#### Consent No. WAR090120

Category:

Discharge Permit to land (seepage)

[30652]:

Discharge permit to discharge partially treated wastewater to land and groundwater through the base of

the existing oxidation ponds;

[30653]:

Discharge permit to discharge partially treated wastewater to land and groundwater through the base of

the existing wetland treatment system.

Pursuant to sections 104B, 105, 107 and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name

Address

**Duration of consent** 

Purpose for which right is

granted

Carterton District Council

Dalefield Road, Carterton

Commences: 14 October 2013

Expires: 14 October 2017

Replacement consent for the continued operation of the Carterton Wastewater Treatment Plant which involves:

The discharge of partially treated wastewater to land and groundwater via seepage from the existing oxidation ponds and the existing wetland treatment system

Legal description of land

Conditions

Lot 1 DP 24549, Lot 2 DP 24549, Lot 1 DP 30724 & Lot 2 DP 30724

Schedule 3: Conditions 1 – 3, Schedule 5 & 6 as attached

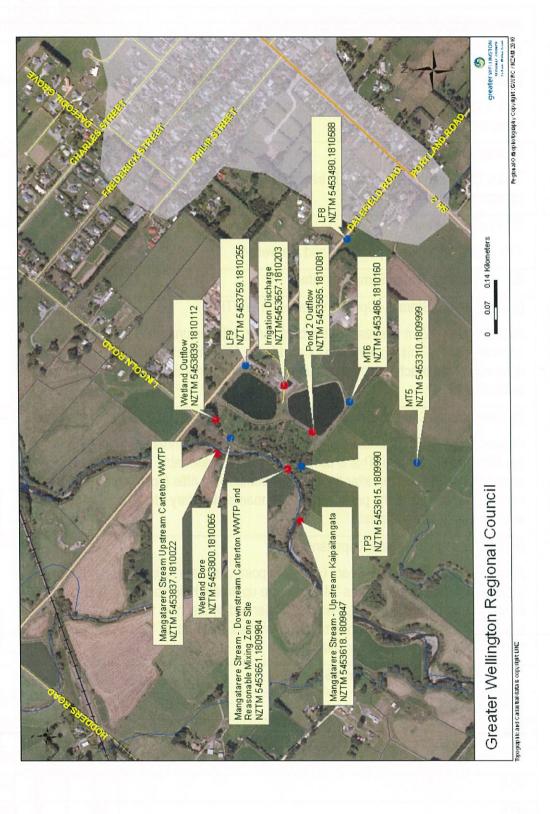
For and on behalf of

WELLINGTON REGIONAL COUNCIL

Manager, Environmental Regulation

Date: 14 October 2013

# **WAR090120** [30652, 30653] Schedule 6 – Figure 1: Monitoring site locations **Conditions to Resource Consent**



# Conditions to Resource Consent WAR090120 [30652, 30653]

Schedule 6 – Figure 2: Irrigation Blocks



# Conditions to Resource Consent WAR090120 [27253]

#### Management

1. There shall be no discharges to air that are noxious, dangerous, offensive or objectionable resulting from the operation of the Carterton Wastewater Treatment Plant, at or beyond the boundary of the waste water plant site as designated (Dc007) in the Wairarapa Combined District Plan.

#### **Odour Management Plan**

- 2. An Odour Management Plan shall be prepared within three months of the commencement of this consent by a suitably experience person in air discharges and shall include (but is not limited to) the following details:
  - a) The details of the operating and maintenance regimes to manage odours;
  - b) Procedures for maintaining continuous monitoring of dissolved oxygen levels in the upper layer of the oxidation pond;
  - c) Procedures for regular visual and maintenance inspections of the treatment plant;
  - d) Details of regular required treatment plant maintenance;
  - e) Procedures for monitoring and managing pond levels to minimise wave action that might result in aerosols:
  - f) Procedures for monitoring and managing pond sludge levels;
  - g) The details of influent screening and biosolids management including ingress, egress and covering of trucks, and covering of any stored screenings, sludge or biosolid piles;
  - h) The details of the odour complaints procedure, record keeping and response procedure;
  - i) Identify the likely sources of odour on a Map.
  - j) Describe in detail your procedure for dealing with complaints.

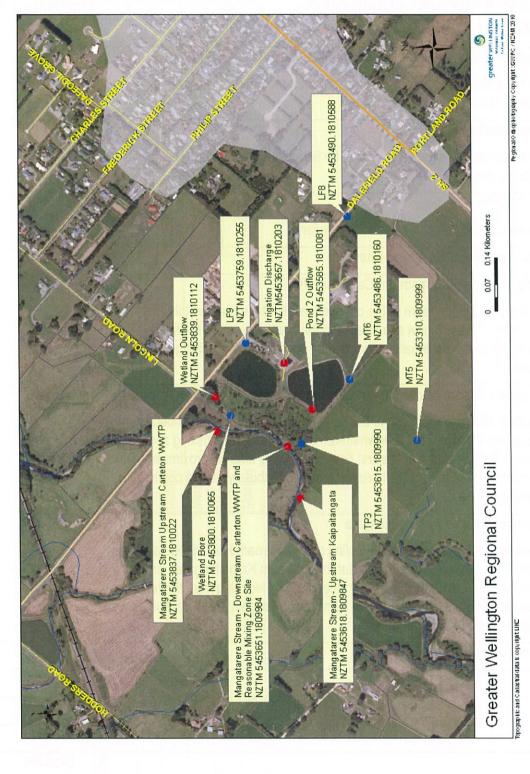
# Conditions to Resource Consent WAR090120 [27253]

Schedule 5 - Table 1: Monitoring Summary Table

Table 1: Sampling Parameters, Frequency and Detection Limit

	in the second			Frequency			Detection Limit
Location	Inlet	Pond 2	Discharge to unnamed tributary	Land discharge area	Mangatarere Stream	Groundwater sampling	is ti 20 Table
Constituent	Before primary tank Pond 2 outflow before wetland	Pond 2 outflow before wetland	Wetland Outflow		At locations in Table 2	At locations in Table 2	
Flow	Every 15 minutes	Every 15 minutes	Every 15 minutes		Monthly	Water level below top of casing	As per condition 21: Schedule A,
Inspection	Daily	Daily	Daily	Daily	Monthly	Monthly	Ato
Pond level		Daily		2 V		17	10mm
Soil moisture		je k		Daily			C
Biological Oxygen Demand Monthly BOD	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1g/ m³
Suspended Solids SS	Monthly	Monthly	Monthly	Monthly	Monthly	1	1g/m³
E. coli	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1 cfu/100 ml
Faecal Coliforms	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1 cfu/100 ml
Ammoniacal Nitrogen NH3- Monthly N	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m³
Nitrate Nitrogen NO3-N	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m <sup>3</sup>
Total Phosphorus TP	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m <sup>3</sup>
Total Nitrogen TN	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1g/m³
Dissolved Reactive Phosphorus DRP	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.005g/m³

Schedule 6 - Figure 1: Monitoring site locations



# Conditions to Resource Consent WAR090120 [27253]

Schedule 6 – Figure 2: Irrigation Blocks



#### Consent No. WAR090120

Category: [27252]:

Discharge Permit to water

Discharge permit to discharge treated wastewater to

Mangatarere Stream:

Pursuant to sections 104B, 105, 107 and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name

Address

**Duration of consent** 

Purpose for which right is granted

Legal description of land

Conditions

Carterton District Council

Dalefield Road, Carterton

Commences: 14 October 2013

Expires: 14 October 2017

Replacement consent for the continued operation of the Carterton Wastewater

Treatment Plant which involves:

The discharge of tertiary treated wastewater to the Mangatarere Stream; and

Lot 1 DP 24549, Lot 2 DP 24549, Lot 1 DP 30724 & Lot 2 DP 30724

Schedule 1: Conditions 1 - 17, Schedule 5 & 6 as attached

For and on behalf of WELLINGTON REGIONAL COUNCIL

Manager, Environmental Regulation

Date: 14 October 2013

#### **Definitions**

In the following conditions, the expressions below have the meaning given:

Definitions:		
WWTP	Waste Water Treatment Plant	
BOD <sub>5</sub>	Carbonaceous five days Biochemical Oxygen Demand	
NH <sub>4</sub> -N	Total Ammoniacal Nitrogen	
NO <sub>x</sub> -N	Total oxidised nitrogen	
TN	Total Nitrogen	
TP	Total Phosphorus	
TSS	Total Suspended Solids	
DRP	Dissolved Reactive Phosphorous	
E.coli	Escherichia coli	
DO	Dissolved oxygen	
g/m <sup>3</sup>	Grams per cubic metre	
L/s	Litres per second	
Manager	Manager Environmental Regulation, Wellington Regional Council	

# Conditions to Resource Consent WAR090120 [27252]

- 1. Discharges to the unnamed tributary of the Mangatarere Stream shall be operated under the following conditions:
  - a) There shall be no discharge of treated wastewater to the unnamed tributary of the Mangatarere Stream at times when the flow in the Mangatarere Stream at State Highway 2 (SH2) is below the estimated half median flow (1,140 litres/second) except as authorised under condition 2;
  - b) When the flow in the Mangatarere Stream at SH2 is between the estimated half median (1,140 litres/second) and estimated three times median (6,840 litres/second), the Consent Holder shall ensure that the dilution ratio of stream flow to discharged treated wastewater is not less than 50:1;
  - c) When the flow in the Mangatarere Stream at SH2 is above three times estimated median flow (6,840 litres/second), the Consent Holder shall ensure that the dilution ratio of stream flow to discharged treated wastewater is not less than 30:1, unless the treatment ponds are at full capacity.

The estimated median flow for Mangatarere Stream at SH2 has been derived from the correlation between flows in the Mangatarere Stream at the Gorge and SH2 bridge sites:

- (i) Median flow for the Mangatarere stream is a flow of 2,280 litres/second;
- (ii) Half median flow for the Mangatarere Stream is a flow of 1,140 litres/second; and
- (iii) Three times median flow for the Mangatarere Stream is a flow of 6,840 litres/second.

Instantaneous flows in the Mangatarere Stream are measured at SH2 bridge site by Wellington Regional Council and are available on the website at the following link <a href="http://www.gw.govt.nz/mangatarere-river-at-sh/">http://www.gw.govt.nz/mangatarere-river-at-sh/</a>.

- 2. Discharges to the Mangatarere Stream will not be permitted to occur at times when the flow in the Mangatarere Stream at SH2 is below the estimated half median flow (1,140 litres/second) unless:
  - a) The land discharge area is at or above capacity as defined by condition 1, 5 and/or 7 of Schedule 2; and
  - b) The wastewater treatment ponds are full; and
  - c) The consent holder has consulted with Greater Wellington Regional Council no later than 5 days prior to the discharge commencing or at the time when the wastewater treatment ponds reach 90% of maximum capacity whichever occurs earlier:
    - i. The consent holder must submit written evidence to the Manager for Greater Wellington's Regional Council which addresses:
      - (1) the anticipated volume, dilution and duration of the discharge; and
      - (2) the proposed measures intended to manage the discharge flow and to mitigate any resultant adverse effects on the environment; and
  - d) The dilution of the discharge is not less than 30:1; and
  - e) The consent holder has obtained written approval from the Manager prior to discharge. This written approval may include requirements that must be met during the discharge regime (including the requirement that wastewater be discharged to land in excess of the usual requirements of Condition 1 of Schedule 2).

**Advisory Note:** Notifications can be e-mailed to <a href="mailed-to-notifications@gw.govt.nz">notifications@gw.govt.nz</a>. Please include the consent reference WAR09120 and the name and phone number of the relevant contact person.

- 3. Where a discharge occurs pursuant to Condition 2 of Schedule 1, the Consent Holder shall:
  - a) Take a grab sample of the discharged wastewater and the receiving environment in accordance with Table
     1: Schedule 5. Sampling shall occur between 0 and 30 minutes after the discharge commences and once daily thereafter for the duration of the discharge; and
  - b) If the discharge occurs for more than 14 days within any 30 day period, the consent holder shall undertake macroinvertebrate sampling in Surface Water Sampling Sites A(i), B(i) and B(ii) identified in Table 2: Schedule 5 and Figure 1: Schedule 6. The macroinvertebrate sampling must be carried out in accordance with conditions 13 and 14: and
  - c) Within one month of the discharge ending the consent holder shall submit a report to Greater Wellington Regional Council detailing:
    - i. The results of any grab sampling; and
    - ii. The results of any macroinvertebrate sampling; and
    - iii. An analysis of the reasons necessitating the discharge; and
    - iv. A summary of the recommendations and improvements that have been and/or are programmed to be made (including timeframes) to improve the system and the management of the wastewater treatment plant to prevent future discharge events from occurring.

#### During the Period 1 January to 31 March

- 4. Should flows exceed estimated half median (1,140 litres/second), discharge to the unnamed tributary or the Mangatarere Stream is only permitted when:
  - a) the conditions of consent [27251] do not permit any further irrigation; and
  - b) when there is no storage capacity remaining within the larger WWTP system; and
  - c) when a minimum dilution of 30:1 can be achieved; and
  - during the period 1 January to 31 March inclusive, any discharges of treated wastewater from the WWTP to the unnamed tributary of the Mangatarere Stream which do occur shall as far as practicable be of a minimal occurrence and duration, especially during the river flow recession period as flows recede from 1.5 times median flow. And where possible discharges shall be limited to times when the flow in the Mangatarere Stream is predicted to exceed three times the median flow for longer than six hours duration.

Advisory Note: Discharge can occur during this period providing land application options have been exhausted and further storage is not possible, and providing a dilution of 30:1 is achieved.

- 5. Should a discharge occur during the period 1st January to 31st March in accordance with condition 4: Schedule 1, the Consent Holder shall:
  - Take a grab sample of the discharged wastewater and the receiving environment 'Wastewater and Surface Water Sites located in Schedule 5 Table 2 and Schedule 6 Figure 1. Sampling shall occur between 0 and 30 minutes after the discharge commences and once daily thereafter for the duration of the discharge; and
  - b) If the discharge occurs for longer than 14 days within any 30 day period, the consent holder shall undertake macroinvertebrate sampling in Surface Water Sampling Sites A(i), B(i) and B(ii) identified in Schedule 5: Table 2 and Schedule 6:Figure 1. The macroinvertebrate sampling must be carried out in accordance with Schedule 1 conditions 13 and 14; and
  - c) Within one month of the discharge occurring the consent holder shall submit records to Greater Wellington Regional Council detailing:
    - a. The results of any grab sampling; and
    - b. The results of any macroinvertebrate sampling.

# **Continued Conditions to Resource Consent WAR090120 [27252]**

- 6. Should a discharge occur during the period 1<sup>st</sup> January to 31<sup>st</sup> March in accordance with Condition 4: Schedule 1, the Manager shall be advised **24 hours prior** to the discharge, and a summary report provided within **10 working days** of the discharge ceasing, indicating:
  - a) The dates and duration of the discharge;
  - b) Records of the corresponding flow in the Mangatarere Stream;
  - c) Reasons for the discharge, and an identification of mitigation for future discharges;
  - d) Result of water quality analysis.

**Advisory Note:** Notifications can be e-mailed to <a href="mailed-to-notifications@gw.govt.nz">notifications@gw.govt.nz</a>. Please include the consent reference WAR09120 and the name and phone number of the relevant contact person. The pollution hotline is available 24 hours per day 7 days per week on 0800 496 734.

7. Should a discharge occur in during the period 1st January to 31st March in accordance with condition 4: Schedule 1, the Consent Holder shall notify the public health unit of the Wairarapa District Health Unit **24 hours prior** to the discharge. The significance of the discharge and Mangatarere Stream conditions shall be discussed along with the need for any public advisory notices.

#### **Discharge Quality**

- 8. In addition to condition 5: Schedule A and in accordance with condition 15: Schedule A, the following UV treatment standards shall apply:
  - a) For discharges up to 5,000m³/day the median of 10 consecutive E coli values shall not exceed 100 per 100 millilitres, and no more than 2 out of 10 consecutive values shall exceed 1,400 per 100 millilitres; or
  - b) For discharges between 5,000m³/day and 10,000m³/day the median of 10 consecutive E coli values shall not exceed 10,000 per 100 millilitres; or
  - c) For discharges over 10,000m³/day, UV treatment shall be applied to a minimum of 10,000m³/day with the median of 10 consecutive E coli values shall not exceed 10,000 per 100 millilitres, and the remaining flow shall have no UV treatment.

#### **Receiving Water Standards**

- 9. The discharge of treated wastewater from the WWTP shall not cause any of the following effects in Mangatarere Stream beyond the reasonable mixing zone, at a distance of 100 metres or more from the first flow constricting riffle where the unnamed drain confluences with the Managatarere Stream as identified in Table 2: Schedule 5 and Figure 1: Schedule 6 as Mangatarere Stream Downstream of Carterton WWTP:
  - a) At all times:
    - (i) the production of any conspicuous oil or grease films, scums or foams or floatable or suspended material; or
    - (ii) any emission of objectionable odour;
  - b) Within 12 months of the commencement of this consent:
    - (i) the rendering of fresh water unsuitable for consumption by farm animals; or
    - (ii) change the horizontal visibility (defined as the horizontal sighting range of a 200mm black disc) by more than 40%;
  - c) Within three years of the commencement of this consent:
    - (i) any significant adverse effect on aquatic life; or
    - (ii) the maximum cover of the bed by periphyton as filamentous growths (more than 2cm long) to exceed 30%: or
    - (iii) the maximum cover of the bed by periphyton as diatom or cyanobacteria mats (more than 0.3cm thick) to exceed 60%; or

- (iv) the biomass of periphyton as filamentous growths or mats on the bed to exceed 120mg chlorophyll a/m² over a representative reach; or
- (v) dissolved oxygen to be below 80% saturation; and
- (vi) the concentration of total ammonia-nitrogen to exceed 0.9g/m3; and

#### When compared with the upstream monitoring site defined in Table 2: Schedule 5:

- (i) any conspicuous change in colour or visual clarity; or
- (ii) change the horizontal visibility (defined as the horizontal sighting range of a 200mm black disc) by more than 20 %; or
- (iii) the QMCI to be reduced by more than 20%; or
- (iv) an increase in percentage Deposited Sediment cover greater than 10%; or
- (v) temperature to increase by more than 2 degrees; or
- (vi) pH to change by more than ±0.5; and
- (vii) Reasonable mixing shall be deemed to have occurred within 100 metres of the confluence of the unnamed tributary with the Mangatarere Stream (as shown on Figure 1 of Schedule 6), as measured downstream in the active channel of the Mangatarere Stream.

**Advice Note:** The above standards for dissolved oxygen and total ammonia-nitrogen shall be considered to be breached only when:

- (i) the concentration or any parameter recorded or measured at the downstream site is above the standards set in condition (c) ii, iii, iv, x or xi; and
- (ii) the increase between the upstream and downstream concentration (calculated in Formula 1 below) is equal to or exceeds 20%; and
- (iii) the discharge is occurring into Stream flows below 3 x estimated median flow in the Mangatarere Stream.

Formula 1: Percentage of increase = 100 X [(downstream result – upstream result)/upstream result]

#### Surface Water Discharge Management Plan

- 10. A Surface Water Discharge Management Plan shall be prepared and submitted to the Manager for approval by a suitably qualified and experienced expert in stream biota assessment within **three months** of the commencement of this consent. Prior to submitting, the draft plan will have been provided to the Manager for review and comment. This plan will develop options and mitigation measures to be used on a regular basis to reduce the impact of the discharge on the Mangatarere Stream, especially in the period before condition 9(c): Schedule 1 come into effect. The plan and associated works will include consideration of, but not limited to:
  - a) inflow and infiltration controls;
  - b) wetlands upgrade;
  - c) discharge proportional to stream flow;
  - d) additional storage; and
  - e) additional treatment.

#### **Environmental monitoring programme**

Water Quality Sampling

11. The Consent Holder shall collect representative grab samples from the Mangatarere Stream according to the frequency, constituents, detection limits and locations detailed in Table 2: Schedule 5 and Figure 1: Schedule 6. All sites shall be sampled on the same day. As far as practicable, the monthly surface water sampling day shall coincide with the wastewater sampling day required under condition 18: Schedule A.

# **Continued Conditions to Resource Consent WAR090120 [27252]**

#### Macroinvertebrate Sampling

- 12. The Consent Holder shall have an appropriately qualified and experienced ecologist undertake macroinvertebrate sampling twice each year at surface water locations identified in Table 2: Schedule 5 and Figure 1: Schedule 6.. These surveys shall be undertaken prior to the changeover between land and water discharge regimes, i.e. once in November to December at the end of the water discharge regime, and once in March/April at the end of the land discharge regime.
  - **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.
- 13. The sampling and assessment required under condition 12 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 the Mangatarere Stream at [State Highway 2] and during a period of low flow.
- 14. 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 0.1m<sup>2</sup> 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

- 15. 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 Table 2: Schedule 5 and Figure 1: Schedule 6. The periphyton assessment shall be undertaken twice per year, every year to coincide with macroinvertebrate monitoring and reporting. 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 & 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 & Kilroy 2000). The composite sample shall also be analysed for ash free dry weight and chlorophyll *a*.
- 16. 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 Table 2: Schedule 5 and Figure 1: Schedule 6. The deposited sediment assessment shall be undertaken twice per year, annually to coincide with macroinvertebrate monitoring and reporting required by Condition 12: Schedule 1.

#### Reporting

17. The findings and results of investigations in conditions 11, 12, 15 & 16: Schedule 1 shall be incorporated and submitted in quarterly reports, as required by condition 25: Schedule A. The reports must note any differences encountered with reference to the applicable discharge regime and assess compliance against the Water Quality Standards listed in condition 5: Schedule 1.

# Continued Conditions to Resource Consent WAR090120 [27252]

# Schedule 5 - Table 1: Monitoring Summary Table

Table 1: Sampling Parameters, Frequency and Detection Limit

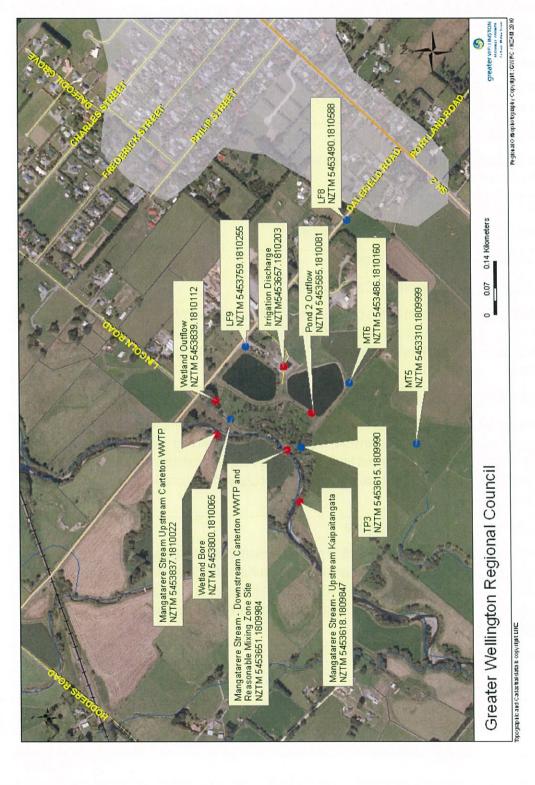
				Frequency			Detection Filling
Location	Inlet	Pond 2	Discharge to unnamed tributary	Land discharge area	Mangatarere Stream	Groundwater sampling	
Constituent	Before primary tank Pond 2 outflow before wetland	Pond 2 outflow before wetland	Wetland Outflow		At locations in Table 2	At locations in Table 2	
Flow	Every 15 minutes	Every 15 minutes	Every 15 minutes		Monthly	Water level below top of casing	As per condition 21: Schedule A,
Inspection	Daily	Daily	Daily	Daily	Monthly	Monthly	
Pond level		Daily					10mm
Soil moisture				Daily			
Biological Oxygen Demand Monthly BOD	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1g/ m³
Suspended Solids SS	Monthly	Monthly	Monthly	Monthly	Monthly		1g/m³
E. coli	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1 cfu/100 ml
Faecal Coliforms	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1 cfu/100 ml
Ammoniacal Nitrogen NH3- Monthly N	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m³
Nitrate Nitrogen NO3-N	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	$0.01g/m^3$
Total Phosphorus TP	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m <sup>3</sup>
Total Nitrogen TN	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1g/m³
Dissolved Reactive Phosphorus DRP	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.005g/m³

				Frequency			Detection Limit
Particulate Organic Matter POM	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m³
Hd	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1 pH
Conductivity	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1µS/cm
Temperature	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1 °C
Clarity (black disc)	Monthly	Monthly	Monthly	Monthly	Monthly	1	0.1 m
Dissolved Oxygen DO	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.2g/m <sup>3</sup>

### **Continued Conditions to Resource Consent** WAR090120 [27252] Schedule 5 - Table 2: Monitoring Sites

APPROXIMATE SAMPLING SITE LOCATION	NZTM N	NZTM E
A. Wastewater Sampling Site		
(i) Discharge point the unnamed tributary of the Mangatarere Stream	5453839	1810112
This is at the existing discharge point into the unnamed tributary of the Mangatarere Stream		
(ii) Irrigation Discharge	5453657	1810203
This is at the container where it is treated by filtration and UV prior to being pumped to the driplines		
(iii) Pond 2 Outflow	5453585	1810081
This is located between pond two and the wetland		
B. Surface Water Sampling Sites		1:00
(i) Mangatarere Stream - Upstream Carterton WWTP	5453837	1810022
Approximately 120m upstream of the confluence with the unnamed tributary (upstream site). This is a new site located in the Mangatarere immediately upstream of the reach potentially influenced by contaminants discharged from the wetland cells		
(ii) Mangatarere Stream - Downstream Carterton WWTP	5453651	1809984
Approximately 100m downstream of the confluence of the unnamed tributary with the Mangatarere Stream. This is downstream of the reasonable mixing zone, undertaken in the first run after the first flow-constricting riffle (approximately 100 metres downstream of the point where the unnamed tributary (drain) confluences with the Mangatarere Stream)		
(iii) Mangatarere upstream Kaipaitangata	5453618	1809847
Approximately 230m downstream (sampling point upstream Kaipaitangata Stream confluence). This approximates "Mangatarere upstream Kaipaitangata", and is downstream of the main area potentially influenced by leaching from the land application area, situated approximately 80 metres upstream of the confluence of the Mangatarere and Kaipaitangata		
C. Groundwater Sampling Sites		
LF8	5453490	1810588
LF9	5453759	181025
TP3	5453615	1809990
MT6	5453486	181016
MT5	5453310	180999
WETLAND BORE	5453800	181006

Schedule 6 – Figure 1: Monitoring site locations



# **Continued Conditions to Resource Consent WAR090120 [20752]**

Schedule 6 – Figure 2: Irrigation Blocks





#### Consent No. WAR090120

Category: Discharge Permit to land, air & water

[27251]: Discharge permit to discharge treated wastewater to

land via an irrigation system;

[27252]: Discharge permit to discharge treated wastewater to

Mangatarere Stream;

[27253]: Discharge permit to discharge odours from the oxidation

ponds and other operational activities;

[30652]: Discharge permit to discharge partially treated

wastewater to land and groundwater through the base of

the existing oxidation ponds;

[30653]: Discharge permit to discharge partially treated

wastewater to land and groundwater through the base of

the existing wetland treatment system.

Pursuant to sections 104B, 105, 107 and 108, and subject to all the relevant provisions of the Resource Management Act 1991 and any regulations made thereunder, a consent in respect of a natural resource is hereby granted to:

Name

Address

**Duration of consent** 

Purpose for which right is granted

Carterton District Council

Dalefield Road, Carterton

Commences: 14 October 2013

Expires: 14 October 2017

Replacement consent for the continued operation of the Carterton Wastewater Treatment Plant which involves:

The discharge of tertiary treated wastewater to land via the existing sub-surface dripline irrigation system;

The discharge of tertiary treated wastewater to the Mangatarere Stream; and

The discharge of partially treated wastewater to land and groundwater via seepage from the existing oxidation ponds and the existing wetland treatment system;

Discharge permit to discharge odours from the oxidation ponds and other operational activities to air. The discharge of odours to air from the operation of the oxidation ponds and other operational activities related to the wastewater treatment plant.

Legal description of land

Conditions

Lot 1 DP 24549. Lot 2 DP 24549. Lot 1 DP 30724 & Lot 2 DP 30724

Schedule A Conditions 1 – 50, Schedule 5 & 6 as attached

For and on behalf of WELLINGTON REGIONAL COUNCIL

Manager, Environmental Regulation

Date: 14 October 2013

#### Schedule A - Carterton WWTP discharge

To carry out the following activities associated with the upgrading and operation of the Carterton Wastewater Treatment Plant and the provision for the associated discharge of treated wastewater to water, land and air:

#### **Discharge Permits**

[27251]:	Discharge permit to discharge treated wastewater to land via an irrigation system.
[27252]:	Discharge permit to discharge treated wastewater to the Mangatarere Stream.
[27253]:	Discharge permit to discharge odours from the oxidation ponds and other operational activities to air.
[30652]:	Discharge permit to discharge partially treated wastewater to land and groundwater through the base of the existing oxidation ponds.
[30653]:	Discharge permit to discharge partially treated wastewater to land and groundwater

through the base of the existing wetland treatment system.

Consent is granted subject to the following conditions, for a duration of 4 years from the date of the

#### **Definitions**

commencement of the consent.

In the following conditions, the expressions below have the meaning given:

Definitions:	
WWTP	Waste Water Treatment Plant
BOD <sub>5</sub>	Carbonaceous five days Biochemical Oxygen Demand
NH <sub>4</sub> -N	Total Ammoniacal Nitrogen
NO <sub>x</sub> -N	Total oxidised nitrogen
TN	Total Nitrogen
TP	Total Phosphorus
TSS	Total Suspended Solids
DRP	Dissolved Reactive Phosphorous
E.coli	Escherichia coli
DO	Dissolved oxygen
g/m <sup>3</sup>	Grams per cubic metre
L/s	Litres per second
Manager	Manager Environmental Regulation, Wellington Regional Council

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# Conditions to Resource Consent WAR090120 [27251, 27252, 27253, 30652, 30653]

#### Schedule A - General Conditions:

- The activity authorised by this Wastewater Discharge Permit shall be undertaken in general accordance with the concepts, parameters, drawings, specifications, statement of intent, proposed mitigation measures and other information lodged with the Wellington Regional Council on 30 September 2008 and further information received on:
  - 08 June 2010: Carterton District Council Discharge to Land and Water Assessment of Effects on the Environment Prepared by NZET Ltd and Dated 8 June 2010;
  - 18 December 2009: Response to Section 92 Request Prepared by NZET Ltd;
  - 28 March 2011: Technical Report prepared by Aquanet Consulting Ltd titled 'Carterton District Council
    Wastewater Treatment Plant Discharge of Treated Wastewater to the Mangatarere Stream, dated 28
    March 2011:
  - 06 December 2011: Addendum Report prepared by Olivier Ausseil, Aquanet Consulting Ltd and titled 'Report of Olivier Ausseil Consulting Water Scientist';
  - 20 September 2011: Response prepared by Greg Butcher regarding the Tatham Bore and ground water direction;
  - 21 December 2012: Memorandum from the Hearing Panel to the Participants dated 21 December 2011;
  - 16 March 2012: Documents prepared by NZET and titled 'Responses made to memorandum section 7.2
    'recommended plan,' 'Carterton Wastewater Treatment Plant Discharge Consents Consent
    Implementation Strategy' and 'CDC Revised Conditions Version 2';
  - 03 April 2012: Report prepared by Christine Foster titled An application by Carterton District Council
    pursuant to section 88 of that Act for discharge permits to land, water and air to enable the continued
    operation of the Carterton Wastewater Treatment Plant;
  - 01 May 2012: Memorandum Prepared by Hugh Dixon-Paver at Greater Wellington Regional Council and titled, 'Memo to Hearing Panel re CDC response: Carterton WWTP';
  - 22 May 2012: Memorandum from Hearing Panel to Participants dated 22 May 2012;
  - 20 June 2012: Carterton District Council Further Submission including Memorandum from CDC to Hearings Panel, CDC revised conditions Version 5 and CDC Wastewater Guide;
  - 20 June 2012: Further Submission prepared by Corina Jordan, Wellington Fish & Game Council dated 20 June 2012;
  - 20 June 2012: Further Submission prepared by Dr Stephen Palmer, Wairarapa District Health Board dated 18 June 2012;
  - 30 July 2012: Closing Statement prepared by Colin Wright, CDC and titled 'CDC Wastewater Consent Right of Reply / Closing Statement.'

Where there may be contradiction or inconsistencies between the application and further information 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 permit, the conditions apply.

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 consult in writing with the Manager Environmental Regulation, Wellington Regional Council (hereafter referred to as "the Manager"), 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.

#### Inflow and Infiltration (I&I) Management

3. The Consent Holder shall minimise the volume of treated wastewater entering the WWTP by preventing, as far as is practicable, stormwater inflow and infiltration into the wastewater reticulation network and treatment system. This shall include the prevention of stormwater run-off from the land surrounding treatment ponds.

Note: The reporting on I&I management is required under condition 40 of the consent.

#### Discharge Rate, Parameters and Regime

- 4. This Permit authorises the discharge of secondary treated wastewater at:
  - a) An annual average daily flow of 3,500m<sup>3</sup>/day; and
  - b) A maximum daily rate of 30,000m<sup>3</sup>/day.
- 5. Any treated wastewater discharged in accordance with consents [27251] and [27252] shall meet the following standards:
  - a) The concentration of BOD<sub>5</sub> shall not exceed 40g/m<sup>3</sup> in 7 out of any 10 consecutive monthly test results;
  - b) The concentration of TSS shall not exceed 85g/m<sup>3</sup> in 7 out of any 10 consecutive monthly test results;
  - c) The concentration of Total Ammonia-nitrogen (NH<sub>4</sub>-N) shall not exceed 20g/m³ in 7 out of any 10 consecutive monthly test results; and
  - d) The concentration of DRP shall not exceed 8g/m³ in 7 out of any 10 consecutive monthly test results.

**Advice Note:** Compliance will be demonstrated based on the monthly grab samples required by Schedule A, condition 18.

6. At all times the Consent Holder shall ensure the volume of treated wastewater discharged to land is maximised and the volume discharged to surface water is minimised. On any given day that a discharge occurs to the unnamed tributary of the Mangatarere Stream the Consent Holder must have collected information demonstrating that the volume discharged to land has been maximised.

#### **Management and Operations Plans**

- 7. The Consent Holder shall prepare the Plans listed in Table 1. The Plans shall give effect to requirements in Schedule 1, 2, 3, and 4 (attached) and may be prepared as separate plans or as part of a combined plan.
- 8. The Plans in Table 1 (below), including any amendments, shall be subject to the written approval of the Manager. The consents shall thereafter be exercised in conformance with the approved Plans.
- 9. All Plans listed in Table 1 (below) are to be prepared by a suitably qualified and experienced person with expertise in the matters that the individual Plan is to address.

**Table 1: Management Plans** 

	Consents	Due (time from commencement of consent)
Overriding Operations and Management Plan	All	3 months
Tangata Whenua Values Monitoring Plan	All	12 months
Surface Water Discharge Management Plan	27252	3 months
Irrigation Management Plan	27251	3 months
Odour Management Plan	27253	3 months

## Continued Conditions to Resource Consent WAR090120 [27251, 27252, 27253, 30652, 30653]

10. All management plans shall be reviewed and where necessary updated annually within one month of the anniversary of the commencement date of this of consent. Updated plans shall be subject to the written approval of the Manager.

#### Overriding Operation and Maintenance Plan (OOMP)

- 11. The Consent Holder shall prepare an Overriding Operations and Management Plan (OOMP) and submit this to the Manager within **three months** of the commencement of this consent and set out how the effective and efficient operation of the wastewater treatment plant will be achieved. The OOMP shall include as a minimum:
  - a brief description of the treatment and discharge system, including a site map indicating the locations of all waste streams entering the treatment system, treatment device(s), points of discharge, and monitoring sites;
  - b) on-site responsibilities, including operation and maintenance of the site;
  - how the system will be operated and maintained to meet the requirements of the conditions of these consent;
  - d) measures to minimise the discharge during times when people are likely to be using the Mangatarere Stream for recreation (including adjustments to the timing of discharge depending on the season if appropriate);
  - e) management of the ponds and wetland system to cope with peak flows and prevent unauthorised discharges;
  - f) key operational matters, including daily, weekly and monthly maintenance checks;
  - g) monitoring procedures covering all aspects of these consents to demonstrate compliance with the conditions, including regular checks for potential unauthorised discharges of untreated or partially treated wastewater to the unnamed tributary of the Mangatarere Stream arising from discharge/ emergency relief/ overflow valves;
  - h) contingency plans in the event of system malfunctions or breakdowns; and the means of receiving and dealing with any complaints.
- 12. The Consent Holder shall manage the WWTP discharge in accordance with the OOMP and shall advise the Manager in writing of any changes to the OOMP.

#### Management of Pond Level

- 13. The Consent Holder shall be able to demonstrate, upon request by the Manager that ponds are at their lowest possible operational level at all times. This shall include providing records, on request, that demonstrate that discharge to land in accordance with consent [27251] has been maximised.
- 14. The Consent Holder shall not permit the wastewater level in the Carterton WWTP oxidation ponds or wetlands to overtop the pond or wetland's walls.

#### Discharge Upgrades

- 15. Within **twelve months** of the commencement date of these consents, the Consent Holder have installed an Ultraviolet (UV) plant capable of treating wastewater flows up to 10,000m³/day from the wetland system.
- 16. The Consent Holder shall consider and implement any additional changes necessary to ensure compliance with the wastewater quality standards in condition 5: Schedule A and Condition 8: Schedule 1.

#### Wastewater Monitoring and Recording

- 17. 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:
  - a) Wetland outflow at location specified in Table 2: Schedule 5 and Figure 1: Schedule 6; and
  - b) Irrigation discharge at locations specified in Table 2: Schedule 5 and Figure 1: Schedule 6.
- 18. The Consent Holder shall monitor influent and treated wastewater flow and quality according to the frequency, constituents and detection limits specified in Table 1: Schedule 5, and at locations specified in Table 2: Schedule 5 and Figure 1: Schedule 6. Samples shall be representative grab samples at each of the sampling ports.
- 19. 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, in the Quarterly Report, as required in Condition 25: Schedule A.
- 20. 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, 2005" 21st 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; and
  - d) if any monitoring sites are identified as unsuitable, alternative monitoring sites shall be identified and developed after consultation with the Manager.

#### Wastewater Volume Measurement

- 21. Within **one month** of the commencement of this consent, the Consent Holder shall fit and maintain measuring equipment to monitor the wastewater flows at the following points:
  - a) inlet works;
  - b) pond 2 outflow;
  - c) the point at which treated wastewater is distributed to the discharge to land area.
- 22. Within **one month** of the commencement of this consent, the consent holder shall install a datalogger and flow measuring device at the discharge point of the unnamed tributary of the Mangatarere Stream that is compatible with Wellington Regional Council's Water Use Data Management System.
  - 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.
- 23. 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%. 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 by 31 July.

## Continued Conditions to Resource Consent WAR090120 [27251, 27252, 27253, 30652, 30653]

- 24. The consent holder shall:
  - a) Verify the accuracy of the wastewater measuring devices and datalogger system required under condition(s) 21 and 22 within **three months** of the commencement of this consent to determine if the actual volume of water taken is within +/- 5% and where installed at a weir or open channel, measurement error is to be no more than +/- 10%; and
  - b) Any verification of the wastewater meter under this condition must be performed by a suitably qualified person, that is to the satisfaction of the Manager, Environmental Regulation, Wellington Regional Council.

#### Reporting

- 25. The Consent Holder shall provide a **Quarterly Report** for each three-month period ending 31 March, 30 June, 30 September and 31 December to the Manager 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:
  - 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) An assessment of compliance with the conditions of this consent;
  - c) Reasons for non-compliance or difficulties in achieving compliance with the conditions of this consent; and
  - d) Details (including photographs) of inspections and maintenance undertaken during the period under review.
- 26. The Consent Holder shall provide 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 a critical analysis of the information in terms of compliance and adverse environmental 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;
  - any reasons for non-compliance or difficulties in achieving compliance with the conditions of this consent;
  - d) any measures that have been undertaken, or are proposed to be undertaken in the upcoming 12 months, to improve the environmental performance of the wastewater treatment and disposal system;
  - e) a summary of monitoring and results from Cultural Health Monitoring;
  - f) any recommendations on alterations/additions to the monitoring programmes;
  - g) a copy of any complaints recorded during the year and any follow up actions undertaken; and
  - h) any other issues considered important by the Consent Holder.

Note: A copy of the report shall be provided to the Community Liaison Group.

#### Cultural Health Monitoring Plan

27. Within **12 months** commencement of this consent, the Consent Holder shall submit a Cultural Health Monitoring Plan (CHMP) to the Manager. A longer timeframe is acceptable if approved by the Manager.

- 28. The CHMP shall be developed following consultation with Kahungunu ki Wairarapa and Rangitaane o Wairarapa and shall include, but not be limited to, the following considerations:
  - a) What cultural health indicators the above organisations would like monitored within the Mangatarere Stream environment:
  - b) The methodology of how the identified cultural health indicators will be sampled/evaluated;
  - c) The monitoring frequency for the identified cultural health indicators;
  - d) A map showing the location of the identified cultural health indicators sampling point(s); and
  - e) Any other relevant information.
- 29. The CHMP shall be developed in accordance with the Ministry for the Environment's 'Cultural Health Index for Streams and Waterways, 2006' as appropriate or any other relevant guideline.
- 30. The Consent Holder shall engage suitably qualified and experienced personnel to assist in the preparation of the CHMP and undertake the monitoring. Repeat monitoring shall use the same sites.
- The results of the monitoring required by the CHMP, shall be reported to the Manager on an annual basis, by 30 September. The assessment of the monitoring results shall be undertaken by a suitably qualified person that is to the satisfaction of the Manager.

The CHMP report shall include, but not be limited to, the following:

- The results of all monitoring undertaken under the CHMP;
- A discussion of the likely impact the discharges are having/had on the cultural values of the waterbody including cumulative effects, if possible;
- A comparison of the results with any previous monitoring undertaken in accordance with the CHMP;
- Any recommendations for changes to the CHMP (e.g. indicator species, monitoring sites), and why;
- Any recommendations for mitigation and minimising the impact of the discharges on cultural values of the waterbody, is possible;
- Copies of any comments on the monitoring results that have been received from the organisations included in condition 28; and
- Any other relevant information.

The report shall be to the satisfaction of the Manager.

32. Upon review of the CHMP report, the Consent Holder can update the CHMP or the Manager can request the CHMP be updated to incorporate the learning's from previous monitoring undertaken. Any amendments to the CHMP shall be submitted to and be to the satisfaction of the Manager.

#### Signage

- 33. 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; and
    - provide a 24-hour contact phone number; and
    - be visible to the public visiting the area and legible from a distance of 50 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.
- 34. The Consent Holder shall consult with Wairarapa Public Health and provide a copy of their written approval regarding the working 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 Manger within one month of the commencement of this consent.

# Continued Conditions to Resource Consent WAR090120 [27251, 27252, 27253, 30652, 30653]

#### **Complaints Register**

- 35. The Consent Holder shall keep a record of any complaints that are received. 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.
- The Consent Holder shall notify the Manager 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.
- 37. The Consent Holder shall forward to the Manager a copy of any complaints recorded in the annual report required by Condition 26 of these Schedule A.

#### Investigations

#### Water budget report

- 38. Within **eighteen months** of the commencement of this consent, the Consent Holder shall complete a water and nutrient budget for the Carterton WWTP and submit to the Manager a report on its findings. The water budget report shall be prepared by a suitably qualified and experienced expert. The report shall be based on at least twelve months of continuous Wastewater Treatment Plant inflow and outflow data, and shall particularly focus on identifying and quantifying the losses (if any) of wastewater from:
  - a) the ponds; and
  - b) the wetland system (the wetland cells, the distribution channel, the collection channel).
- 39. Following consultation with the Manager, the Consent Holder shall identify any actions required resulting from the findings of the report in order to mitigate adverse environmental effects and recommend timeframes for undertaking such actions. A report detailing the extent of mitigation action, including works required and timing, shall be submitted to the Manager within **twenty four** months of the commencement of this consent.

#### Report on reduction of Inflow and Infiltration (I&I), Tradewaste and other initiatives

- 40. The Consent Holder shall submit to the Manager a report by 30 September each year summarising initiatives to reduce flow and load of contaminants to the WWTP, improvements to WWTP performance and reduction of flow and load of contaminants to the Managarere Stream. This report shall include as a minimum:
  - a) a detailed report on any groundwater inflow and stormwater infiltration reduction measures implemented in the preceding 12 months, including their effectiveness;
  - a detailed report on any tradewaste measures implemented in the preceding 12 months, including their effectiveness;
  - c) any measures that have been undertaken, or are proposed to be undertaken in the upcoming 12 months, to improve the environmental performance of the wastewater treatment and disposal system;
  - d) long term strategic initiatives, including progress towards reducing the discharge to the Mangatarere Stream in terms of volume and contaminants; and
  - e) any other issues considered important by the Consent Holder.

41. The Consent Holder shall, within three months of the grant of this permit and quarterly thereafter, report to the Manager on progress made towards compliance with condition 40: Schedule A, including relevant decisions made by the CDC (subject to commercial considerations preventing public disclosure of any details).

#### Land irrigation system sustainability report

- 42. Within **eighteen months** of the commencement of this consent, the consent holder shall complete a detailed assessment of the wastewater treatment capacity of the council-owned land on the WWTP site, and submit to the Manager, a report on its findings. The assessment shall be undertaken by a suitably qualified and experienced soil or land treatment scientist, and shall particularly focus on quantifying the quantity of wastewater that can sustainably be discharged to this land, and assess the likely contaminant losses to the underlying groundwater and Mangatarere Stream. The report shall include as a minimum:
  - a brief description of the discharge system, including a site map indicating the locations of discharge and groundwater monitoring sites;
  - b) current operational management and maintenance requirements of the existing land application system;
  - c) methods for the control and regulation of irrigation application, including application depths, return periods, and soil moisture and (if appropriate) nutrient monitoring;
  - d) detailed analysis and assessment of monitoring results of the current land application system;
  - e) the suitability of the soil and area currently utilised, the use of additional areas and the implication for long term sustainability for the land application system; and
  - f) recommendations for the long term management of the land application area.
- 43. Following consultation with the Manager, the consent holder shall identify any actions required resulting from the findings of the report in order to mitigate adverse environmental effects and recommend timeframes for undertaking such actions. A report detailing the extent of mitigation action, including works required and timing shall be submitted to the Manager with **twenty four** months of the commencement of this consent.
- 44. Within **twenty seven months** of the commencement of this consent, the Consent Holder must investigate alternatives for the discharge of treated wastewater from the Carterton WWTP so as to minimise the discharge to and its effects on the Mangatarere Stream. This must include long term options for avoiding discharges during stream flows below half median flow.
- 45. No later than **twenty seven months** after the commencement of this Consent, the Consent Holder must provide to the Manager a report detailing the investigations undertaken in Condition 44 which must include (but not be limited to) the following matters:
  - a) The options that have been investigated for discharge to land not owned by the CDC so as to minimise residual discharge to the Mangatarere Stream;
  - b) The options that have been investigated to increase storage within the wastewater treatment plant or to expand storage available so as to manage residual flows of treated wastewater to the Mangatarere Stream;
  - c) The actions that have been taken by the Consent Holder to implement its preferred options arising out of (a) and (b) above; and
  - d) The recommended actions that have still to be undertaken to implement the preferred options arising out of (a) and (b) above, and the time frame over which the Consent Holder intends to achieve those actions.

# Continued Conditions to Resource Consent WAR090120 [27251, 27252, 27253, 30652, 30653]

#### System Failure

- 46. The system shall be maintained in an efficient operating condition at all times. In the event of any treatment failure that would result in a deterioration in the quality of the discharge which would affect the receiving environment, and be in breach of any condition of this consent, the consent holder shall:
  - Take immediate steps to remedy and mitigate any adverse effects on the environment caused by the failure;
  - b) Notify the Manager 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 (WAR090120) and the name and phone number of a contact person;
  - c) The Consent Holder shall forward an incident report to the Manager within seven (7) working days of the incident occurring, unless otherwise agreed with the Manager. 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

- 47. Notification in accordance with Condition 46: Schedule A shall include but not be limited to:
  - The nature of the discharge,
  - Location of the discharge.
  - Start date and time of the discharges,
  - End date and time of the discharge (if known at the time of notification).
  - Duration of the discharge (hours),
  - Maximum flow (litres/second) or estimate thereof,
  - Mean flow (litres/second) or estimate thereof,
  - Volume (m<sup>3</sup>),
  - 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.

#### **Community Liaison Group**

48. 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 WWTP, the long term strategy for wastewater treatment and discharge, progress with initiatives to reduce flow and load of contaminants to the WWTP, improvements to WWTP performance, and reductions to the volume and load of contaminants discharged to the Mangatarere Stream. The applicant shall invite all submitters to the application to attend the CLG meetings. The CLG shall 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 within two weeks of each meeting.

#### Review

- 49. 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.
  - to alter the discharge regime described in conditions 2: Schedule 2.

#### Resource management charges

50. 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.

# WAR090120 [27251, 27252, 27253, 30652, 30653] **Continued Conditions to Resource Consent**

Schedule 5 - Table 1: Monitoring Summary Table

Table 1: Sampling Parameters, Frequency and Detection Limit

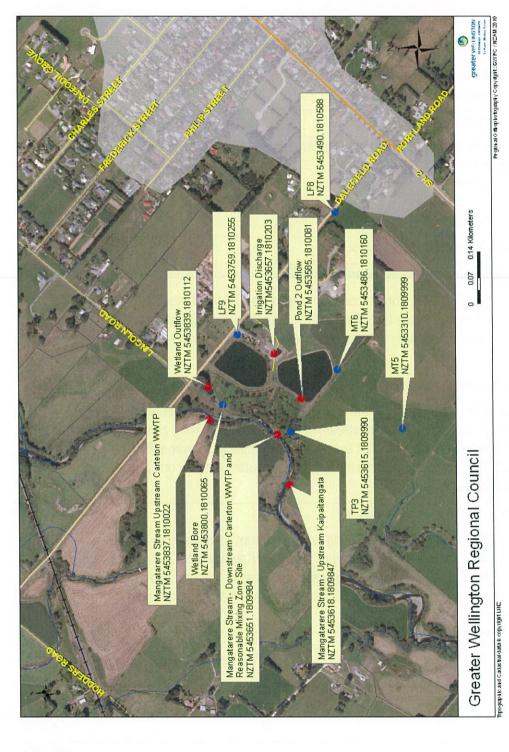
				Frequency			Detection Limit
Location	Inlet	Pond 2	Discharge to unnamed tributary	Land discharge area	Mangatarere Stream	Groundwater sampling	
Constituent	Before primary tank Pond 2 outflow before wetland	Pond 2 outflow before wetland	Wetland Outflow		At locations in Table 2	At locations in Table 2	
Flow	Every 15 minutes	Every 15 minutes	Every 15 minutes		Monthly	Water level below top of casing	As per condition 21: Schedule A,
Inspection	Daily	Daily	Daily	Daily	Monthly	Monthly	
Pond level		Daily					10mm
Soil moisture				Daily			
BOD Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1g/ m³
Suspended Solids SS	Monthly	Monthly	Monthly	Monthly	Monthly	ı	1g/m³
E. coli	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1 cfu/100 ml
Faecal Coliforms	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	1 cfu/100 ml
Ammoniacal Nitrogen NH3- Monthly N	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m³
Nitrate Nitrogen NO3-N	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m <sup>3</sup>
Total Phosphorus TP	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m <sup>3</sup>
Total Nitrogen TN	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1g/m³
Dissolved Reactive	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.005g/m <sup>3</sup>

				Frequency			Detection Limit
Phosphorus DRP							
Particulate Organic Matter Monthly POM	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.01g/m³
Hd	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1 pH
Conductivity	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1µS/cm
Temperature	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.1 °C
Clarity (black disc)	Monthly	Monthly	Monthly	Monthly	Monthly	ï	0.1 m
Dissolved Oxygen DO	Monthly	Monthly	Monthly	Monthly	Monthly	Monthly	0.2g/m <sup>3</sup>

# Continued Conditions to Resource Consent WAR090120 [27251, 27252, 27253, 30652, 30653]

Schedule 5 - Table 2: Monitoring Sites

APPROXIMATE SAMPLING SITE LOCATION	NZTM N	NZTM E
A. Wastewater Sampling Site		
(i) Discharge point the unnamed tributary of the Mangatarere Stream	5453839	1810112
This is at the existing discharge point into the unnamed tributary of the Mangatarere Stream		
(ii) Irrigation Discharge	5453657	1810203
This is at the container where it is treated by filtration and UV prior to being pumped to the driplines		
(iii) Pond 2 Outflow	5453585	1810081
This is located between pond two and the wetland		
B. Surface Water Sampling Sites		
(i) Mangatarere Stream - Upstream Carterton WWTP	5453837	1810022
Approximately 120m upstream of the confluence with the unnamed tributary (upstream site). This is a new site located in the Mangatarere immediately upstream of the reach potentially influenced by contaminants discharged from the wetland cells		
(ii) Mangatarere Stream - Downstream Carterton WWTP	5453651	1809984
Approximately 100m downstream of the confluence of the unnamed tributary with the Mangatarere Stream. This is downstream of the reasonable mixing zone, undertaken in the first run after the first flow-constricting riffle (approximately 100 metres downstream of the point where the unnamed tributary (drain) confluences with the Mangatarere Stream)		
(iii) Mangatarere upstream Kaipaitangata	5453618	1809847
Approximately 230m downstream (sampling point upstream Kaipaitangata Stream confluence). This approximates "Mangatarere upstream Kaipaitangata", and is downstream of the main area potentially influenced by leaching from the land application area, situated approximately 80 metres upstream of the confluence of the Mangatarere and Kaipaitangata		
C. Groundwater Sampling Sites		
LF8	5453490	1810588
LF9	5453759	181025
TP3	5453615	180999
MT6	5453486	181016
MT5	5453310	180999
WETLAND BORE	5453800	181006



# Continued Conditions to Resource Consent WAR090120 [27251, 27252, 27253, 30652, 30653]

Schedule 6 – Figure 2



