATION	NZTM N	NZTM E
A. Wastewater Sampling Site		
Discharge to Ruamahanga River	1804567	5434977
UV Treatment Plant	1804562	5434931
Martinborough Receiving Water (Ruamahanga River)		
Upstream of discharge	1804399	5435667
50m downstream	1804399	5435103
250m downstream	1804267	5435237
500m downstream	1804038	5435261
B. Groundwater Sampling Sites		
<i>[To be confirmed in the Environmental Monitoring Plan]</i>		

Note: Schedule 1: Condition 12 applies to Schedule 6: Table 2 to the extent that where an approved management plan or manual (including any review in accordance with Schedule 1: Condition 7) contains a monitoring location which differs from those specific methodologies contained within this table, the management plan or manual methodology shall prevail. This is to ensure that current appropriate industry methodologies can be applied without the need for an unnecessary variation to conditions (subject to the endorsement of the Manager).

Figure 1: Indicative monitoring site locations (NB Inlet monitoring location to be confirmed upon installation of equipment during Stage 1A)



	 <p>Date: 6/03/2014</p>	<p>Martinborough Waste Water Treatment Plant River Water Quality Monitoring Sites</p>	<p><small>DISCLAIMER: The Masterton, Carterton, and South Wairarapa District Councils accept no responsibility for actions or property undertaken on land or structures situated, by any individuals or company, or agency using all or any of the information presented on this map. The Councils do not provide interpretation of this information or advice on how to interpret, or utilize the information. It can be used for professional advice should be sought. The information displayed on this map may contain errors or omissions or may not have the spatial accuracy required for some purposes.</small></p>	 <p>1:15,000 Drawn by: Emma Davison</p>
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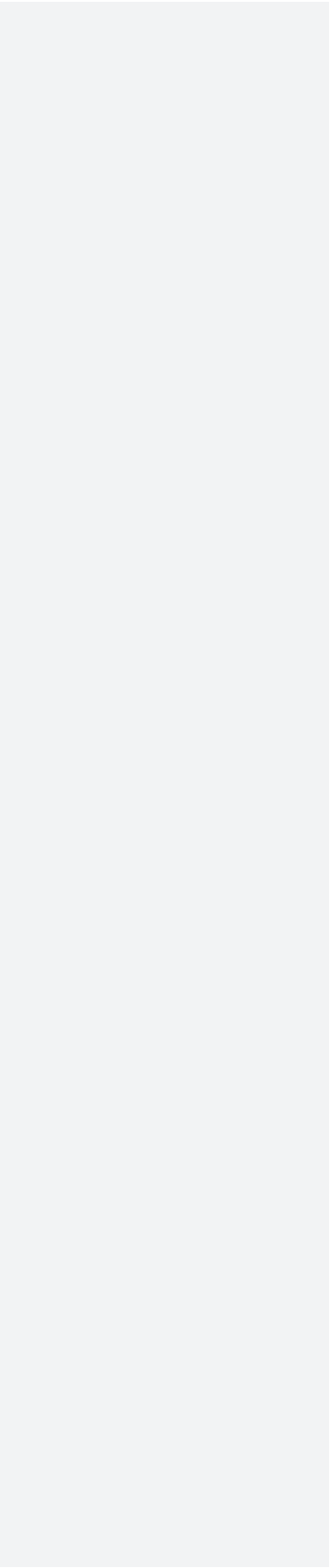


Figure 2: Indicative macroinvertebrate monitoring site locations

Figure 1: Locality Map for Sampling Sites Upstream (U2) and Downstream (D1 and D2) of the Discharge of Treated Wastewater from the Martinborough Oxidation Pond to the Ruamahanga River.

