Resource Consent

RESOURCE MANAGEMENT ACT 1991

Summary of decision – s127 variation

Consent No.	WAR160341	
Consent ID(s)	[38763] (new) [34718] (old) DP – Discharge to land	
	[38764] (new) [34719] (old) DP – Discharge to Air (Odour Centre Pivot operation)	
	[38765] (new) [34720] (old) DP – Discharge to Air (tertiary treated wastewater)	
	[38766] (new) [34721] (old) DP – Discharge to Water (unnamed tributary of the Mangatārere Stream)	
	[38767] (new) [34722] (old) DP – Discharge to Air (WWTP facilities)	
	[38768] (new) [34723] (old) DP – Discharge to Land (seepage from secondary and tertiary ponds)	
	[38770] (new) [34724] (old) DP – Discharge to Land (seepage from wetlands)	
	[38771] (new) [34725] (old) DP – Discharge to Land (Accidental from pipeline and reservoirs)	
	[38772] (new) [34726] (old) Land use – Works in the bed of an ephemeral channel	
	[38773] (new) [34727] (old) Land use – To disturb land for construction of storage reservoirs	
	[38774] (new) [34728] (old) Water Permit – Diversion due to earthworks	
	[38775] (new) [34729] (old) Discharge to Water – (existing weir outlet) emergency only	
	[38776] (new) [34730] (old) Land use – Streamworks (new outfall structure)	
	[38777] (new) [34731] (old) Discharge to Water – Mangatārere Stream	
Name	Carterton District Council	
Address	PO Box 9, Carterton 5743	
Duration of consent	Original date granted: 30 November 217	Variation effective: 29 June 2023
	Original commencement date: 19 January 2018	Expires: 17 January 2053
Purpose for which consent(s) is granted	**Schedule A**: General Conditions for all consents **Schedule H:** [Monitoring Requirements] The discharge of contaminants to land, water and air, the diversion of surface water, associated land use consents and the disturbance of land associated with the upgrading, operation and, maintenance of the Carterton District Council Wastewater Treatment and Wastewater Management Facilities **Schedule B** [34718] Discharge permit - to discharge treated wastewater to land [34719] Discharge permit - to discharge odour to air from the centre pivot irrigators	

	[34720] Discharge permit - to discharge tertiary treated wastewater to air from the centre pivot irrigators. **Schedule C**: Expired January 2023 [34721] **Schedule CA:** [34729] Discharge of treated wastewater into an unnamed tributary of the Mangatārere Stream, via the existing weir outfall for emergency discharges only **Schedule D:** [34722] Discharge to Air of contaminants including odour from facilities at Carterton Wastewater treatment plan (clarifier, anaerobic digester, secondary and tertiary oxidation ponds) [34723] Discharge to land from the base of the secondary and tertiary oxidation ponds [34724] Discharge to land from the base of the existing wetland treatment areas [34725] Discharge to land from on-site pipelines supplying the land irrigation areas, base of sequential batch reservoirs and river discharge outfall **Schedule E:** [34726] To disturb the bed, deposit soil and reclaim and re-contour a farm paddock [34727] To excavate and disturb land and deposit material for construction of storage reservoirs [34728] To divert water from an ephemeral channel and flood flows within a floodplain by altering the landform with land re-contouring and constructing storage reservoirs **Schedule F:** [34730] for establishment, use, occupation and maintenance of an outfall structure in or on the bed and bank of the Mangatārere Stream **Schedule G:** [34731] To discharge a maximum of 60,000m3 of tertiary treated wastewater per day to the Mangatārere Stream
Location	Dalefield Road, Carterton at or about map reference NZTM 1810309.5453161
Legal description of land	Lots 1 & 2 DP 24549, Lots 1 & 2 DP 30724, Lot 2 DP89642, Lot 1 DP 1 4020, Part Lots 1 & 2 DP 30724, unformed legal road comprised in Taratahi 1 B, Part Taratahi 391 ClA, Part Taratahi 391 C I B, Part Taratahi 391 Cl C and Part Taratahi 391 C1D and Part Taratahi 391 CD2
Conditions	See below

Decision recommended by:	Genevieve Walker	Resource Advisor, Environmental Regulation	
Decision peer reviewed by:	Kirsty van Reenen	Resource Consultant to Environmental Regulation	
Decision approved by:	Kristina Cranston	Lead Consenting Advisor, Environmental Regulation	

Processing timeframes:

Application lodged: 21/12/22 **Application officially received:** 21/12/22

Applicant to be notified of decision by: 08/02/23 **Applicant notified of decision on:** 29/06/23

Time taken to process application: 52 working days

The applicant provided written agreement (WAR160341 s37 agreement from CDC.msg) on 23 January 2023 for an extension of timeframes under s37(1) to process the application. The extension is for 15 days or 'as required' working days under sections s37A(4) of the Act.

The applicant then provided written agreement (further section 37 agreement) to a further extension of timeframes under s37(1) to process the application. The extension is for 130 working days under sections s37A(5) of the Act.

The reasons for the extensions are:

- Time for experts to review, based on availability of experts over the early 2023 summer period.
- Condition review by the applicant.
- Additional proposed changes to the conditions by the applicant.

In making this decision Wellington Regional Council has given consideration to the following issues, as required by section 37A(1) of the Act:

- The interests of any person who the Council considers may be directly affected by the extension;
- The interests of the community in achieving adequate assessment of the effects of the proposal; and
- The Wellington Regional Council's duty under section 21 of the Act to avoid unreasonable delay.

Decision approved by:	Nicola Arnesen	Team Leader, Environmental Regulation	

Consent conditions Schedule A and H (monitoring requirements)

Consent No. WAR160341 Category:

[34718] Discharge to Land
[34719] Discharge to Air (Odour Centre Pivot operation)
[34720] Discharge to Air (tertiary treated wastewater)
[34721] Discharge to Water (unnamed tributary of Mangatarere Stream)
[34722] Discharge to Air (WWTP facilities)
[34723] Discharge to Land – (Seepage from secondary and tertiary ponds)
[34724] Discharge to Land (Seepage from wetlands)
[34725] Discharge to Land (Accidental from pipelines and reservoirs)
[34726] Land Use – Works in the bed of an ephemeral channel
[34727] Land Use – To disturb land for construction of storage reservoirs
[34728] Water Permit – diversion due to earthworks
[34729] Discharge to Water (existing weir outlet) emergency only
[34730] Land Use – Streamworks (new outfall structure)
[34731] Discharge to Water (Mangatarere Stream)

Pursuant to sections 104B, 104D, 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	Carterton District Council	
Address	P O Box 9, Carterton 5743	
Duration of consent	Granted: 30 November 2017 Commencement: 19 January 2018	Expires: 17 January 2053 Except for [34721] [34726] [34727] which expire: 17 January 2023
Purpose for which right is granted	**Schedule A: General Conditions for all consents** **Schedule H: Monitoring Requirements** The discharge of contaminants to land, water and air, the diversion of surface water, associated land use consents and the disturbance of land associated with the upgrading, operation and, maintenance of the Carterton District Council Wastewater Treatment and Wastewater Management Facilities	
Location	Dalefield Road, Carterton at or about map reference NZTM 1810236.5453689	
Legal description of land	Lots 1 & 2 DP 24549, Lots 1 & 2 DP 30724, Lot 2 DP89642, Lot 1 DP 14020, Part Lots 1 & 2 DP 30724, unformed legal road comprised in Taratahi 1B, Part Taratahi 391C1A, Part Taratahi 391C1B, Part Taratahi 391C1C and Part Taratahi 391C1D and Part Taratahi 391CD2	
Conditions	Schedule A & H	

Schedule A: GENERAL CONDITIONS APPLYING TO ALL CONSENTS

Definitions

In the conditions in Schedules A to H, the following expressions have the meanings given.

CDC means Carterton District Council

Field capacity means the state of the soil after rapid drainage has effectively ceased and the soil water content has become relatively stable

Median Flow means a flow of 2.235 cubic metres per second in the Mangatārere Stream, as measured at the GWRC State Highway 2 flow recording site.

Half Median Flow means a flow of 1.1175 cubic metres per second in the Mangatārere Stream, as measured at the GWRC State Highway 2 flow recording site.

2 x Median Flow means a flow of 4.470 cubic metres per second in the Mangatārere Stream, as measured at the GWRC State Highway 2 flow recording site.

3 x Median Flow means a flow of 6.705 cubic metres per second in the Mangatārere Stream, as measured at the GWRC State Highway 2 flow recording site.

SBR means sequential batch reservoir.

Surface Ponding means circumstances where rainwater or treated wastewater combined with rainwater remains on the ground surface with a depth greater than 25mm covering a continuous area exceeding 10m² or multiple areas of such ponding having a combined area exceeding 20m² for more than 24 hours.

Treatment Wetland means the constructed wetland within the WWTP used to treat wastewater.

WWTP means Wastewater Treatment Plant.

Conditions to Resource Consent
WAR160341 [34718, 34719, 34720, 34721, 34722, 34723, 34724, 34725, 34726, 34727, 34728, 34729, 34730 34731]

Schedule A: General Condition applying to all consents

Consistency With Application Details

1. The location, design, implementation and operation of the proposed activities and discharges shall be in general accordance with the application dated April 2017 and its associated plans and documents lodged with the Wellington Regional Council on **12 April 2017**, letter providing further clarification dated **17 July 2017,** draft negotiated conditions dated **21 November 2017** and the s127 change of condition application lodged **21 December 2022.** For the avoidance of doubt, where information contained in the application is contrary to conditions of this consent, the conditions shall prevail. Where there may be contradiction or inconsistencies between the application and further information referred to above, the most recent information applies. In addition, where there may be inconsistencies between information provided by the applicant and conditions of the consent, the conditions apply.

   Advice Note: *Any variation from the location, design concepts and parameters, implementation and/or operation that is not in general accordance with the application and further information supplied 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 not permit the wastewater level in the Carterton WWTP oxidation ponds or treatment wetlands to overtop the ponds or wetland's walls.

Treatment Standards – Odour Minimisation

3. The Consent Holder shall ensure that the oxidation ponds and any associated discharges from the WWTP are managed to achieve aerobic conditions at all times as measured at the pond surface using a dissolved oxygen meter so as to not cause objectionable or offensive odour effects to occur at or beyond the site boundary.

Operational Management Plan

4. Within six months of the commencement of this resource consent, the Consent Holder shall prepare and submit to the Manager Environmental Regulation, Wellington Regional Council for certification, a Wastewater Operations Management Plan (OMP). The objectives of the OMP shall be to:

   a) Minimise as far as practicable adverse effects on the water quality and aquatic ecosystem health of the downstream river system arising from discharges of treated wastewater from the CDC WWTP; and
   b) Maximise as far as practicable the discharge of treated wastewater from the CDC WWTP to land in preference to discharge to the Mangatārere Stream, provided this can be achieved without exceeding the sustainable capacity of the Daleton Farm irrigation area; and

c) Ensure that, when discharge to the stream occurs, discharge occurs during stream flows above 3x median to the extent reasonably practicable and occasions of discharge to the stream in flows below 3x median are minimised; and

d) Ensure that, discharge at stream flows below 2 x median flow are avoided, except under exceptional circumstances;

e) Should any discharges below 2x median flow occur, identify and implement measures to avoid further discharges below 2 x median in accordance with Objective d) above;

f) Address inflow and infiltration to the CDC wastewater reticulation network to progressively reduce wastewater inputs entering the CDC WWTP; and

g) Demonstrate how all operational and monitoring conditions specified by consents WAR160341 [34718] to [34731] will be given effect to achieve objectives (a) to (d) above.

The OMP shall include as a minimum:

General Matters:

i. An overview of the WWTP process;
ii. WWTP operating procedures for managing discharges both to land and water;
iii. A description of 'normal operating conditions'; and
iv. A description of how discharges to the Mangatārere Stream are to be managed during the following Mangatārere Stream flows:
    - above 3x median flows;
    - between 2x median and 3x median flows; and
v. A description of how emergency discharges to water will be managed during flows between 2x median flow and half median; and
vi. A description of how emergency discharges to water at any time via the weir outfall (as described in Table 1 (Schedule H) and shown on Figure 1 (Schedule H)) will be managed to minimise potential adverse effects on the receiving environment;
vii. The measures to be used to maximise opportunities for discharge to land and minimise discharge to water (provided the sustainable capacity of the land irrigation area is not exceeded);

WWTP and Discharge Operations:

viii. The responsibilities of operational staff for on-site treatment activities and for discharge activities;
ix. Plant condition inspections and maintenance;
x. Trouble shooting guide;
xi. Staff training procedures;
xii. Hazard identification and health and safety training;
xiii. Details of a complaints register;

Land Irrigation Management and Soil Health:

xiv. The measures to be taken to maintain soil structure and soil health as a result of soil monitoring;
xv. Methods to be adopted to measure the volumes and contaminant concentrations of treated wastewater irrigated to land for the purpose of

assessing on an ongoing basis the impact of nutrient leaching to the Mangatārere Stream;

xvi. Target values to limit leached nitrogen and phosphorus from the site to maintain nutrient leaching within the range associated with accepted farming practices presented in the Overseer assessments accompanying the application;

xvii. Hydraulic application rates for irrigated treated wastewater;

xviii. Pasture and crop management;

xix. Measures to be taken to manage irrigation to land when soil moisture is at or over field capacity and/or when any discharge to land will cause soil moisture to exceed field capacity.

Monitoring:

xx. Operational and compliance monitoring procedures and protocols, including:

- A map showing the location of all sampling and monitoring sites
- A description of, including a photograph and details of access to, each sampling or monitoring location;
- stream flows (using GWRC flow data from the State Highway 2 flow recording site);
- discharged treated wastewater volume and quality;
- stream water quality;
- stream ecological monitoring;
- groundwater quality and level monitoring, including groundwater emerging from beneath the land irrigation areas;
- weather and climate monitoring;
- soil moisture monitoring;
- soil health monitoring

xxi. Additional monitoring to be implemented during discharge to the Mangatārere Stream during flows between half median and 2x median flow;

xxii. For the purposes of discharge permit WAR163041 [34721], the additional instream monitoring to be implemented when discharging to the stream in flows below half median.

Review

xxiii. A protocol (and programme) for reviewing the effectiveness of the OMP.

5. Once the Manager Environmental Regulation, Wellington Regional Council has certified that the OMP meets the requirements of Condition 4 (Schedule A), the Consent Holder shall implement the OMP at all times. No substantive amendments to the OMP shall be implemented unless the Manager Environmental Regulation, Wellington Regional Council has certified in writing that the amendment meets the requirements of Condition 4 (Schedule A).

Tangata Whenua Values

6. The Consent Holder shall:

a) Within six months of the commencement of this resource consent, or within an alternative timeframe as agreed by the Manager Environmental Regulation, Wellington Regional Council consult with Kahungunu ki Wairarapa and Rangitane o Wairarapa about how they would like to input into the Advisory Group and what, if any, amendments need to be made to the Tangata Whenua Values Monitoring Plan dated March 2015; and

b) Following this consultation, submit a report to the Manager Environmental Regulation, Wellington Regional Council describing the results of the consultation and detailing how Kahungunu ki Wairarapa and Rangitane o Wairarapa would like to engage, including any tasks and time frames recommended to implement engagement and any recommended changes to the Tangata Whenua Values Monitoring Plan; and

c) Implement the tasks set out in the report supplied under (b) above unless alternative arrangements are agreed with the Manager Environmental Regulation, Wellington Regional Council.

Management Plan Review

7. The OMP and the Tangata Whenua Values Monitoring Plan shall be reviewed and, where necessary, updated annually within one month of the anniversary of the commencement date of this resource consent. No substantive variation to any management plan shall be implemented unless the Manager Environmental Regulation, Wellington Regional Council has certified in writing that the variation meets the requirements of the relevant conditions of consent.

Wastewater Monitoring and Recording

8. To enable the sampling of the treated wastewater, easy and safe access to sampling points shall be provided and maintained as close as is practicable to the following locations as defined in Table 1 (Schedule H) and as shown on Figure 1 (Schedule H):

   i. The treatment discharge;
   ii. The irrigation discharge immediately prior to each ~~centre pivot~~ irrigation area; and
   iii. SBR outflow.

9. 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 on request.

10. In respect of monitoring required by these consents, the following shall apply:

    a) all sampling and on-site monitoring techniques employed in respect of the conditions of this consent shall be carried out by suitably experienced and qualified persons;
    b) all laboratory 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, 2014"* 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) if any monitoring sites are identified as unsuitable, alternative monitoring sites shall be identified and developed after consultation with, and approval by, the Manager Environmental Regulation, Wellington Regional Council.

11. The Consent Holder shall maintain measuring equipment to monitor the wastewater flows at or adjacent to the following points:

a) Inlet works;
b) The treatment discharge;
c) The irrigation discharge;
d) Pond 2 outflow; and
e) SBR outflow.

12. The Consent Holder shall maintain a flow measuring device at:

a) the point of discharge from the treatment wetland to the unnamed tributary of the Mangatārere Stream and
b) the point of discharge from the SBRs via the outfall to the Mangatārere Stream.

13. The collected data shall be compatible with Wellington Regional Council's Water Use Data Management System and:

a) 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) shall be installed and maintained by an Irrigation New Zealand Blue Tick accredited installer (or equivalent) 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: An accredited installer is currently accredited by Irrigation New Zealand (also referred to as IrrigationNZ) represented by the 'Blue Tick' logo. A list of accredited providers can be located at www.irrigationnz.co.nz. Should the Blue Tick scheme become defunct, or a better scheme be developed during the term of the consents, the Consent Holder can change to the better scheme once agreed in writing by the Manager Environmental Regulation, Wellington Regional Council.

14. 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) measure and record cumulative discharge;
b) measure and record instantaneous flow rate;
c) be installed in accordance with the manufacturer's specification;
d) be verified five-yearly by 30 September of the verification year by an Irrigation New Zealand Blue Tick accredited verifier (or equivalent); and

e) The Consent Holder shall provide evidence of the verification in writing to the Manager Environmental Regulation, Wellington Regional Council within one month of the verification being completed.

Annual Report

15. 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 include a summary of compliance for the year ending 30 June and be provided in electronic format. The Annual Report shall include as a minimum:

a) a summary of the number of occasions and duration of discharge of treated wastewater to land (by irrigation) and to water during the previous 12-month period and the stream flow at the time of discharge to water;
b) details of any incidences of discharge to the stream during stream flows below 2x median flow, the duration of those discharge(s), the treated wastewater quality at the time of the discharges and the effects of the discharge(s) on the receiving environment, incorporating sampling, analysis and reporting required by Schedule G;
c) An analysis of the circumstances leading to discharges to the Mangatārere Stream during stream flows below 2x median flow, and a description of measures to be implemented in accordance with Condition 4e) (Schedule A);
d) details of any incidences of discharge to the stream via the existing weir following commencement of discharge from the replacement stream outfall, including details of the treated wastewater quality at the time of the discharges and the effects of the discharge(s) on the receiving environment, incorporating sampling, analysis and reporting required by Schedule CA;
e) a commentary on how the operation of the land irrigation and discharge to water activities met the objectives of the OMP and any notable trends or issues arising;
f) a summary of all monitoring undertaken in accordance with the conditions of consents WAR160341 [34718] to [34731], including compliance monitoring for the year ending 30 June each year, and a critical analysis of the information in terms of compliance and adverse environmental effects carried out by a suitably qualified person;
g) a discussion on any trends or changes in environmental effects evident from the monitoring data, both within the annual monitoring period and compared to previous years, including any changes indicating adverse effects not foreseen in the assessments of effects accompanying the application;
h) any reasons for non-compliance or difficulties in achieving compliance with the conditions of this consent;
i) 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 or to address any unforeseen effects identified under (g) above;
j) The measures taken during the reporting period to address inflow and infiltration in the wastewater reticulation network and the impact of those measures on inflows to the WWTP, and measures proposed for the forthcoming 12 month period to address inflow and infiltration;

k) a summary of the monitoring and modelling (including Overseer modelling if undertaken) to evaluate nutrient management requirements for the site and nutrient loads resulting from the irrigation of treated wastewater to land;
l) a summary of results from Tangata Whenua Values Monitoring (if required);
m) any recommendations on alterations/additions to the monitoring programmes;
n) a copy of any complaints recorded during the year and any follow up actions undertaken; and
o) any other issues relevant to the implementation of these consents and any issues considered important by the Consent Holder.

16. In addition to the annual reporting required by Condition 15 (Schedule A), the Consent Holder shall advise the Manager Environmental Regulation, Wellington Regional Council in writing of any exceptional or unusual results identified in any of the sampling results required by these conditions as soon as reasonably practicable after analysis and identification.

Advisory Group

17. For the duration of these consents, the Consent Holder shall convene a Wastewater Advisory Group comprising invited representatives of:

a) Rangitane o Wairarapa
b) Ngati Kahungunu ki Wairarapa
c) Wairarapa Public Health
d) Sustainable Wairarapa
e) Mangatārere Restoration Society
f) GWRC
g) The Consent Holder.

18. The Consent Holder shall supply copies of all monitoring reports to the members of the Advisory Group at the same time those reports are supplied to the Manager Environmental Regulation, Wellington Regional Council. The Consent Holder shall invite the members of the Advisory Group to a first meeting within six months of the commencement of these consents. Thereafter, for the duration of these consents, the Consent Holder shall invite the members of the Advisory Group to a meeting no less than once annually and the Advisory Group shall determine whether more frequent meetings are required. The Consent Holder shall provide secretarial support services to facilitate the efficient functioning of the Advisory Group.

Ten Year Review

19. No later than 31 December 2027 the Consent Holder shall provide to the Manager Environmental Regulation, Wellington Regional Council an independent report, reviewing the efficacy of the WWTP operation and discharge regime in terms of avoiding, remedying or mitigating adverse effects of the discharges to the environment.

20. The review and report shall include, but not be limited to, the following:

– A full description of the discharge regime (including storage);

- A brief summary of the compliance record;
- A brief summary of monitoring findings describing actual effects on the environment;
- Any recommendations made by the Advisory Group to the Consent Holder and the Consent Holder's subsequent decisions on these recommendations;
- The results of any reports commissioned into improvements or alternatives to the current WWTP and discharge facilities;
- A description of any changes proposed to any parts of the WWTP and discharge facilities;
- A summary of the consent implications of any proposed changes to the WWTP and discharge facilities.

21. In the event that the report identifies significant adverse effects on the environment as a direct result of discharges to land, water or air and where no suitable means of avoiding, remedying or mitigating such effects is proposed within the report, the Wellington Regional Council may, within six months of receipt of the report, initiate a review of conditions of these consents under section 128 of the Resource Management Act 1991, for the purpose of determining as soon as practicable whether changes are required to the conditions of consent to address such effects, including but not limited to changes relating to the volumes of wastewater permitted to be discharged to the Mangatārere Stream and to land and the volume of wastewater storage in the system.

Signage

22. 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 discharge outfall to the unnamed tributary of the Mangatārere Stream and in the vicinity of the new pipeline outfall which shall at all times:

- provide clear identification of the location and nature of the discharge; 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.

System Failure

23. The WWTP 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 could affect the receiving environment, and be in breach of any condition of these consents, 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 as soon as is practicable 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 and shall include the consent reference and the name and phone number of a contact person;

c) 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 Regional Public Health as soon as is practicable of the malfunction being detected.

24. Notification in accordance with Condition 23 (schedule A) shall include but not be limited to:

a) The nature of the system failure;
b) Location of any consequential discharge
c) Start date and estimated time of the system failure;
d) Estimated duration of the system failure (hours);
e) Maximum flow (litres/second) or estimate thereof of any consequential discharge;
f) Mean flow (litres/second) or estimate thereof of any consequential discharge;
g) Estimated volume of any consequential discharge (m^3);
h) Cause of system failure;
i) Action taken (including signs, notification of interested parties, clean-up of stream); and
j) The contact details of the person reporting the notification.

Complaints

25. 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.

26. The Consent Holder shall notify the Manager Environmental Regulation, Wellington Regional Council of all complaints relating to the exercise of these consents, on the first working day after being received by the Consent Holder.

27. 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:

a) 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;

b) 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;
c) to alter the monitoring requirement(s) in light of the results obtained from any previous monitoring;
d) to require remediation measures to be undertaken if adverse effects from the activity are greater than anticipated in the application.
e) to alter the discharge regime described in the attached Schedules B to G.
f) to enable consistency with the relevant Regional Plan(s).

Resource Management Charges

28. 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 H: MONITORING REQUIREMENTS FOR DISCHARGE PERMITS WAR 160341 [34718] [34719] [34720] [34721] [34722] [34723] [34724] [34725] [34726] [34727] [34729] [34730] [34731]

SCHEDULE H - TABLE 1: REQUIRED SAMPLING SITE LOCATIONS **(all as shown on Figure 1)**				
			Approximate Location	
Sampling Sites Required Within Carterton Wastewater Treatment System for Sampling Treated Wastewater Quality		**Figure 1 Reference**	**NZTM E**	**NZTM N**
Schedule A Condition 11 Schedule C Condition 3'	**Inlet** Located at a point to measure the quality of influent wastewater to the WWTP	'Inlet'	1810260	5453747
Schedule A Condition 8 (i)	**Treatment Discharge – Post UV** Located at a point immediately following UV treatment	'Post UV'	1810112	5453839
Schedule A Condition 8 (ii)	**Irrigation Discharge - Land:** Located at the inlet to each centre pivot irrigator for sampling when irrigation to land occurs: (a) Inlet to ~~Centre Pivot 1~~ irrigation area (b) Inlet to ~~Centre Pivot 2~~ irrigation area	'Irrigation discharge CP1' 'Irrigation discharge CP2'	1810307 1809973	5453333 5453127
Schedule A Condition 8 (iii)	**SBR Outflow:** Located at a point immediately landward of the new discharge to stream point.	'SBR outfall to stream'	1809730	5452195
Schedule CA Condition 6	**Emergency Discharge via Weir:** For sampling the quality of treated wastewater that is discharged via the weir into the unnamed tributary of the Mangatārere Stream as authorised by Schedule CA WAR160341 [34729]	'Weir Outflow'	1810087	5453831

Groundwater Sampling Sites		Figure 1 Reference	NZTM E	NZTM N
All required by Schedule B Condition 8	Historical monitoring bore associated with CDC landfill to provide upgradient baseline	LF8	1810588	5453490
	Historical monitoring bore associated with CDC landfill to provide upgradient baseline	LF9	1810255	5453759
	Monitoring bore upgradient of land irrigation areas	MT6A	1810160	5453486
	Monitoring site down gradient of irrigation via Centre Pivot 1	MT5A	1809999	5453310
	Monitoring site down gradient of irrigation via Centre Pivot 1	DT1	1810060	5453148
	Monitoring site down gradient of irrigation via Centre Pivot 1	DT2	1810190	5452928
	New monitoring site downgradient of expanded land irrigation area	MT7	1809713	5453391
	New monitoring site downgradient of expanded land irrigation area	MT8	1809451	5453018
	New monitoring site downgradient of expanded land irrigation area	MT9	1809678	5453019
	New monitoring site downgradient of expanded land irrigation area	MT10	1809923	5452680
Surface Water Sampling Sites for Discharge to Unnamed Tributary of the Mangatārere Stream		**Figure 1 Reference**	**NZTM E**	**NZTM N**
Schedule C Conditions 3 and 10 **Schedule CA Condition 6**	**Mangatārere Stream - Upstream of Carterton WWTP** Approximately 120m upstream of the confluence with the unnamed tributary.	'Man Up'	1810022	5453837
Schedule C Conditions 3 and 10 **and** **Schedule CA Condition 6**	**Mangatārere upstream Kaipaitangata** Approximately 80 metres upstream of the confluence of the Mangatārere and Kaipaitangata.	'Man US Kaip'	1809847	5453618

Surface Water Sampling Sites for Discharge to Unnamed Tributary of the Mangatārere Stream		Figure 1 Reference	NZTM E	NZTM N
Schedule C Conditions 3 and 10 **&** **Schedule CA Condition 6**	**Mangatārere Stream – Downstream (New)** Approximately 300m downstream of the confluence of the Mangatārere and Kaipaitangata Streams	'Man DS Kaip'	1809721	5453604
Surface Water Sampling Sites for Discharge via New Outfall to Mangatārere Stream		**Figure 1 Reference**	**NZTM E**	**NZTM N**
Schedule G Conditions 7, 8, 11 and 12	**Mangatārere Stream Downstream of Outfall** This sampling site is located downstream of the proposed new outfall and approximates the Greater Wellington Regional Council State of the Environment monitoring site	'Man @ SH2'	1809783	5452142
Schedule G Condition 7, 8, 11 and 12	**Mangatārere Stream Upstream of Outfall** This is a new sampling site upstream of the proposed new outfall	'Man US of outfall'	1809712	5452234

Table 2: Monitoring Requirements (Sampling Parameters, Frequency and Detection Limits)

	1	2	3	4	5	6	7	
Reason for Sampling:	**Monitoring within treatment process**	**Discharge to unnamed tributary (WAR160341 [34721]):** **Discharge quality + Receiving environment**	**Emergency discharge to unnamed tributary (WAR160341 [34729]):** **Discharge quality + Receiving environment**	**Discharge to Mangatārere Stream (WAR160341 [34731]):** **Discharge quality + Receiving environment**	**Mangatārere Stream:** **(WAR160341 all discharges to water [34721], [34729] & [34731])** **Monthly monitoring of stream state**	**Discharge to Land:** **(WAR160341 [34718]):** **Discharge quality**	**Groundwater sampling:** **(WAR160341 [34718]):** **Monthly monitoring of receiving environment**	
Location	**Inlet**	**Post UV** **Man Up** **Man US Kaip** **Man DS Kaip**	**Post UV (if from-WWTP) or Weir Outflow (if from SBR))** **Man Up** **Man US Kaip** **Man DS Kaip**	**SBR outfall to stream** **Man US of outfall** **Man @ SH2**	**Man Up** **Man @ SH2**	**Irrigation discharge CP1** **Irrigation discharge CP2 (once CP2 constructed)**	**LF8, LF9, MT6A, MT5A, DT1, DT2, MT7, MT8, MT9, MT10**	**Detection Limit**
Flow	Continuous	Continuous	Continuous	Continuous	Continuous (using GWRC gauging data)	Continuous (x2)		
Oxidation Pond Level	Continuous	Continuous	Continuous	Continuous				10mm

SCHEDULE H: MONITORING REQUIREMENTS FOR DISCHARGE PERMITS WAR 160341 [34718] [34719] [34720] [34721] [34722] [34723] [34724] [34725] [34726] [34727] [34729] [34730] [34731]

SBR Cell Level	Continuous			Continuous				
Water level below top of casing							Monthly	10mm
Parameter						**Frequency**		
Biological Oxygen Demand BOD	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	1g/ m^3
Suspended Solids SS	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	1g/m^3
E. coli	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	1 cfu/100 ml
Total Nitrogen TN	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.1g/m^3
Total Ammoniacal Nitrogen	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.01g/m^3
Nitrate Nitrogen	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.01g/m^3
Total Phosphorus TP	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.01g/m^3
Dissolved Reactive Phosphorus DRP	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.005g/m^3
pH	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.1 pH

SCHEDULE H: MONITORING REQUIREMENTS FOR DISCHARGE PERMITS WAR 160341 [34718] [34719] [34720] [34721] [34722] [34723] [34724] [34725] [34726] [34727] [34729] [34730] [34731]

Note 1. Regarding clarity measurement for low flows, a clarity tube may be used when measurement results do not exceed 1m; Black disc must be used for low flows when accessible, if clarity results via tube exceed the maximum 1m measurement.

Conductivity	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.1µS/cm
Temperature	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.1 °C
Clarity (clarity tube if measurement is <1m, black disc for low flows when clarity >1m).		Monthly ①	Daily	Monthly ①	Monthly		-	0.1 m
Clarity (clarity tube for high flows when not accessible)		Monthly ①	Daily	Monthly ①	Monthly		-	0.1 m
Dissolved Oxygen DO	Monthly	Monthly ①	Daily	Monthly ①	Monthly	Monthly ②	Monthly	0.2g/m^3

SCHEDULE H: MONITORING REQUIREMENTS FOR DISCHARGE PERMITS WAR 160341 [34718] [34719] [34720] [34721] [34722] [34723] [34724] [34725] [34726] [34727] [34729] [34730] [34731]

ADVISORY NOTES:

1. **In Table 2, the expression 'Monthly ①' means measured once per month if discharge to surface water is occurring during that month and measured only when discharge to water is occurring.**

2. **'Monthly ②' means measured once per month if discharge to land is occurring during that month and measured only when discharge to land is occurring.**

3. **Sampling for scenarios 2, 3, 4 and 6 in the following table is required only at times when discharge to the named receiving environment is occurring.**

4. **Clarity measurement is not required for Post UV or SBR outfall.**

EXPLANATORY NOTE:

There are a number of operational and monitoring scenarios which will occur as the consent progresses and new works come on line. Table 2 identifies how the sampling will occur under these different scenarios. This explanatory note seeks to clarify the requirements by example.

Once the consent is granted the plant will be operating under the "interim" conditions until the SBR and new outfall are constructed and commissioned. This period may be up to five years from the date of commencement of the new consent. During this period monitoring and sampling as per columns 1, 5, and 7 will occur as a default at all times. When discharge to water is occurring monitoring will be as per columns 1,2, and 7, and when discharge to land is occurring monitoring will be as per columns 1, 6, and 7.

Once the SBR / new outfall is operational, long-term monitoring will occur according to tables 1, 5, and 7 when there is no discharge, 1, 4, and 7 when discharging to stream, and 1, 6 and 7 when discharging to land. If discharge to stream occurs during a calendar month, then the stream sampling for that month should occur at the same time as the discharge sampling.

Once the long-term operating scenario has commenced, if an (operational) emergency discharge is required through the unnamed tributary, then daily sampling is required for the duration of the emergency discharge. Under such conditions, in addition to the monthly sampling under columns 1 and 7, daily sampling as per column 3 is required. The discharge quality sample will be taken either at the post UV sample point if the discharge is from the existing plant, (SBR's off line) or the weir outfall sampling point if the SBR's are operational but the new stream outfall is not able to be used.

FIGURE 1 (SCHEDULE H): LOCATION OF SAMPLING AND MONITORING SITES REQUIRED BY WAR160341

CARTERTON DISTRICT COUNCIL

N W E S

Date: 15/11/2017

Figure 1 - Sampling Points
Operated by CDC
Including Required WAR160341 Sampling Points

0 0.05 0.1 0.2 Km

Scale = 1:7,000

Drawn By: tony

R:\Engineering\Wastewater\Treatment Plant\Proposal - CAD shape files\Treatment_Plant_Proposal.mxd

Consent Conditions - Schedule B

Consent No. WAR160341

[34718]
[34719]
[34720]

Category:

Discharge to Land
Discharge to Air (Odour Centre Pivot operation)
Discharge to Air (Tertiary treated wastewater)

Pursuant to sections 104B, 104D, 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	Carterton District Council	
Address	P O Box 9, Carterton 5743	
Duration of consent	Granted: 30 November 2017 Commenced: 19 January 2018	Expires: 17 January 2053
Purpose for which right is granted	**Schedule B** [34718] Discharge permit – to discharge treated wastewater to land [34719] Discharge permit – to discharge odour to air from the centre pivot irrigators [34720] Discharge permit – to discharge tertiary treated wastewater to air from the centre pivot irrigators	
Location	Dalefield Road, Carterton at or about map reference NZTM 1810309.5453161	
Legal description of land	Lots 1 & 2 DP 24549, Lots 1 & 2 DP 30724, Lot 2 DP89642, Lot 1 DP 14020, Part Lots 1 & 2 DP 30724, unformed legal road comprised in Taratahi 1B, Part Taratahi 391C1A, Part Taratahi 391C1B, Part Taratahi 391C1C and Part Taratahi 391C1D and Part Taratahi 391CD2	
Conditions	Schedule B as attached	

Conditions to Resource Consent
WAR160341 [34718] [34719] [34720]

Equipment Maintenance

1. The Consent Holder shall ensure that all irrigation equipment and systems are maintained in efficient operating condition at all times.

Discharge Rate

2. The Consent Holder shall ensure that the land irrigation authorised by this consent does not result in:

    a) Soil moisture content within the irrigation areas in excess of field capacity (except where necessary to minimise the duration of discharge to surface water, where the potential effects of land irrigation are less adverse than the potential effects of discharge to surface water); and
    b) the land irrigation does not result in:
        i. The discharge of treated wastewater by overland flow from the land irrigation areas to any surface water body; or
        ii. Surface ponding within the irrigation areas (excluding the centre pivot wheel tracks).

Treated Wastewater Quality

3. All treated wastewater discharged from the CDC WWTP to land shall meet the following standards measured at the irrigation discharge point defined in Schedule H and compliance shall be based on the preceding 12 consecutive sampling results:
    a) The median concentration of BOD_5 shall not exceed 70g/m^3 and the annual load shall not exceed 600 kg/ha/year;
    b) Median *E coli* values shall not exceed 100 per 100 millilitres.

Setback Distances

4. No discharge of treated wastewater shall occur closer than:

    a) Five metres from any boundary with Lot 1 DP89642 Taratahi Dist Blk X Tiffin SD;
    b) 1.5 metres from any other boundary where sub-surface drip-line irrigation is used; and
    c) 25 metres from any boundary where methods other than sub-surface drip-line irrigation are used.

Maximum Operating Wind Speed

5. Operation of the ~~centre pivot~~ irrigators shall occur in wind speeds of 12 m/s (including sustained gusts) or less, unless irrigation is dripline.

Air Quality and Odour Management

6. The Consent Holder shall adopt best practicable measures to ensure that any discharge to air authorised by this consent does not result in spray drift or objectionable or offensive odour beyond the site boundary. These measures shall include:

   a) Maintaining aerobic conditions in the treated wastewater that is to be irrigated to land;
   b) Configuring the ~~centre pivot~~ sprinklers to produce droplets generally larger than 150 microns~~,~~ using low pressure ~~(less than 1.4 bar);~~
   c) Limiting the height of the sprinkler nozzles to no higher than 1.52 metres above ground or as otherwise agreed by the Manager Environmental Regulation, Wellington Regional Council which shall only be given if effects are demonstrated to be within the scope of effects as assessed in the application.

Signage

7. For the duration of these consents, the Consent Holder shall maintain appropriate signage on the boundaries of the site which shall be legible to a person during daylight hours, warning that tertiary treated wastewater is discharged to land and may be present at the site. The signage shall display a 24-hour contact phone number and state that there is to be no unauthorised entry.

Monitoring

8. The Consent Holder shall maintain soil moisture monitoring probes, groundwater monitoring bores and meteorological monitoring weather stations in the locations specified in Table 1 and Figure 1 (Schedule H).

9. The Consent Holder shall implement a programme of annual soil monitoring which shall include soil sampling and analysis of the indicators specified in Table A below for areas under wastewater irrigation and a comparable control area as agreed with the Manager Environmental Regulation, Wellington Regional Council.

10. The Consent Holder shall ensure that all groundwater sampling is carried out in accordance with either the Ministry for Environment Groundwater sampling protocol 'A National Protocol for State of the Environment Groundwater Sampling in New Zealand 2006 (or any subsequent amendments) or an alternative methodology (i.e. low flow sampling) as approved by The Manager Environmental Regulation, Wellington Regional Council.

SCHEDULE B: LAND IRRIGATION OF TREATED WASTEWATER:

ADDITIONAL CONDITIONS FOR DISCHARGE PERMITS WAR160341 [34718] [34719] [34720]

Table A Land Irrigation Monitoring Requirements

Media Monitored	Parameter or Feature	Monitoring Frequency	Monitoring Method
Irrigation System	Pipelines	Monthly	Review pressure/ flow records and visual inspection of exposed pipes
	Sprinklers	Monthly	Visual inspection
	Driplines	Weekly	
Effluent Flow	Volumes	Daily	
Effluent Quality	**All parameters specified in Table 2 (Schedule H)**	**As specified in Table 2 (Schedule H)**	**As specified in Table 2 (Schedule H)**
	Metals	Six-monthly	Grab sample
Crop Growth	Yield	At each harvest /supplement making	Tonnes/ha
	Crop Nutrient Uptake	At each harvest /supplement making	Herbage tests Nitrogen, phosphorus, potassium, sulphur, magnesium, calcium, sodium)
	Crop Health (insects etc)	Monthly	Visual inspection
Climate	Rainfall	Continuously	Weather station
	Wind	Continuously	Anemometers
	Evapotranspiration	Daily	Weather station
Soil Condition	Soil water status	Continuously	Soil moisture probes (annual calibration)
	Soil Chemistry including pH – Cation exchange capacity – Total Base Saturation – Cations (calcium, magnesium, potassium and sodium) – Exchangeable Sodium Percentage (ESP) – Olson Phosphorus – Sulphate Sulphur – Total Nitrogen – Crop Nitrogen (available N using anaerobic incubation) – Mineral N, measure of immediately available	Once yearly in Spring at the start of the irrigation season.	Composite plug sampling to a depth of 15 cm. Each composite sample shall consist of 20 sub samples. Composite samples shall be taken from the irrigated and non-irrigated (control) sites See also Schedule B Condition11

SCHEDULE B: LAND IRRIGATION OF TREATED WASTEWATER:

ADDITIONAL CONDITIONS FOR DISCHARGE PERMITS WAR160341 [34718] [34719] [34720]

Table A Land Irrigation Monitoring Requirements

Media Monitored	Parameter or Feature	Monitoring Frequency	Monitoring Method
	nitrate and ammonium – Total Carbon – Organic matter		
	Additional soil chemistry sampling for: – Cation (sodium) – Exchangeable Sodium Percentage (ESP) – Olson Phosphorus	In addition to the above required annual sampling in Spring, sampling is also required in the first Autumn following the commencement of Discharge Permits WAR160341 [34718] [34719] [34720] at completion of the irrigation season, to check on sodium and phosphorus levels in the soil.	Composite plug sampling to a depth of 15 cm. Each composite sample shall consist of 20 sub samples. Composite samples shall be taken from the irrigated and non-irrigated (control) sites See also Schedule B Condition11
	Heavy metals, including Arsenic As Cadmium Cd Chromium Cr Copper Cu Lead Pb Nickel Ni Zinc Zn	Two-yearly	Composite plug sampling to a depth of 15 cm. Each composite sample shall consist of 20 sub samples. Composite samples shall be taken from the irrigated and non-irrigated (control) sites See also Schedule B Condition 11
	Soil physical including Bulk density 0-10 cm and Macro porosity	Once every two years unless the Manager, Environmental Regulation Wellington Regional Council certifies in writing that the patterns of bulk density and macro porosity are stable such that sampling frequency can be reduced to once every five years.	Intact core method. Three cores per site shall be taken from the irrigated and non-irrigated (control) sites

SCHEDULE B: LAND IRRIGATION OF TREATED WASTEWATER: ADDITIONAL CONDITIONS FOR DISCHARGE PERMITS WAR160341 [34718] [34719] [34720]			
Table A Land Irrigation Monitoring Requirements			
Media Monitored	**Parameter or Feature**	**Monitoring Frequency**	**Monitoring Method**
Groundwater (bores LF8. MT5A, DT1, DT2 as shown on Figure 1 (Schedule H)	Depth to water, Ph, TN, NH4N, NO3N, TP, ORP, FC, *E coli,* TSS, Volatile SS, BOD, DO, Temperature, TKN, Conductivity, Transmissivity	Monthly	Measurement at the groundwater monitoring bores shown on Figure 1 (Schedule H)

Continued Conditions to Resource Consent WAR160341 [34718] [34719] [34720]

11. The soil samples required for testing and analysis under Condition 9 (Schedule B) are to be collected by a suitably qualified independent party subject to the satisfaction of the Manager Environmental Regulation, Wellington Regional Council and shall be undertaken in accordance with the following sampling procedures:

    a) soil type(s) from the disposal site must be identified and included in the results forwarded to the Wellington Regional Council;
    b) if there are different soil types across the disposal site then separate soil samples for each type must be taken with the results presented separately;
    c) composite soil samples (i.e. made up of at least 20 subsamples) must be taken at various sampling sites, taking into account the different soil types across the wastewater disposal site and the same sampling sites must be utilised each time sampling is undertaken;
    d) sampling must be undertaken ~~during the same month each sampling year and~~ prior to the irrigation season;
    e) as far as practicable, avoid sampling in very wet or very dry conditions;
    f) as far as practicable, avoid sampling near shelter belts, water troughs and gateways/access points;
    g) sample locations shall be recorded and plotted on a locality map, the map shall be included in the results forwarded to the Wellington Regional Council.

12. Should groundwater monitoring in bores MT8, MT9, MT10 show bacteriological and/or nitrate contamination at or above drinking water standards as determined in the Drinking water Standards for New Zealand 2005 (or equivalent standard that supersedes the 2005 standards), the Consent Holder shall notify bore owners with bores sited between MT8, MT9, MT10 and the Mangatārere Stream on Gallons Road of test results and inform them that they should be getting any shallow groundwater supply used for human drinking water tested.

    Advice Note: *Condition 12 does not require the Consent Holder to itself undertake any water quality testing of the groundwater in the privately owned bores. The condition requires only that the Consent Holder alert the bore owners.*

Sodium Management

13. If the results of monitoring undertaken in accordance with Condition 9 (Schedule B) show that the Sodium Absorption Ration (SAR) of the treated wastewater exceeds 5 (mmolcL-1)0.5, the soil receiving the treated waste water shall be tested for sodium concentrations six- monthly. The Consent Holder shall apply a suitable soil amendment (gypsum) to maintain the ESP (exchangeable sodium percentage) in the soil at or below 15 per cent.

Consent Conditions – Schedule C

Expired January 2023.

Consent Conditions – Schedule CA

Consent No. WAR160341 [34729] Category: Discharge to Water

Pursuant to sections 104B, 104D, 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	Carterton District Council	
Address	P O Box 9, Carterton 5743	
Duration of consent	Granted: 30 November 20173 Commenced: 19 January 2018	Expires: 17 January 2053
Purpose for which right is granted	**Schedule CA** [34729] Discharge of treated wastewater into an unnamed tributary of the Mangatarere Stream, via the existing weir outfall for emergency discharges only	
Location	Dalefield Road, Carterton at or about map reference NZTM 1810119.5453838	
Legal description of land	Lots 1 & 2 DP 24549, Lots 1 & 2 DP 30724, Lot 2 DP89642, Lot 1 DP 14020, Part Lots 1 & 2 DP 30724, unformed legal road comprised in Taratahi 1B, Part Taratahi 391C1A, Part Taratahi 391C1B, Part Taratahi 391C1C and Part Taratahi 391C1D and Part Taratahi 391CD2	
Conditions	Schedule CA	

Conditions to Resource Consent WAR160341 [34729] - CA

Discharge Regime

1. There shall be no discharge of treated wastewater to the unnamed tributary of the Mangatārere Stream at times when the flow in the Mangatārere Stream at SH2 (State Highway 2) is below the estimated half median flow.

2. When the flow in the Mangatārere Stream is between half median flow and 3x median flow, the Consent Holder shall ensure that the dilution ratio of stream flow to treated wastewater is no less than 50:1.

3. When the flow in the Mangatārere Stream is above the 3x median flow, the Consent Holder shall ensure that the dilution ratio of stream flow to treated wastewater is no less than 30:1.

4. The volume of discharge shall not exceed 60,000 cubic metres in any 24 consecutive hour period.

5. The discharge of treated wastewater from the CDC WWTP via the weir to an unnamed tributary of the Mangatārere Stream is permitted to occur under Discharge Permit 160341 [34729] only in the following exceptional circumstances:

    a) The land irrigation areas are at or above capacity, including any additional capacity provided by exception under Condition 2 (a) (Schedule B), and it is not practicable to discharge treated wastewater to land; **and**
    b) The storage ~~sequential batch~~ reservoirs are full or out for unforeseen urgent maintenance purposes or the infrastructure required to pump treated wastewater to or from the SBRs is not functional; or
    c) The CDC WWTP facilities are unable to store treated wastewater due to extreme unforeseen weather events or unforeseen delays in scheduled maintenance or repair works within the WWTP facilities; **and**
    d) The discharge occurs no more than twice per year for a maximum of two weeks.

    As soon as practicable and within one working day after commencing the discharge, the Consent Holder shall advise the Manager Environmental Regulation, Wellington Regional Council and Regional Public Health of the anticipated volume, contaminant concentration, in-stream dilution and duration of the proposed discharge. The Consent Holder shall obtain written approval from the Manager Environmental Regulation, Wellington Regional Council for the discharge. This written approval may include requirements to minimise potential adverse effects on the stream receiving environment for the duration of the discharge,

    Advice Note: *Condition 2 (Schedule B) limits the rate of irrigation to land but provides an exception for circumstances where discharge to land in excess of the specified limits is necessary to minimise the duration of discharge to surface water (where the potential effects of land irrigation are less adverse than the potential effects of discharge to surface water). WAR160341 [34729)] provides for emergency or unforeseen circumstances and is to be exercised as a last resort after all other management alternatives, including discharge to land, have been exhausted. Condition 5 (a) (Schedule CA) above clarifies that the exception provided for in Condition 2 (Schedule B) is to be exercised before resorting to discharge to the unnamed tributary under WAR160341 [34729]. Greater Wellington Regional Council will not withhold approval for the exception to exceed land discharge irrigation rates in emergency or unforeseen circumstances and may require the exception to be exercised.*

Additional Sampling Required For Discharges via Weir Outfall

6. If any discharge occurs pursuant to Discharge Permit WAR160341 [34729] the Consent Holder shall, in addition to the applicable conditions of Schedules A and G, undertake the following additional sampling and reporting:

   a) Take a grab sample of the discharged wastewater and the receiving environment at the treatment discharge sampling point specified in Table 1 and Figure 1 (Schedule H) for the constituents and detection limits detailed in Table 2, Schedule H. Sampling shall occur between 60 and 120 minutes after the discharge commences and once daily thereafter for the duration of the discharge via the weir; and
   b) Macroinvertebrate sampling at the Surface Water Sampling Sites identified Table 1 and Figure 1 (Schedule H). The macroinvertebrate sampling must be carried out in accordance with Conditions 13, 14 and 15 (Schedule G); and
   c) Within two months of the discharge ending the Consent Holder shall submit a report to the Manager Environmental Regulation, Wellington Regional Council detailing:
      i. The results of any treated wastewater discharge quality and receiving water grab sampling; and
      ii. The results of any macroinvertebrate sampling;
      iii. An analysis of the reasons necessitating the discharge; and
      iv. A summary of the recommendations and improvements that have been made, or are programmed to be made (including time frames) to improve the system and the management of the WWTP to reduce the need for future discharges under this consent occurring.

Treated Wastewater Quality – for SBR Treated Wastewater

7. Where the treated wastewater discharged via the weir has passed through SBR treatment, the treated wastewater shall comply with the wastewater quality standards and compliance limits specified in Conditions 8 and 9 (Schedule G) and the results of all sampling undertaken shall be included in the sampling record for the purposes of calculating median and 95th percentile quality values for the purpose of Condition 9 (Schedule G).

Treated Wastewater Quality – for Non-SBR Treated Wastewater

8. Where the treated wastewater discharged via the weir has not passed through SBR treatment:

   a) Treated wastewater discharged from the CDC WWTP to surface water shall meet the following standards measured at the point of outflow from the treatment discharge:

Parameter	Median Limit Value	95th Percentile Limit Value
BOD_5 (g/m³)	52	80
TSS (g/m³)	85	140
TAN (g/m³)	35	55
DRP (g/m³)	9	27

   b) Ultra-violet treatment shall achieve the following standards:
      i. 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; and

ii. For discharges between 5,000m³/day and 10,000m³/day, the median of 10 consecutive *E coli* values shall not exceed ~~10,000~~ 1,400 per 100 millilitres and no more than 2 out of 10 consecutive values shall exceed ~~1,400~~ 10,000 per 100 millilitres; and

iii. For discharges over 10,000m³/day, UV treatment shall be applied to a minimum of 10,000m³/day for which the median of 10 consecutive *E coli* values shall not exceed 10,000 per 100 millilitres, and the remaining flow is not required to be UV treated.

c) Compliance with Condition 8 (Schedule CA) shall be based on the treated wastewater quality results from the grab sampling required by Condition 6 (Schedule CA), except as provided under (d) below;

d) Where there are less than 12 sampling results available from the Condition 6 (Schedule CA) grab sampling, compliance shall be based on a composite of median and 95th percentile values of 12 sample results comprising the available grab sampling results plus the most recent sampling results from the historical record of treated wastewater quality sampling undertaken during occasions of discharge to the unnamed tributary of the Mangatārere Stream pursuant to Condition 3 (Schedule C) of expired resource consent WAR160341 [34721] or any previous samples taken under exercise of consent WAR160341 [34729] whichever is the most recent; and.

e) Compliance shall be achieved where:

i. 4 or more of the preceding 12 consecutive values for any specified parameter is less than or equal to the limit specified for median values; and

ii. 10 or more of the preceding 12 consecutive values for any specified parameter is less than or equal to the limit specified for 95th percentile values.

Advice Note: *Condition 8 acknowledges that, for occasional discharges via the weir in unforeseen circumstances, the discharges may occur for only short periods making it difficult to acquire sufficient grab sampling results to allow determination of compliance. To ensure the discharge continues to meet minimum standards, compliance will in those circumstances take into account the most recent historical sampling data available from expired discharge permit WAR160341 [34721] to provide a meaningful basis for determining median and 95th percentile values.*

Receiving Water Standards

9. The discharge of treated wastewater via the weir from the CDC WWTP shall not cause any of the following effects in the Mangatārere Stream downstream of the zone of reasonable mixing:

a. The production of any conspicuous oil or grease films, scums or foams or floatable or suspended material; or

b. any emission of objectionable odour; or

c. any significant change in colour or clarity; or

d. any significant adverse effect on aquatic life; or

e. the maximum cover of the bed by periphyton as filamentous growths (more than 2cm long) to exceed 30%; or

f. the maximum cover of the bed by periphyton as diatom or cyanobacteria mats (more than 0.3cm thick) to exceed 60%; or

g. the biomass of periphyton as filamentous growths or mats on the bed to exceed 120mg chlorophyll-*a* per m^2 over a representative reach;

h. the concentration of total ammoniacal nitrogen to exceed 0.9mg/l; and

When compared with the upstream monitoring site defined in Table 1 (Schedule H) shall not cause:

i. the horizontal visibility to decrease by more than 20%; or

j. the Quantitative Macroinvertebrate Community Index to be reduced by more than 20%.

Reporting

10. The Consent Holder shall include in the annual report required by Condition 15 (Schedule A) details of any occasions of discharge to surface water via the weir, including the reasons necessitating the discharge via the weir, the duration of the discharge and the measures taken to limit the duration of discharge and minimise potential adverse effects on the stream receiving environment. The findings and results of all sampling required by the conditions of Schedule CA shall be incorporated into and submitted in the annual report, as required by Condition 15 (Schedule A).

Consent Conditions – Schedule D

Consent No. WAR160341 Category:

[34722] Discharge to Air (WWTP facilities)
[34723] Discharge to Land (Seepage from secondary and tertiary ponds)
[34724] Discharge to Land (Seepage from wetlands)
[34725] Discharge to Land (Accidental from pipelines and reservoirs)

Pursuant to sections 104B, 104D, 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	Carterton District Council	
Address	P O Box 9, Carterton 5743	
Duration of consent	Granted: 30 November 2017 Commenced: 19 January 2018	Expires: 17 January 2053
Purpose for which right is granted	**Schedule D** [34722] Discharge to Air of contaminants including odour from facilties at Carterton Wastewater treatment plan (clarifier, anaerobic digester, secondary and tertiary oxidation ponds) [34723] Discharge to land from the base of the secondary and tertiary oxidation ponds [34724] Discharge to land from the base of the existing wetland treatment areas [34725] Discharge to land from on-site pipelines supplying the land irrigation areas, base of sequential batch reservoirs and river discharge outfall	
Location	Dalefield Road, Carterton at or about map references NZTM 1810289.5453697[34722], 1810163.5453772[34723], 1810066.5453765[34724], 1810054.5453020[34725]	
Legal description of land	Lots 1 & 2 DP 24549, Lots 1 & 2 DP 30724, Lot 2 DP89642, Lot 1 DP 14020, Part Lots 1 & 2 DP 30724, unformed legal road comprised in Taratahi 1B, Part Taratahi 391C1A, Part Taratahi 391C1B, Part Taratahi 391C1C and Part Taratahi 391C1D and Part Taratahi 391CD2, and Lot 5 DP 461177	
Conditions	Schedule D	

Consent conditions – Schedule G

Consent No. WAR160341 [34731] Category: Discharge to Water

Pursuant to sections 104B, 104D, 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	Carterton District Council	
Address	P O Box 9, Carterton 5743	
Duration of consent	Granted: 30 November 2017 Commenced: 19 January 2018	Expires: 17 January 2053
Purpose for which right is granted	**Schedule G** [34731] To discharge a maximum of 60,000m^3 of tertiary treated wastewater per day to the Mangatarere Stream	
Location	Dalefield Road, Carterton at or about map reference NZTM 1809724.5452198	
Legal description of land	Lots 1 & 2 DP 24549, Lots 1 & 2 DP 30724, Lot 2 DP89642, Lot 1 DP 14020, Part Lots 1 & 2 DP 30724, unformed legal road comprised in Taratahi 1B, Part Taratahi 391C1A, Part Taratahi 391C1B, Part Taratahi 391C1C and Part Taratahi 391C1D and Part Taratahi 391CD2	
Conditions	Schedule G	

Conditions to Resource Consent WAR160341 [34731]

Stream Discharge Regime

1. No discharge of treated wastewater from the CDC WWTP to surface water is permitted to occur when the flow in the Mangatārere Stream is below half median flow.

2. When the flow in the Mangatārere Stream is between half median flow and 2x median flow, the discharge of treated wastewater from the CDC WWTP to surface water is permitted to occur only in the circumstances described in Condition 6 (Schedule G) below.

3. When the flow in the Mangatārere Stream is above 3x median flow, the Consent Holder shall ensure that the dilution ratio of stream flow to treated wastewater is no less than 30:1.

4. When the flow in the Mangatārere Stream is between the 2x median flow and 3x median flow, the Consent Holder shall ensure that the dilution ratio of stream flow to treated wastewater is no less than 50:1.

5. The volume of discharge shall not exceed 60,000 cubic metres in any 24 consecutive hour period, and the duration of each individual discharge event shall not exceed seven consecutive days within any 30-day period.

6. The discharge of treated wastewater from the CDC WWTP to the Mangatārere Stream is permitted to occur when flows in the Mangatārere Stream are between 2x median flow and the estimated half median flow only in the following exceptional circumstances:

   a) The land irrigation areas are at or above capacity and it is not practicable to discharge treated wastewater to land; **and**
   b) The sequential batch reservoirs are full; **or**
   c) The CDC WWTP facilities are unable to store treated wastewater due to extreme unforeseen weather events or unforeseen delays in scheduled maintenance or repair works within the WWTP facilities; **and**
   d) The dilution ratio of stream flow to treated wastewater is not less than 50:1
   e) The discharge is for a period not exceeding seven consecutive days within any 30 day period.

   Within one working day of commencing the discharge, the Consent Holder shall advise the Manager Environmental Regulation, Wellington Regional Council of the anticipated volume, contaminant concentration, in-stream dilution and duration of the proposed discharge.

Additional Sampling Required Following Discharge in Flows Between half Median and 2x Median ~~and 3x Median~~

7. If any discharge occurs pursuant to Condition 6 (Schedule G), the Consent Holder shall, in addition to Conditions 8 to 17 (Schedule G) and the applicable conditions of Schedule A, undertake the following additional sampling and reporting:

a) Take a grab sample of the discharged wastewater and the receiving environment at the sampling sites specified in Table 1 and Figure 1 (Schedule H) in accordance with the frequency, constituents and detection limits detailed in Table 2, Schedule H. Sampling shall occur between 60 and 120 minutes after the discharge commences and once daily thereafter for the duration of the discharge; and

b) Macroinvertebrate sampling at the Surface Water Sampling Sites identified Table 1 and Figure 1 (Schedule H). The macroinvertebrate sampling must be carried out in accordance with Conditions 13, 14 and 15 (Schedule G) below; and

c) Within two months of the sampling being undertaken the Consent Holder shall submit records to the Manager Environmental Regulation, Wellington Regional Council detailing:

i. The results of any treated wastewater discharge quality and receiving water grab sampling; and

ii. The results of any macroinvertebrate sampling;

iii. An analysis of the reasons necessitating the discharge; and

iv. A summary of the recommendations and improvements that have been made, or are programmed to be made (including time frames) to improve the system and the management of the WWTP to prevent future discharges in flows between half median and 2x median occurring.

Treated Wastewater Quality Sampling

8. The Consent Holder shall monitor the quality of treated wastewater discharged from the CDC WWTP to surface water at the SBR outflow sampling point for the parameters and at the frequency specified in Table 2 (Schedule H).

Treated Wastewater Quality

9. For the purposes of Condition 10 (Schedule G), compliance shall be based on the treated wastewater monitoring data for the preceding 12 consecutive occasions of discharge to surface water and compliance shall be achieved where:

a) A minimum of 4 of the preceding 12 consecutive median values for any specified parameter is less than or equal to the limit specified for median values; and

b) A minimum of 10 of the preceding 12 consecutive 95th percentile values for any specified parameter is less than or equal to the limit specified for 95th percentile values.

10. a) Treated wastewater discharged from the CDC WWTP to surface water shall meet the following standards measured at the point of outflow from the sequential batch reservoirs:

Parameter	**Median Limit Value (except where specified, all median values will be established based on the sampling undertaken during the first 12 months following commencement of consent)**	**95th Percentile Limit Value**
BOD_5 (g/m³)	To be confirmed	25

TSS (g/m³)	To be confirmed	50
TAN (g/m³)	To be confirmed	20
DRP (g/m³)	To be confirmed	9
E. coli (per 100 mls)	100	100

b) The 95th percentile limits specified in the above table may be amended by the Manager Environmental Regulation, Wellington Regional Council provided the amended limit values are demonstrated, by a suitably qualified water quality specialist, to have a better environmental outcome than the above specified limits.

c) Within 18 months of commissioning the SBRs, the Consent Holder will prepare a report to identify appropriate median limits which should be set, based on the discharge quality sampling results for the no less than a 12 month period. The limits will be reviewed by an appropriately qualified water quality specialist and agreed by the Manager Environmental Regulation, Wellington Regional Council.

Water Quality Sampling

11. The Consent Holder shall collect representative grab samples from the Mangatārere Stream at the sampling sites specified in Table 1 (Schedule H) and according to the frequency, constituents, detection limits detailed in Table 2 (Schedule H) and Figure 1 (Schedule H). All sites shall be sampled on the same day. As far as practicable, the monthly surface water sampling day shall coincide with a wastewater discharge quality sampling occasion required by Condition 8 (Schedule G).

Receiving Water Standards

12. The discharge of treated wastewater from the CDC WWTP shall not cause any of the following effects in the Mangatārere Stream downstream of the zone of reasonable mixing:

a) any emission of objectionable odour; or
b) any significant adverse effect on aquatic life; or
c) the maximum cover of the bed by periphyton as filamentous growths (more than 2cm long) to exceed 30%; or
d) the maximum cover of the bed by periphyton as diatom or cyanobacteria mats (more than 0.3cm thick) to exceed 60%; or
e) the biomass of periphyton as filamentous growths or mats on the bed to exceed 120mg chlorophyll-*a* per m^2 over a representative reach; or

Compared with the upstream monitoring site shall not cause:

f) a decrease in the Quantitative Macroinvertebrate Community Index of more than 20%; or
g) a decrease in water clarity of more than 33%.

Macroinvertebrate Sampling

13. The Consent Holder shall engage an appropriately qualified and experienced ecologist to undertake macroinvertebrate sampling three times in the first year following the commencement

of this consent and twice each following year at the surface water locations identified in Table 1 and Figure 1 (Schedule H).

These surveys shall be undertaken prior to, or as soon as practicable (but in no case more than 1 month following) the commencement of each land irrigation season, ~~(approximately during the period November to December),~~ and once ~~at~~ near the end of the land irrigation season.

In addition, for the first year following commencement of consent, sampling shall also be undertaken during the land irrigation season (approximately during the period January to March). If the macroinvertebrate sampling confirms that the discharge is not having significant adverse effects on aquatic ecosystem health, the frequency of macroinvertebrate sampling required by this condition may be reduced with the written approval of 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.*

14. The sampling and assessment required under Condition 13 (Schedule G) shall be undertaken following a period of at least ~~three weeks~~ 14 days without a significant flood event (defined as an instantaneous river flow exceeding 3x median and during a period of low flow.

15. 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^2 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

16. The Consent Holder shall engage an appropriately qualified and experienced freshwater ecologist to 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 H) and Figure 1 (Schedule H). The periphyton assessment shall be undertaken three times in the first year following the commencement of this consent and twice each following year and shall, where as practicable, coincide with the macroinvertebrate monitoring required by Conditions 12 to 14 (Schedule G). 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-1b from the Stream Periphyton Monitoring Manual (Biggs amd Kilroy 2000) at the same established monitoring sites and transects as defined in Condition (a) 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.

Reporting

17. The findings and results of the monitoring required by Conditions 8, 11 and 13 to 16 (Schedule G) shall be incorporated and submitted in the annual report, as required by General Condition 15 (Schedule A). The reports must note any differences encountered with reference to the applicable discharge regime and assess compliance against the treated wastewater quality and receiving water quality standards listed in Conditions 8 and 9 above.

Reasons for decision report

1. Background, proposal and assessment

Under section 127(1) of the Act, the applicant has applied to change condition(s) of consent WAR160341 as outlined below. In accordance with the formatting of the original application, the conditions have been split between the relevant schedules.

The table below shows the CDC proposed condition, and if GWRC agrees to the applicants proposed change or if the condition has been modified. Removals are ~~crossed out~~ and additions are in yellow and underlined. Where there is no change to the condition in the GWRC proposed condition column, it states 'agree.

Column three provides the assessment of environmental effects of the proposed change.

Schedule A – General (including references to Schedule H; monitoring requirements)

CDC proposed condition	GWRC proposed condition	Assessment
8. To enable the sampling of the treated wastewater, easy and safe access to sampling points shall be provided and maintained as close as is practicable to the following locations as defined in Table 1 (Schedule H) and as shown on Figure 1 (Schedule H): i. The treatment discharge; ii. The irrigation discharge immediately prior to each ~~center pivot~~ irrigation area; and iii. SBR outflow.	Agree.	The change is only to the type of irrigator, not the irrigation area. Additionally, this condition only relates to the sampling, and this will still occur prior to each irrigation area. I consider the intent of the condition is still captured, and effects are still within consented envelope.
8. Change reference to center pivot to Irrigation area in the reference to Table 1, Schedule H, and Figure 1, Schedule H.	Agree.	Updated table to reflect change from sample sites to irrigation areas in monitoring requirement tables in Schedule H; for the same reasons as described above.

Schedule H – Discharge from new Treatment Plant Reservoirs
(Note. Schedule H is located within Schedule A).

CDC proposed condition	GWRC proposed condition	Reasoning
Schedule H Table 2 <u>Black Disc</u> Propose removing black disc measurement. Evaluate as too much of a health and safety risk to enter the stream to perform measurement. A clarity tube allows measurement out of the stream in all conditions, it can be viewed away from trees eliminating shadows. This is much more repeatable method and can produce consistent results. <u>Suspended Solids</u> Change the limit of detection for suspended solids to 3g/m³. The majority of the measurements are higher than 3g/m³ and to achieve 1g/m would require an additional 3L per site, adding a further 40kg of weight to transport. The benefit of that level of accuracy for the mainly groundwater samples that are below the limit is minor.	**Black disc:** GWRC agree to remove the black disc requirement if clarity as measured via the clarity tube is less than 1m. Should clarity be measured as 1m, then a black disc measurement shall also be undertaken. Note under the table as follows: <u>Note 1.</u> Regarding clarity measurement for low flows, a clarity tube may be used when measurement results do not exceed 1m; Black disc to be used for low flows when accessible, if clarity results via tube exceed the maximum 1m measurement). **TSS:** Do not agree to the change.	<u>Black disc</u> Mr Rados of Aquanet did not recommend removing the black disc requirements for the following reasons: Clarity tube measurements are limited by the length of the tube (1m) and this monitoring method is inappropriate for streams routinely exceeding 1m visual clarity. The Mangatārere stream's 5-year median, according to LAWA, **is 2.02 m**, which is more than double the maximum measuring limit of the clarity tube, and the GWRC monitoring data record **6.4 m** in the July 2021 – June 2022 reporting period. In contrast, the use of black disc is not limited by its design in that aspect. The black disc monitoring method is routinely used by all regional councils in the country and is a recognised monitoring method subject to National Environmental Monitoring Standards (NEMS). These standards should be referred to with regards to appropriate monitoring methodology. The Mangatārere Stream is relatively shallow and there are no apparent difficulties in routinely undertaking black disc measurements as long as the operator is adequately trained and qualified (noting the regional council routinely measure black disc in the Mangatārere Stream and much larger rivers). Removing the black disc monitoring requirements would effectively prevent assessment of the effects of the discharge on water clarity. I consider it both appropriate and reasonable to retain the black disc monitoring requirement. However, under high flow conditions, when visibility is low, a clarity tube may be

		used. Additionally, a clarity tube may be used in the first instance and retained as the main unit of measurement, should the clarity reading be less than 1m. Should clarity exceed the 1m reading available from the tube, a black disc measurement is required to be undertaken. <u>Suspended Solids:</u> As assessed by Mr Rados, there are multiple in-stream TSS measurements below 3 g/m3, and increasing the detection limit would cause a loss of information affecting our ability to assess the effects of the discharge on visual clarity and deposited sediment. I do not consider it appropriate to remove this requirement.
ADVISORY NOTES: 1. In Table 2, the expression 'Monthly ①' means measured once per month if discharge to surface water is occurring during that month and measured only when discharge to water is occurring. 2. 'Monthly 2' means measured once per month if discharge to land is occurring during that month and measured only when discharge to land is occurring. 3. Sampling for scenarios 2, 3, 4 and 6 in the following table is required only at times when discharge to the named receiving environment is occurring. 4.<u>Clarity measurement is not required for Post UV or SBR outfall</u>	Agree.	The applicant noted the addition is required to fix an error caused by inclusion in table. All parameters are to be measured, but not clarity for in the discharge/ in pipe concentration. The clarity measurements are to help evaluate clarity change in the receiving environment. Trying to measure clarity for the discharge is unnecessary if it were possible. Post UV and SBR outfall is in a pipe, so it is not possible to measure a black disc. Mr Rabos reviewed and agreed with the applicants reasoning and the change as appropriate.

Schedule B – Land Irrigation of Treated Wastewater

CDC proposed condition	GWRC proposed condition	Reasoning
5. Operation of the ~~centre pivot~~ irrigators shall occur in wind speeds of 12 m/s (including sustained gusts) or less, unless irrigation is ~~sub-soil~~ dripline.	Agree.	Effects of discharges to air were assessed by Ms Deb Ryan, Air Quality Expert From Pattle Delamore Partners (PDP). Ms Ryan assessed the effects of the change from an air discharge point of view and being within the existing consented envelope. The removal of direct reference to center pivot allows for alternatives, which would have the same or lower potential for spray drift and the same controls applying.
6. The Consent Holder shall adopt best practicable measures to ensure that any discharge to air authorised by this consent does not result in spray drift or objectionable or offensive odour beyond the site boundary. These measures shall include: a) Maintaining aerobic conditions in the treated wastewater that is to be irrigated to land; b) Configuring the ~~centre pivot~~ sprinklers to produce droplets generally larger than 150 microns~~,~~ using low pressure ~~(less than 1.4 bar);~~ c) Limiting the height of the sprinkler nozzles to no higher than 1.52 metres above ground or as otherwise agreed by the Manager Environmental Regulation, Wellington Regional Council which shall only be given if effects are demonstrated to be	Agree to change as proposed.	As stated in the application, alternative irrigators and their associated effects were considered in Attachments 16A, 16B and 16C (Hewitt Evidence) - for Spray Drift Modelling of Wastewater Effluent. These reports demonstrate the comparative spray drift effects. For this proposed change, as outlined in these reports, the proposed larger droplet size significantly lowers the potential for spray drift. Ms Ryan reviewed the application and was satisfied the effects of the proposed change are lower than the original consented scope of effects. I consider the intent of the condition is still captured, and effects are lower than the consented envelope. The applicant proposed the advice note at the end of condition 6 to provide for surface driplines and any future irrigation methods, The applicant agreed to its subsequent removal. **Minor amendment note**: An agreed change to Schedule B: Condition 6 was not included in the final

within the scope of effects as assessed in the application. ~~Alternative irrigation system may be considered, including other mitigation measures, if effects are shown to be within the scope of effects as assessed in the application after agreement of the Manager Environmental Regulation, Wellington Regional Council.~~		document. This minor amendment version rectifies the error.
11. The soil samples required for testing and analysis under Condition 9 (Schedule B) are to be collected by a suitably qualified independent party subject to the satisfaction of the Manager Environmental Regulation, Wellington Regional Council and shall be undertaken in accordance with the following sampling procedures: a) soil type(s) from the disposal site must be identified and included in the results forwarded to the Wellington Regional Council; b) if there are different soil types across the disposal site then separate soil samples for each type must be taken with the results presented separately; c) composite soil samples (i.e. made up of at least 20 subsamples) must be taken at various sampling sites, taking into account the different soil types across the wastewater disposal site and the same sampling sites must be utilised each time sampling is undertaken; d) sampling must be	Agree to change as proposed.	Mr Barry Lynch, Senior Environmental Scientist at GWRC reviewed the application as it relates to soil sampling. Mr Lynch confirmed the requirement for soil sampling to take place at the same time every year can be removed. However, they specified that every effort should be made to carry out soil sampling close to the same time every year but if conditions for sampling are unfavourable; for example, if this is a significant heavy rain period, the sampling time can be moved. The intent of the sampling in this condition is to detect any deterioration in soil quality due to irrigation with treated wastewater. The detection of any deterioration will not significantly be affected if sampling does not take place at exactly the same time. Based on the assessment of Mr Lynch, I consider this condition change appropriate.

undertaken ~~during the same month each sampling year and~~ prior to the irrigation season; e) as far as practicable, avoid sampling in very wet or very dry conditions; f) as far as practicable, avoid sampling near shelter belts, water troughs and gateways/access points; sample locations shall be recorded and plotted on a locality map, the map shall be included in the results forwarded to the Wellington Regional Council.		
Schedule B Table A: CDC proposed to remove the below additional sampling parameters for bores LF8, MT5A, DT1 and DT2 as outlined in Schedule *Groundwater (bores LF8. MT5A, DT1, DT2 as shown on Figure 1 (Schedule H)* *Depth to water, Ph, TN, NH4N, NO3N, TP, ORP, FC, E coli, TSS, Volatile SS, BOD, DO, Temperature, TKN, Conductivity, Transmissivity* *Monthly* *Measurement at the groundwater monitoring bores shown in Figure 1 (Sch H)*	Do not agree to change.	The intent of this proposed change is to remove sampling parameters for the four bores identified in Schedule B. These four bores are located around the centre pivot irrigation area. No effects assessment was provided by CDC which supports the removal of the additional monitoring bores. Mr Rob Van Der Raaij (Groundwater Scientist) at GWRC and Mr Rados (Freshwater Scientist) of Aquanet reviewed this condition removal. Regarding FC and VSS removal, both experts agreed these parameters need to be retained. Mr Van Der Raaij agreed with Mr Rados that at least one of TKN or nitrate be measured so that the balance or organic nitrogen can be used as an indicator of direct infiltration. Regarding TN, Mr Van Der Raaij noted that there are two main methods for determining total nitrogen (TN); One is by direct analysis of TN, the other is a calculation based on the sum of

		oxidized nitrogen (nitrite+nitrate) and organic nitrogen (including ammonia). If the latter method is used during monitoring, TKN is likely going to be being measured anyway. If the former method is used, then nitrite should also be measured (as noted by Mr Rados) to obtain the balance of organic nitrogen. Mr Van Der Raaij further noted a common method of measuring nitrate is to analyse nitrite+nitrate and nitrite separately then determine nitrate by balance; and thus, it is possible nitrite is being measured regardless of whether it's actually reported (The method used for determining TN should be noted in any reporting). Mr Van Der Raaij noted ORP is a measure of the oxidizing/reducing potential of the water and can be used as an indicator of how well the system can remove organic contaminants via oxidation. Note oxygen is consumed in this process, so DO can often be used as a proxy. However, for wastewaters positive ORP can also indicate substances such as chlorine. Mr Van Der Raaij considered that on balance, ORP could be omitted as much of the information can be obtained through DO and the separate nitrogen species. Without an assessment of effects on the removal of this parameter, I do not agree to its removal. Transmissivity is not something you would commonly monitor but is usually determined via pump tests on establishment of a bore. As a one-off measurement this would be good information to have for the monitoring bores. With no assessment of effects, I also do not agree to this removal.

Schedule C – Expired Jan 2023. No changes

Schedule CA - Discharge of Treated Wastewater to an Unnamed Tributary of the Mangatārere Stream for Emergency or Unforeseen Urgent Maintenance Purposes

CDC proposed condition	GWRC proposed condition	Reasoning
5. The discharge of treated wastewater from the CDC WWTP via the weir to an unnamed tributary of the Mangatārere Stream is permitted to occur under Discharge Permit 160341 [34729] only in the following exceptional circumstances: a) The land irrigation areas are at or above capacity, including any additional capacity provided by exception under Condition 2 (a) (Schedule B), and it is not practicable to discharge treated wastewater to land; and b) The storage ~~sequential batch~~ reservoirs are full or out for maintenance or the infrastructure required to pump treated wastewater to or from the SBRs is not functional; or c) The CDC WWTP facilities are unable to store treated wastewater due to extreme unforeseen weather events or unforeseen delays in scheduled maintenance or repair works within the WWTP facilities; and d) The discharge occurs no more than twice per year for a maximum of two weeks. As soon as practicable and within one working day	GWRC agree to condition change, subject to final wording as below (for B): b) The storage ~~sequential batch~~ reservoirs are full or out for unforeseen urgent maintenance purposes or the infrastructure required to pump treated wastewater to or from the SBRs is not functional; or	The applicant explained the reasoning for this condition change was largely due to the anticipated compliance reporting for the upcoming summer period, when lining works are proposed to occur. I discussed this change with the current compliance officer for CDC WWTP, Aaron Johnston. I agree with Mr Johnston that I do not agree to change the condition to 'maintenance,' as routine maintenance is not considered an exceptional circumstance. We agree to the change being out for 'unforeseen urgent maintenance purposes' to cover future unforeseen events. Future unforeseen events does not include routine or planned maintenance. An option was discussed with the applicant about inserting a note on this condition which allows the upcoming liner works. I do not agree to a note on the consent as this is a specific period of work unrelated to the overall consent. I further note emails have been passed between the applicant and the CDC Compliance officer regarding the compliance rating for this period of work.

after commencing the discharge, the Consent Holder shall advise the Manager Environmental Regulation, Wellington Regional Council and Regional Public Health of the anticipated volume, contaminant concentration, in-stream dilution and duration of the proposed discharge. The Consent Holder shall obtain written approval from the Manager Environmental Regulation, Wellington Regional Council for the discharge. This written approval may include requirements to minimise potential adverse effects on the stream receiving environment for the duration of the discharge, Advice Note: Condition 2 (Schedule B) limits the rate of irrigation to land but provides an exception for circumstances where discharge to land in excess of the specified limits is necessary to minimise the duration of discharge to surface water (where the potential effects of land irrigation are less adverse than the potential effects of discharge to surface water). WAR160341 [34729)] provides for emergency or unforeseen circumstances and is to be exercised as a last resort after all other management alternatives, including discharge to land, have been exhausted. Condition 5 (a) (Schedule CA) above clarifies that the exception provided for in Condition 2 (Schedule B) is to be exercised before resorting to discharge to the unnamed tributary under WAR160341 [34729]. Greater Wellington Regional Council will not withhold approval for the exception to exceed land discharge irrigation rates in emergency or unforeseen circumstances and may require the exception to be exercised.		
Condition 8(b)(ii):	Agree	The application states the lower threshold value should be the number

i. For discharges between 5,000m³/day and 10,000m³/day, the median of 10 consecutive *E coli* values shall not exceed ~~10,000~~ 1,400 per 100 millilitres and no more than 2 out of 10 consecutive values shall exceed ~~1,400~~ 10,000 per 100 millilitres; and		which can be exceeded a higher number of times, with a lesser allowable frequency for the higher threshold value. I agree that this condition appears to be an error, and the change as proposed is logical. Aquanet Freshwater Scientist Dimitris Rados reviewed the application as the changes relate to freshwater effects. Mr Rados further acknowledged that while stated in the advice note of this condition, it needs to be noted that use of sampling results from past years, to assess the effect of discharges via the weir outfall to the unnamed tributary, can bias the results of the monitoring period, either towards or away from compliance, especially in years when only few samples are required to be collected.

Schedule D Schedule D Discharge to Land (Accidental from pipelines and reservoirs)

CDC proposed condition	GWRC proposed condition	Reasoning
Include Lot 5 DP 461177 in this schedule, as the pipe passes over this land parcel.	Agree.	The applicant provided the easement agreement between CDC and the landowner to convey wastewater through this property.

Schedule G WAR160341 [34731] Schedule G – Discharge from new Treatment Plant Reservoirs

CDC proposed condition	GWRC proposed condition	Reasoning
Condition 7: **Additional Sampling Required Following Discharge in Flows Between Half Median and 2x Median ~~and 3x Median~~**	Agree	Change proposed to remedy consent error. Mr Rados noted Condition 2 also refers to Condition 6 and flows ranging between half median and 2 x median. The effects of discharge to the receiving environment will be more pronounced at low flows, and thus, that's when additional sampling will be more important, in comparison to when flows

		are higher, between 2x and 3x Median. I consider the change to be appropriate.
13. The Consent Holder shall engage an appropriately qualified and experienced ecologist to undertake macroinvertebrate sampling three times in the first year following the commencement of this consent and twice each following year at the surface water locations identified in Table 1 and Figure 1 (Schedule H). These surveys shall be undertaken ~~prior~~ after 1 month of ~~to~~ the commencement of each land irrigation season ~~(approximately during the period November to December),~~ and once ~~at~~ near the end of the land irrigation season. In addition, for the first year following commencement of consent, sampling shall also be undertaken during the land irrigation season (approximately during the period January to March). If the macroinvertebrate sampling confirms that the discharge is not having significant adverse effects on aquatic ecosystem health, the frequency of macroinvertebrate sampling required by this condition may be reduced with the written approval of 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	GWRC agree to condition change, subject to final wording, recommended change as below: …Table 1 and Figure 1 (Schedule H). These surveys shall be undertaken prior to, or as soon as practicable (but in no case more than 1 month following) the commencement of each land irrigation season, ~~(approximately during the period November to December),~~ and once ~~at~~ near the end of the land irrigation season.	As assessed by Mr Rados and as set out in the advice note, the intent of the "spring" monitoring is to capture the effects of the discharge to water that occurs during the winter/early spring period. The monitoring should be undertaken before the end of the regular discharges to water (aka beginning of the irrigation season), or as soon as practicable after that (noting that macroinvertebrate monitoring must not be undertaken within 2 weeks of a significant fresh). "After 1 month of commencement of each land irrigation season" allows for sampling after too long a period since commencement of land irrigation has passed and sampling will not capture the effects of discharge to water. Mr Rados suggested the following: *"prior to or as soon as practicable (and in no case more than) 1 month of the commencement of".* A tailored condition has been recommended to this effect. I consider this change appropriate.

and under the discharge to land regime.		
14. The sampling and assessment required under Condition 13 (Schedule G) shall be undertaken following a period of at least ~~three weeks~~ 14 days without a significant flood event (defined as an instantaneous river flow exceeding 3x median and during a period of low flow.	Agree.	The applicant states The NEMS (National Environmental monitoring Standard) protocol for macroinvertebrate sampling recommends sampling after 14 days have elapsed. Heavier rainfall events are expected due to climate change, and in past 3 weeks has been difficult to achieve. "Low flow" is traditionally considered as equal to or lower than half median, and this could be added, in addition to its first mention in Schedule D, Condition 4. I consider this change appropriate.

In accordance with section 127(3) of the Act this application has been considered as a **discretionary activity**.

2. Consultation

Iwi authority	**Comments**
Rangitāne o Wairarapa (RoW) C/- Horipo Reimene	A copy of the application was provided to Rangitāne o Wairarapa via Te Wahi. The following comments were initially received from RoW *(in italics):* - **Changing/choosing the right words and placing them in the right places RoW don't have concerns with.** WAR160341 [34729] Schedule CA - Discharge of Treated Wastewater to an Unnamed Tributary of the Mangatārere Stream for Emergency or Unforeseen Urgent Maintenance Purposes: a) The land irrigation areas are at or above capacity, including any additional capacity provided by exception under Condition 2 (a) (Schedule B), and it is not practicable to discharge treated wastewater to land; *- Is this because- of extreme weather events?* b) The storage reservoirs are full or out for maintenance or the infrastructure required to pump treated wastewater to or from the SBRs is not functional? *- Delete? Forgot what SBRs means?* c) The CDC WWTP facilities are unable to store treated wastewater due to extreme unforeseen weather events or unforeseen delays in scheduled maintenance or repair works within the WWTP facilities;

	- *This should not be a reason for an emergency/discharge; maintenance and repair works can be rescheduled.* *d) The discharge occurs no more than twice per year for a maximum of two weeks.* - Statement not clear enough; how does council interpret this condition? - RoW interpretation: this could mean 4 weeks or 28 days per year. Not 100% Sure of what to make of it? - RoW have not had discussion with the hapu Ngati Kahukuraawhitia about this consent application but support the hapu if they have concerns. I clarified the above questions with RoW, and did not receive a response or a final comment on the memo on Te Wahi.
Kahungunu ki Wairarapa	No comment provided, therefore it is assumed they have no concerns.
Other parties or persons	**Comments**
Dimitris Rabos, Freshwater Scientist, Aquanet Consulting Limited	Mr Rabo's reviewed the proposal as it relates to effects to freshwater. His comments are discussed in section 5 of this report.
Barry Lynch, Environmental Scientist, GWRC	Mr Lynch reviewed the proposal as it related to effects to soil. His comments are discussed in section 1 of this report.
Deb Ryan, Air Quality Specialist, Pattle Delamore Partners	Ms Ryan reviewed conditions which related to spray drift. Her comments are discussed in section 1 of this report.

3. Notification decision

A decision was made to process the application on a non-notified basis on 3 May 2023. Further information on the notification decision is provided in document # WAR160341 Notification decision report.docx.

4. Environmental effects

A full assessment of environmental effects was made under WAR160341 as set out in the decision report on 30 November 2017. This assessment focusses on the environmental effects of changing the listed conditions above, in Schedules A, H, B, CA, D, and G only.

An assessment of environmental effects, for simplicity, has been completed in the proposed condition table in section 1 of this report. In summary, I consider all proposed changes which have been accepted are within the scope of effects which was considered at the time the original application was lodged.

4.1 Summary of effects

Given the assessment above, it is considered that the proposed change of consent conditions will not result in any more than minor effects when undertaken in accordance with the recommended consent conditions.

5. Statutory assessment

5.1 Part 2

Part 2 of the Act outlines the purposes and principles of the Act. Section 5 defines its purpose as the promotion of the sustainable management of natural and physical resources. Sections 6, 7 and 8 of Part 2 define the matters a consent authority shall consider when achieving this purpose.

I am satisfied that the granting of the application is consistent with the purpose and principles in Part 2 of the Act.

5.2 Matters to be considered – Section 104-108AA

The original decision provided a detailed assessment of the activity against Section 104-108AA of the Act. I have assessed the change of conditions application against that assessment and consider that the proposed change is consistent with that assessment. Since the original decision, the Proposed Natural Resources Plan (decisions version) was publicly notified on 31 July 2019. I am satisfied that the change of conditions application is consistent with the relevant objectives and policies in the Proposed Natural Resources Plan (decisions version). There are no additional or new matters that need to be considered.

6. Duration of consent

Under section 127(1)(b) of the Act, no consent holder may apply for a change of the consent duration and so the consent expiry date will remain as 17 January 2053.

7. Monitoring

The current compliance monitoring programme and associated charges will remain.