CENTRAL HAWKE'S BAY DISTRICT COUNCIL

APPENDIX E

Proposed Consent Conditions

Porangahau/Te Paerahi WWTP Conditions – 27 August 2021 – Version 1

CONDITIONS RELATING TO CENTRAL HAWKE'S BAY DISTRICT COUNCIL WASTEWATER DISCHARGE CONSENTS

CONSENT HOLDER: CENTRAL HAWKE'S BAY DISTRICT COUNCIL

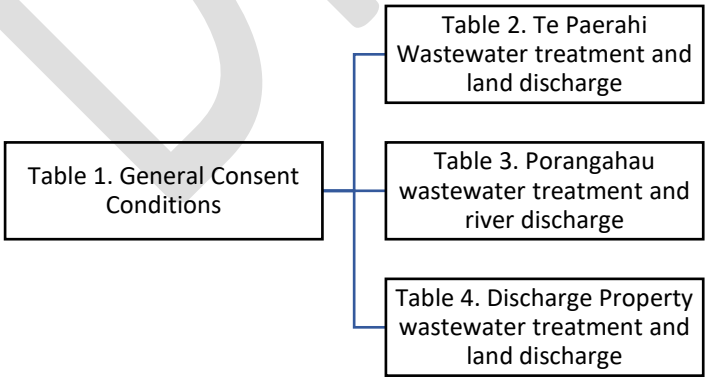
PORANGAHAU & TE PAERAHI WASTEWATER TREATMENT PLANT DISCHARGES

Definitions:

The following definitions apply across all resource consents:

Terminology Used	Definition
Active Storage	Means storage of treated wastewater for land discharge from the Porangahau and/or Te Paerahi WWTP, as well as the combined WWTP to be constructed servicing both communities.
Activities	Means the Activities authorised by the Resource Consents.
Consent holder	Means Central Hawke's Bay District Council (CHBDC).
Council	Means the Regulatory Compliance Manager of the Hawke's Bay Regional Council (HBRC).
Land application	The process of application of wastewater to land, and in this case using irrigation.
Stages	Means staging of the Project (Stages 0-3). Staging provides a systematic implementation of infrastructure. This enables a logical and rapid reduction in the amount of treated wastewater discharged via the existing systems to their respective environments, whilst managing the costs to the Council and the time for procurement and construction to occur.
Discharge Property	Means the two land parcels to receive wastewater irrigation. These are 474 Beach Road, Porangahau (Lot 2 DP 3877 – 81.2 ha & Lot 3 DP 2741 – 33.1 ha) totally 114.3 ha.
Treated Wastewater	Means treated wastewater derived from the Consent Holder's Porangahau and/or Te Paerahi WWTP, as well as the combined WWTP to be constructed servicing both communities.
WWTP	Means Wastewater Treatment Plant, whether it be the existing Porangahau and/or Te Paerahi WWTP, as well as the combined WWTP to be constructed servicing both communities. Of the three WWTPs, context will be provided as to what WWTP is being referred to. WWTP incorporates all current and future treatment processes, as well as storage facilities.

Consent conditions have been grouped into four key tables. Each table relates to a varying component of the consent application. The consent application incorporates three key locations; the Porangahau WWTP, the Te Paerahi WWTP, and the Discharge Property and their respective surroundings of which specific consent conditions are required for each, with general conditions being applicable to all locations. Table 1 outlines these general consent conditions relevant to all locations for the consent duration unless otherwise stated. Table 2 outlines specific consent conditions relevant to the Te Paerahi WWTP and its surroundings, with Table 3 outlining those for the Porangahau WWTP and its surroundings. Table 4 includes consent conditions specifically related to the Discharge Property following wastewater irrigation.



Porangahau/Te Paerahi WWTP Conditions – 27 August 2021 – Version 1

Table 1: General Consent Conditions

Number	Wording	Comment / Notes
	Overarching Principles	
1	These general conditions apply to Discharge Consents X, Y and Z collectively called 'the Consents'.	
2	Except as otherwise required by any other condition of the Resource Consents, the Activities must be carried out in general accordance, but allowing for treatment plant modifications, with the following information provided by the applicant (collectively referred to as 'the Application'). The most recent information takes priority over older information in the event of any conflicts: (a) Porangahau and Te Paerahi Wastewater Discharge – Resource Consent Application and AEE, dated [X] 2021, including Appendices A-[?]; and (b) ? (c) ? (d) Agreed outcomes from engagement with submitters as detailed in i. ? ii. ? iii. ? *Advice Note: If any conflict arises between the conditions of the consent and the application, the conditions of this consent will prevail.*	
	Operational Matters	
	Discharge Timing	
3	The timing of changes to the treatment and discharge regime shall be as follows: (a) Stage 0: To be operational until Stage 1 has been implemented; (b) Stage 1: To be operational within 4 years of commencement of these consents; and (c) Stage 2: To be operational within 6 years of commencement of these consents; and (d) Stage 3: To be operational within 9 years of commencement of these consents and then for the duration of this consent.	
4	The following activities shall cease: (a) Discharge from the Te Paerahi wastewater treatment plant to the sand dunes within 4 years from commencement of consent; (b) Discharge from Porangahau wastewater treatment plan to the Porangahau River under median river flows within 6 years; and (c) Discharge from Porangahau wastewater treatment plant to the Porangahau River within 9 years.	
	Land	
5	The discharge of treated wastewater to the land at the Discharge Property via irrigation shall meet the following criteria: a) Stage 0: 0 ha of irrigation; b) Stage 1: Not less than 4 ha of irrigation; c) Stage 2: Not less than 10 ha of irrigation; and d) Stage 3: Not less than 40 ha of irrigation.	
	Storage	
6	The Consent Holder shall provide the following volume of active storage: a) Stages 1 and 2: Use of the existing treatment ponds to provide not less than a combined 1,000 m^3; and b) Stage 3: Construction of a new pond with a volume not less than 10,000 m^3. *Advice note: Stage 1 and 2 provides for the use of the existing ponds for storage until a new pond is built as required by Stage 3.*	
	Signage	
7	The Consent Holder must, before commencing the consents and for the duration of its operation, erect and maintain signs on all infrastructure. This includes: a) the existing Porangahau WWTP; b) the existing Te Paerahi WWTP;	

	c) the to be constructed combined WWTP; and d) the Discharge Property, including signs every 500 m along the perimeter of the property. The wording of the signage shall be large enough to be read by a person with normal eyesight at 20 m from the sign and shall advise of the presence of the treated wastewater discharge in the area. The precise wording and location of the signage must be certified by the Council's Regulatory Manager.	
	Representative	
8	The consent holder shall nominate a person who is responsible for the maintenance of the wastewater treatment system(s) and the return of information (as required by conditions of this consent). The consent holder shall advise the Council (Manager Compliance) who this person is within one month of the commencement date of this consent and within ten working days of any change occurring.	
	Metering	
9	From the commencement of these Consents, the Consent Holder must install and maintain flow meters to measure and record the wastewater volumes discharged: a) into and out of the existing Porangahau WWTP; b) into and out of the existing Te Paerahi WWTP; c) into the new WWTP; and d) from the new WWTP and/or storage to the discharge site. The measuring device and recording system shall be maintained to continually measure and record the rate and volume of effluent discharged from the oxidation pond. Measuring and recording shall be at intervals not exceeding 30 minutes and to an accuracy of +/- 5%.	
10	Within three months following the installation of the flow meters, and every five years thereafter for the duration of Consents, the Consent Holder must have the flow meters, required by Condition 9, verified in accordance with the manufacturer's specifications. The Consent Holder must provide to the Council's Regulatory Manager, an in-situ flow meter verification certificate confirming the validity of the meters within one month of the verification being completed.	
11	Within three months of the commencement of these Consents, and three months following the construction and installation of a flow meter at the new WWTP, the Consent Holder must provide the Council's Regulatory Manager pulse output readings from the treated wastewater flow meters referred to in Condition 9. This information must be recorded at 15 minute intervals and be provided automatically on a daily basis in a format compatible with the Council's database.	
	Infrastructure Inspection	
12	The Consent Holder must ensure that the physical infrastructure of the pond system for the existing Porangahau and Te Paerahi WWTPs, as well as the future combined WWTP is inspected every month. Any damage to pond embankments, or signs of pond seepage must be identified, noted, and fixed as soon as practicably possible.	
13	If any blockages and/or breaks are identified in any of the system infrastructure in an inspection under Condition 12 and 59 or otherwise, the system affected must cease operation until the blockage and/or break is remedied, and the Consent Holder must notify Council's Regulatory Manager within 48 hours of identifying the blockage and/or break.	
	Monitoring	
	General	
14	The Consent Holder must ensure that all sampling equipment, including meters and field measurement devices, are maintained in good working order by suitably qualified persons in accordance with the manufacturer's instructions and industry best practice guidelines. Records of calibration shall be kept and made available to the Council upon request.	
15	In respect of monitoring required by the Consents, the following apply: (a) All monitoring and sampling techniques employed in respect of the conditions of the Resource Consents must be carried out by suitably experienced and qualified persons;	

	(b) All analytical testing other than on-site measurements, undertaken in connection with these Resource Consents must be performed by a laboratory that is IANZ accredited for the analytical tests or any other method approved in advance in writing by the Council Manager; (c) All water sample analyses must be undertaken in accordance with the methods detailed in the "Standard Methods For The Examination Of Water And Waste Water, 2017" 23rd edition by A.W.W.A., A.P.H.A. and W.E.F., or any other method approved in advance in writing by the Council Manager; and If any monitoring sites are identified as unsuitable, alternative monitoring sites must be identified and developed within a reasonable time after consultation with the Council Manager.	
16	Results of all analyses undertaken in accordance with conditions of this consent shall be provided to the Council (Manager Compliance) within 14 days of being received by the consent holder. Results provided shall be in a digital format compatible with Council computer systems that have been approved by the Council (Manager Compliance). Original laboratory reports shall be forwarded to the Council on request for auditing purposes.	
	Wastewater Monitoring	
17	From the commencement of these Consents, the Consent Holder must take samples of treated wastewater from the sampling port(s) (installed in accordance with Condition 18), once per month in any month that a discharge from any of the WWTPs or storage facilities occurs. The sample must be analysed for: (a) $cBOD_5$; (b) Total Suspended Solids; (c) Total Nitrogen; (d) Nitrate Nitrogen (NO_3-N); (e) Ammoniacal-Nitrogen (NH_4-N); (f) Nitrite Nitrogen (NO_2-N); (g) TKN; (h) Total Phosphorus; (i) Dissolved Reactive Phosphorus (DRP); (j) Sodium (Na); (k) Potassium (K); (l) Magnesium (Mg); (m) Calcium (Ca); (n) *Escherichia coli* (*E. coli*); (o) Dissolved Oxygen; (p) pH; (q) Faecal coliforms; and (r) Enterococci	
	Sampling Port	
18	From the commencement of these Consents, the Consent Holder must install and maintain a sampling port in the pipeline to the discharge from the WWTP(s), or provide a suitable location, where effluent is readily accessible for sampling.	
	Cultural Health Index Monitoring Protocols	
19	Within six months of the commencement of this consent, the Consent Holder must invite [to be determined] to undertake Cultural Health Index Monitoring according to their respective tikanga. If the engagement is accepted, the Consent Holder must commission [to be determined] to undertake Cultural Health Index Monitoring in compliance with the Cultural Health Index Monitoring Protocol prepared in accordance with Condition 20.	
20	If the engagement is accepted to undertake Cultural Health Monitoring as set out in Condition 19, the Consent Holder must commission [to be determined] to prepare a Cultural Health Monitoring protocol that as a minimum, must: (a) Describe the relationship of tangata whenua to the discharge area and the sites of interest in or near the locations to which these consents apply; (b) Describe the tikanga relevant to the proposed cultural monitoring (including kaitiakitanga, mauri of awa, whenua, tangata, whanaungatanga and te ha tawhirimatea), the activities, and the site(s); (c) Identify and map (with map references) the site(s) to be monitored;	

	(d) Set out the frequency of monitoring; (e) Describe the procedures required to access the application site for the monitoring (in particular health and safety requirements); (f) Identify the parameters and methods used for the monitoring; (g) Set out the matters to be included in the Cultural Health Monitoring Report and the frequency of the reporting obligations; (h) Set out the procedures for amendments to the Cultural Health Index Monitoring; and (i) Set out the duration of the monitoring to be undertaken and a review process should the relevant parties determine that monitoring is no longer required. *Advice Note: there are multiple tools for assessing cultural health, including the Mauri Compass. The selection of the methodology is up to the relevant body representing Māori interests.*	
21	The consent holder must provide a copy of the Cultural Health Index Monitoring Protocol, or any amended version to the Council within 1 month of receiving it. *Advice Note: These documents are the intellectual property of the Māori cultural health experts and are not subject to certification or review by the Consent Holder or Council.*	
	Plans	
	Monitoring Plan	
22	No later than six months after the commencement of this Consent, the consent holder shall submit to Council's Regulatory Manager for certification, a Monitoring Plan (MP), completed by a suitably qualified and experienced person. The MP shall be designed to monitor any effects of the wastewater discharges, including to the Porangahau River, Te Paerahi sand dunes and Discharge Property. The MP shall include, but not be limited to: (a) Methodology of the monitoring to be undertaken; (b) Locations for the individual monitoring types; (c) Responsibilities of those undertaking the monitoring; (d) Frequency of the monitoring; (e) ?; (f) ?; and (g) All necessary monitoring as requested by these consents. The MP shall be considered certified unless the Council's Regulatory Manager, within 20 working days of receiving the MP, refuses to certify it, and outlines its reasons in writing for not certifying the MP. If the MP is not certified, an amended MP must be submitted. Once certified by the Council, the MP shall be implemented within three months.	
	Operational and Management Plan	
23	No later than six months after the commencement of this Consent, the Consent Holder must submit to the Council's Regulatory Manager for technical certification an Operation and Management Plan (OMP) detailing (but not limited to) the following items: (a) Managing water levels in the WWTPs located at Porangahau and Te Paerahi; (b) A description of the treatment plant, storage and land application system, including a site map indicating the location of discharge infrastructure, the land treatment area, and monitoring sites; (c) Intended operation and maintenance procedures for the land treatment system and the non-deficit (wet soil) irrigation system, including how the systems will be operated and maintained to comply with these Conditions and the Conditions of Discharge Consents [?], [?] and [?]; (d) A methodology statement and summary setting out recent and proposed infiltration management. This should include forward work to reduced infiltration into the reticulated wastewater system, and a timeline for carrying out these works. (e) The procedures to be implemented to ensure that, where practicable, treated wastewater is discharged as a priority to land in accordance with the general conditions, including record-keeping procedures to demonstrate that the prioritisation has occurred; (f) A procedure to utilise the irrigation system to discharge at a higher application rate when storage is full through the use of the non-deficit (wet soils) system;	

	(g) The measures to be implemented to control, regulate and record irrigation application, including application depths and details about how the management blocks within the land treatment area will be managed; (h) Cropping, pasture, grazing and harvesting management and maintenance procedures; (i) The frequency of flushing of the irrigation pipes and the circumstances under which pipe flushing will occur; (j) Measures to ensure the treated wastewater irrigated remains aerobic; (k) On-site responsibilities, including operation and maintenance of the wastewater treatment facilities and pipelines to the river and land discharge points; (l) Key operational matters, including daily, weekly and monthly maintenance checks, and the keeping of a maintenance register to record the details of all maintenance events and any system malfunctions; (m) Monitoring and reporting procedures required to demonstrate compliance with these Conditions (to water, to land, to air and to groundwater); (n) A description of any other on-farm operations affecting nutrient loading or leaching within the land treatment area (e.g. grazing, crops, fertiliser application); (o) A risk assessment plan and contingency plans in the event of system malfunctions or breakdowns; (p) Procedures for receiving, recording and responding to all complaints in accordance with Conditions (30 and 31); (q) A protocol for managing accidental discovery of artefacts of historic, archaeological or cultural significance during construction; (r) Mitigation and contingency measures for controlling odour, aerosols, ponding and run-off in and from the land treatment area; (s) Procedures for the wind speed shut-down; (t) Procedures for the rainfall induced shut-down required by Condition 55; and (u) Details of how changes in wastewater composition and volume are to be managed and measures to ensure ongoing compliance with conditions.	
24	The Consent Holder must review the OMP by 31 July of each year, commencing [x] [y] 2023 to incorporate any proposed changes to the management of the activities. Following each review, the OMP, including any proposed changes must be submitted to the Council's Regulatory Manager for technical re-certification before 30 November of the same year.	
25	The Consent Holder must undertake the activities in accordance with the OMP that is most recently certified pursuant to Condition 23.	
	Education Plan	
26	Within 12 months of the commencement date of this consent, the Consent Holder must prepare and implement a Wastewater Education Plan (WEP) detailing a multi-faceted programme designed to increase the public's understanding and awareness of how their [the public's] actions/activities can influence wastewater volumes, and the ways in which the public can reduce water use. Within six months after submitting the WEP to the Council Manager, the Consent Holder shall commence delivery of the WEP. The Plan shall be reviewed and updated annually.	
	Reporting and Notification	
27	Records of the inspections carried out in accordance with Conditions 12, 13 and 59 and any resulting system modifications must be recorded in the Annual Monitoring Report as required by Condition 29.	
28	The Consent Holder must notify the Council Manager as soon as possible and no later than within two working days of 24 hours from the identification of any actual or potential non-compliance or when it becomes evident that a breach of Consent Conditions is about to occur. For conditions requiring compliance with a particular water quality standard, notification to the Council Manager is required within two working days 24 hours of receipt of the water quality analysis result from the Laboratory of the non-compliance.	
	Annual Monitoring Report	
29	By 31 September of each year (commencing 31 July 2023) the Consent Holder must provide the Council's Regulatory Manager an annual monitoring report for the 12 month period ending the previous 30 June. The annual monitoring report must include (but not be limited to):	

	(a) Results of sampling and a summary and interpretation of analyses and records collected in accordance with these conditions; (b) Comment on compliance with each of these Conditions, including the effluent standards; (c) A summary of inspections made on the physical infrastructure in accordance with Conditions 12, 13 and 59; (d) Results of soil sampling required by Condition 60, and an analysis to determine whether any material change in soil quality has occurred and actions taken to remedy any nutrient deficiency or excess; (e) Results of groundwater monitoring required by Conditions 61 and 62, including an assessment of whether there has been a decline in groundwater quality due to the activities; (f) Results of surface water monitoring required by Conditions 63, 64 and 65 including an assessment of whether there has been a decline in surface water quality due to the activities; (g) General comment on any non-compliances and operational problems; (h) Details of any works undertaken or proposed to improve the performance of the treatment system; and (i) A copy of the complaints register required by Conditions 30 and 31.	
	Spillages and Complaints	
30	The Consent Holder must maintain and make available to the Council's Regulatory Manager on request, a record of complaints which lists all complaints received alleging adverse effects attributable to the activities. The record must include but not be limited to the following: (a) Name and address of the complainant (if given); (b) The nature and duration of the effect; (c) The date and time the effect was detected; (d) The location where the effect was detected; (e) The prevailing weather conditions when the effect was alleged to be occurring e.g. wind speed and direction; (f) The likely cause of the effect detected; and (g) Any measures taken to mitigate the alleged effect and to avoid its recurrence.	
31	The consent holder shall establish and maintain a 'complaints register' to record the date and time of any complaints received and from whom, the nature and location of the complaint, and any actions taken in response to that complaint. A copy of the complaints register shall be made available to the Council on request.	
32	The Consent Holder must immediately notify the Council's Regulatory Manager of, and keep a record of, any major spillage of material into the wastewater collection system that may adversely impact on the wastewater treatment plant, the land application system or the river discharge system that have the potential to or will result in a non-compliance with any of the conditions of the activities authorised by these Consents.	
	Accidental Discovery	
33	In the event of an archaeological site, waahi tapu or koiwi being discovered or disturbed during the construction activities, the Consent Holder must immediately cease further work in the immediate area and inform [?], the Council's Regulatory Manager, Heritage New Zealand and (in the event that human remains are found) the New Zealand Police. Further work at the immediate area must be suspended while Iwi carry out their procedures for the removal of Taonga. The Council's Regulatory Manager will advise the Consent Holder when work can resume. *Advice Note: In accordance with Section 14(1) of the Coroners Act 2006, in the event that human remains are found the NZ Police should be contacted immediately and all works in the immediate vicinity will cease until advice is given that works can recommence.*	
	Review	
34	The Hawke's Bay Regional Council may annually during the month of May review the conditions of the consent in accordance with Sections 128, 129, 130, 131 and 132 of the Resource Management Act 1991 for the following purposes: a) To address any adverse effect on the receiving environment that can be reasonably attributed to the Activities which may arise from the exercise of the resource consent and which is appropriate to deal with at a later stage;	

	b) To modify the monitoring programme required by the resource consent or require additional monitoring if there is evidence that the current monitoring requirements of the resource consent are inappropriate or inadequate; c) To modify the reporting requirements of the resource consent if there is evidence that the current reporting requirements of the resource consent are inappropriate or inadequate; and d) To address any new regional or national rules, standards, or regulations relating to freshwater and/or coastal water management.	

Table 2: Te Paerahi Wastewater Treatment and Land Discharge

Number	Wording	Comment / Notes
	Operational Matters	
35	The average daily volume of wastewater discharged from the pond over any 12 month period shall not exceed 87 m^3/d for more than 50 % of the time, nor shall it exceed 190 m^3/d for more than 5 % of the time, as determined by daily flow records collected in accordance with Condition 9.	
36	The effluent discharged from the WWTP shall comply with the following standards **up until the establishment of the combined WWTP servicing both communities:** a) over any 12 month period the concentration of $cBOD_5$ shall not exceed 30 mg/L for more than 50 % of the time, nor shall it exceed 60 mg/L for more than 10 % of the time; b) over any 12 month period the concentration of suspended solids shall not exceed 60 mg/L for more than 50 % of the time, nor shall it exceed 140 mg/L for more than 10 % of the time; and c) the pH shall be within the range of 6.5 – 9. These standards are deemed to have been breached if: i. more than 16 samples taken over any 12 month period in accordance with Condition 17 have an $cBOD_5$ concentration exceeding 30 mg/L or more than 5 have an $cBOD_5$ concentration exceeding 60 mg/L; ii. more than 16 samples taken over any 12 month period in accordance with Condition 17 have a suspended solids concentration exceeding 60 mg/L or more than 5 have a suspended solids concentration exceeding 140 mg/L; and iii. any sample taken is outside a pH range of 6.5 – 9.	
	Receiving Environment Monitoring	
37	The consent holder shall ensure that samples are taken from four existing monitoring piezometers, at monthly intervals for the first 12 months and then quarterly intervals and tested for: a) Total ammoniacal nitrogen; b) Total nitrogen; c) Nitrate; d) Total phosphorus; e) Soluble reactive phosphorus; f) *E.coli*; and g) Faecal coliforms.	
38	At the same time samples required by Condition 37 are taken, the water level in each of the four piezometers sampled shall be measured.	
	Operation	
39	The Te Paerahi WWTP system and any discharge shall not result in any offensive or objectionable odour to the extent that it causes an adverse effect beyond the area designated for wastewater management purposes in the Central Hawke's Bay District Plan. For the avoidance of doubt, this condition includes any emission of offensive or objectionable odour from the oxidation pond and soakage area beyond the boundary of the subject property.	

Table 3: Porangahau Wastewater Treatment and River Discharge

Number	Wording	Comment / Notes
	Operational Matters	
40	The rate of wastewater discharged from the pond shall not exceed 1.5 l/s for more than 50 % of the time over any 12 month period, nor shall it exceed 4.8 l/s for more than 5 % of the time over any 12 month period, as determined by daily flow records collected in accordance with Condition 9.	
41	The daily volume of wastewater discharged from the pond over any 12 month period shall not exceed 200 m^3/d for more than 50 % of the time, nor shall it exceed x m^3/d for more than 5% of the time, as determined by daily flow records collected in accordance with Condition 9.	
42	The discharge of treated wastewater from the Porangahau WWTP to the Porangahau River shall meet the following criteria based on staging set out in Condition 3: a) Stage 0: The flow rate and volume shall not exceed that outlined in Condition 40 and 42 above. b) Stages 1 and 2: When the river flow is below 1,312 l/s (1.31 m^3/s) (median) there shall be no discharge to the Porangahau River. c) Stage 3: There will be no discharge to the Porangahau River. *Advice Note: River flow is to be measured for the Porangahau River at Saleyards Bridge.*	
43	The effluent discharged from the oxidation ponds (collected at the sample point specified in Condition 18 shall comply with the following standards: a) over any 12 month period the concentration of $cBOD_5$ shall not exceed 30 mg/L for more than 50 % of the time, nor shall it exceed 60 mg/L for more than 10 % of the time; b) over any 12 month period the concentration of suspended solids shall not exceed 50 mg/L for more than 50 % of the time, nor shall it exceed 90 mg/L for more than 10 % of the time; c) the pH shall be within the range of 6.5 - 9. These standards are deemed to have been breached if: i. more than 16 samples taken over any 12 month period in accordance with Condition 17 have an $cBOD_5$ concentration exceeding 30 mg/L or more than 5 have an $cBOD_5$ concentration exceeding 60 mg/L; ii. more than 16 samples taken over any 12 month period in accordance with Condition 17 have a suspended solids concentration exceeding 50 mg/L or more than 5 have a suspended solids concentration exceeding 90 mg/L; iii. any sample taken is outside a pH range of 6.5 - 9.	.
44	Other than discharges associated with necessary maintenance works, the discharge shall not, from a point approximately 200 m upstream of the point of discharge into the Porangahau River to a point 200 m downstream of the point of discharge into the Porangahau River, give rise to any of the following effects in the Porangahau River: a) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials. b) Any conspicuous change in the colour or visual clarity. c) Any emission of objectionable odour d) The rendering of fresh water unsuitable for consumption by farm animals. e) Any significant adverse effects on aquatic life	
	Receiving Environment Monitoring	
45	The consent holder shall ensure samples are taken from the following locations at monthly intervals two hours after high tide: a) 200 m upstream of where the discharge enters the Porangahau River b) 200 m downstream of where the discharge enters the Porangahau River c) At Kate's Quarry and tested for: i. $cBOD_5$; ii. Total ammoniacal nitrogen; iii. Nitrate; iv. TKN; v. Total phosphorus;	

	vi. Soluble reactive phosphorus; vii. Suspended solids; viii. pH; ix. E Coli; x. Enterococci; and xi. Faecal coliforms.	
46	At the same time the samples required by Condition 45 are taken, measurements should also be taken for dissolved oxygen, conductivity, temperature and clarity (secchi method) at the sampling points referred to as a) and b) in Condition 45.	
47	The Porangahau WWTP system and any discharge shall not result in any offensive or objectionable odour to the extent that it causes an adverse effect beyond the area designated for wastewater management purposes in the Central Hawke's Bay District Plan. For the avoidance of doubt, this condition includes any emission of offensive or objectionable odour from the oxidation pond and soakage area beyond the boundary of the subject property.	

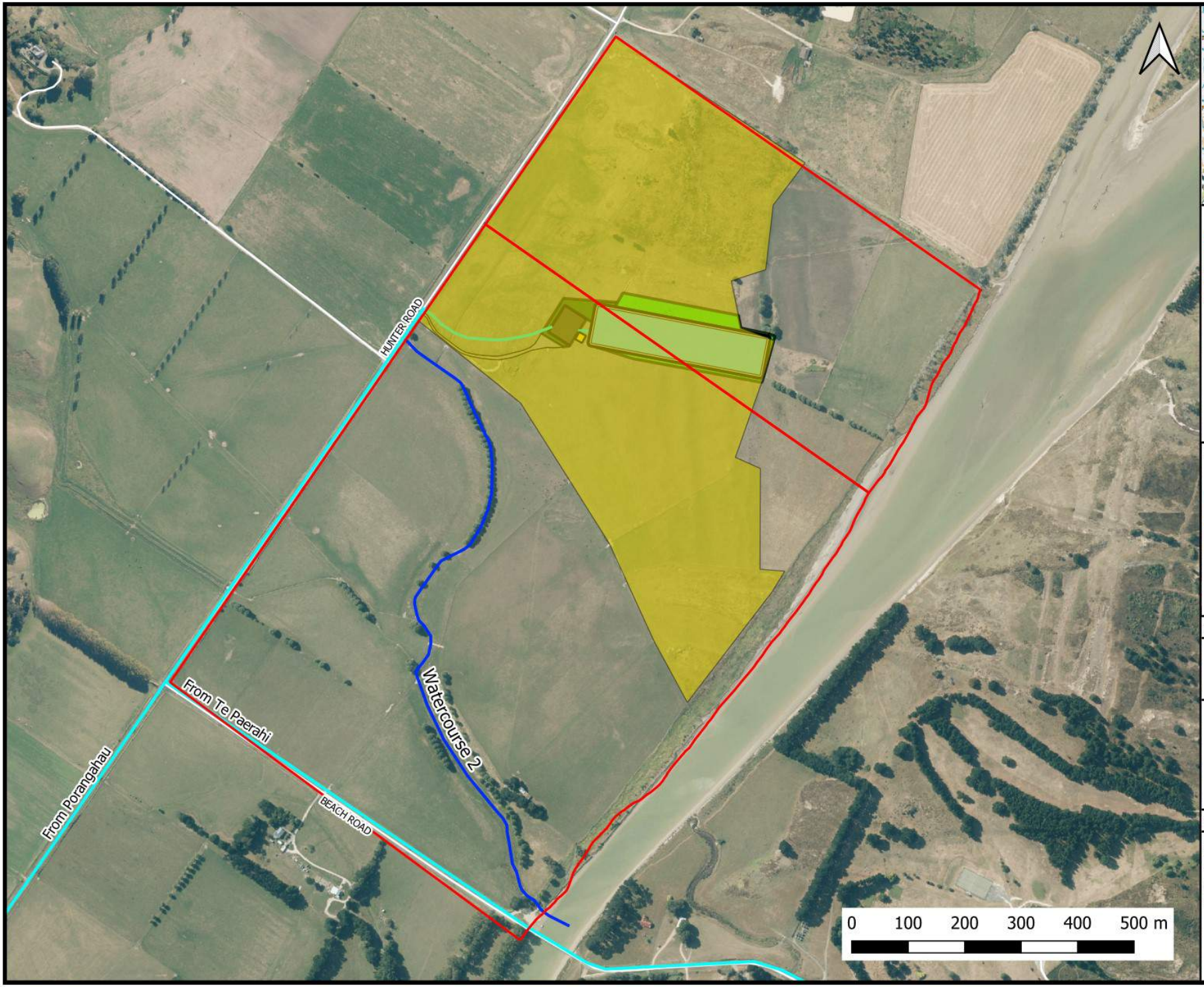
Table 4: Discharge Property Treatment and Land Discharge

	Operational Matters	
	Discharge Quality Parameters	
48	The Consent Holder must ensure that the treated wastewater meets the following standards prior to discharge to the irrigation and non-deficit (wet soils) irrigation system **following the construction of the new combined WWTP at the land discharge site to the end of the consent term:** (a) The concentration of Carbonaceous five-day Biochemical Oxygen Demand (BOD_5) must not exceed x g/m^3 in more than 8 out of 12 consecutive monthly samples, or x g/m^3 in more than 2 out of 12 consecutive monthly samples; (b) The concentration of Total Suspended Solids (TSS) must not exceed x g/m^3 for more than 8 out of 12 consecutive monthly samples, or x g/m^3 in more than 2 out of 12 consecutive monthly samples; (c) The concentration of Ammoniacal Nitrogen (NH_4-N) must not exceed x g/m^3 for more than 8 out of 12 consecutive monthly samples, or x g/m^3 in more than 2 out of 12 consecutive monthly samples; and (d) The concentration of Dissolved Reactive Phosphorus (DRP) must not exceed x g/m^3 for more than 8 out of 12 consecutive monthly samples, or x g/m^3 in more than 2 out of 12 consecutive monthly samples; and (e) The concentration of *Escherichia coli* (*E. coli*) must not exceed x cfu /100 mL for more than 8 out of 12 consecutive monthly samples, or x cfu/100 mL in more than 2 out of 12 consecutive monthly samples. (f) The pH range shall be within the range of 6.5 – 9. *Advice Note: Compliance will be demonstrated based on the samples required by Condition 17 [monitoring section]. The exceedance frequency allowed for the Treated Wastewater quality values identified above are based on monthly sampling over an annual 12-month monitoring period of 1 July to 30 June each year in accordance with the New Zealand Municipal Wastewater Monitoring Guidelines (NZWERF, Sept 2002) Table 13.2. If the frequency of sampling is more than monthly, the allowed numbers of annual exceedances will need to be amended to remain in line with the New Zealand Municipal Wastewater Monitoring Guidelines (NZWERF, Sept 2002) Table 13.2.*	Note: numbers highlighted need confirmation. Values for a-d are approximate to median or average and 95th percentile values as used to assess effects to surface water.
	Discharge Volumes and Timing	
	Land	
49	New irrigation areas are to be developed in accordance with Condition 5 with irrigation applied meeting the following criteria: (a) Regular irrigation: i. typical irrigation application regimes as defined by Conditions 50 and 51. (b) Wet soil irrigation: ii. Uses the same irrigation infrastructure as regular irrigation; iii. Used when soil conditions are too wet for regular irrigation; iv. Used when storage capacity starts to become limited as described in Condition 50; and v. To be applied to areas identified on Plan 1.	
50	Wastewater discharged shall be prioritised such that: (a) Regular irrigation occurs as a priority; (b) Storage is used to buffer irrigation to avoid where possible irrigation when soils are wet; (c) Wet soil irrigation is only used when irrigation is not possible and 75 % of available storage has been used. *Advice Note: Storage capacity is measured on a volume basis and excludes freeboard capacity.*	
51	The Consent Holder must ensure the application rate of treated wastewater onto land or into land does not exceed: (a) Regular irrigation: i. 2 mm above field capacity; ii. 10 mm/h; and	

	iii. 20 mm in any one application. (b) Wet soil irrigation: iv. 10 mm/h; and v. 20 mm in any one application.	
52	The Consent Holder must ensure that the nutrient loading resulting from the discharge of treated wastewater and any other fertiliser material onto and into land at the Discharge Property does not exceed the following criteria based on a 5 year rolling average: (a) Max N Load 250 kg N/ha/year; and (b) Max P Load 80 kg P/ha/year.	
53	Meeting the requirements of Condition 52 shall be determined by calculating the nutrient loading to each management block on the Discharge Property. The nutrient loading will be based on the results of monitoring required in accordance with Condition 17 and a record of the volume of treated wastewater applied to each management block.	
54	The Consent Holder must ensure that treated wastewater is not discharged to land closer than: (a) 20 m from any watercourse, whether flowing continuously or intermittently, including any open drain; (b) 5 m from any property boundary where there are no buildings; (c) 50 m from any bores used for water supplies; or (d) 150 m from any dwelling house, milking shed or other building on any property bordering the land treatment area when that building is directly downwind.	
55	The Consent Holder must not discharge treated wastewater to land of the Properties: (a) Within 48 hours after the application of fertiliser; (b) Within 24 hours after any harvesting activity; (c) Within 48 hours prior to any harvesting activity; or (d) When 50 mm or more rainfall has occurred in the previous 24 hour period as recorded at the Porangahau Climate Station.	
	Farm Management	
56	The Consent Holder must erect and maintain fencing to exclude stock along Watercourse 2, as shown on Plan 1, to allow for the establishment of riparian planting. Riparian planting is to be a combination of flaxes and native vegetation to manage paddock runoff and improve habitat quality.	
57	Notwithstanding the requirements of Condition 56, the Consent Holder can graze permanently fenced riparian margins for weed control purposes providing: a) The total grazing period in any year does not exceed 7 days; and b) The fenced riparian margin shall be grazed no more than twice in any year during the period 1 November to 30 April.	
58	The Consent Holder shall establish and maintain for the term of consent dune grass vegetation: (a) around the eastern perimeter of the wastewater treatment plant and storage area; and (b) on a 50 m wide section of sand dune within a 20 m riparian margin of the Porangahau River.	
	Infrastructure Inspection	
59	The Consent Holder must ensure that the physical infrastructure of the land treatment system and the land treatment area are inspected every week when operational, and that relevant parts of the systems are also inspected whenever any alarms associated with the systems are activated.	
	Monitoring	
	Soils	
60	The Consent Holder must take annual composite soil samples from areas that align with blocks detailed in nutrient budget reporting and have received treated wastewater within the previous 12 month period (starting 1 October and ending 30 September). A minimum of ten 75 mm depth composite samples must be obtained from each block, and must be analysed for the following: (a) pH; (b) Exchangeable Sodium (Na); (c) Exchangeable Sodium percentage (Na); (d) Exchangeable Potassium (K);	

	(e) Exchangeable Magnesium (Mg); (f) Exchangeable Calcium (Ca); (g) Phosphorus (Olsen); (h) Sulphate-S; (i) Total Nitrogen (TN); and (j) Cation Exchange Capacity (CEC).	
	Groundwater	
61	The Consent Holder shall monitor groundwater quality in the months of February, May, August and November in the locations identified on Plan 2 (Monitoring Locations) and in accordance with the MfE Groundwater sampling protocols (2006) or any subsequent updated document.	
62	The Consent Holder must measure and record the static water level of all bores identified in Condition 60 prior to purging and sampling. Samples collected from the bores and shall be analysed for the following parameters: (a) Temperature (field measurement); (b) pH (field measurement); (c) Electrical Conductivity (EC); (d) Chloride (Cl); (e) Nitrate-Nitrogen (NO_3); (f) Ammoniacal-Nitrogen (NH_4N); (g) Nitrite-Nitrogen (NO_2); (h) Dissolved Reactive Phosphorus (DRP); (i) *Escherichia coli* (*E. coli*); and (j) Sodium (Na).	
	Surface Water Chemistry	
63	The Consent Holder shall monitor surface water quality in the months of February, May, August and November in the locations identified on Plan 2 (Monitoring Locations). These include sites located: a) 200 m upstream of the Porangahau WWTP existing discharge location; b) 200 m downstream of the Porangahau WWTP existing discharge location; c) At Kate's Quarry; d) At two ephemeral/intermittent farm drains identified on Plan 2 (Monitoring Locations), on the Discharge Property prior to entering the Porangahau River; and e) At two ephemeral/intermittent farm drains identified on Plan 2 (Monitoring Locations), prior to entering the Discharge Property; *Advice Note: The exact location of the monitoring sites shall be confirmed in consultation with the Council's Regulatory Manager. Should the monitoring locations become unsuitable or inaccessible for sampling due to reasons beyond the consent holder's control during the term of the consent, the consent holder shall identify new monitoring locations, in consultation with the Council's Regulatory Manager.* *Advice Note: There is the potential that there is no flow at the nominated sampling site. In which case records should note that no sample was obtained due to no flow.*	
64	Three years after the commencement of this consent, the Consent Holder may prepare a review report that seeks to reduce or cease the monitoring required by Condition 63 by way of a variation in accordance with s127. This report shall be prepared by a suitably qualified and experienced person and be submitted to Council's Regulatory Manager. The justification shall detail and demonstrate the appropriateness of future monitoring, if any, and take into account the impacts, or lack of, as a result of the Stages implemented in accordance with Condition 3. No change in monitoring shall occur until such time as the Council's Regulatory Manager has agreed to a variation to this consent.	
65	The Consent Holder must monitor the following parameters at the sites identified in Condition 63: (a) Dissolved oxygen (field measurement); (b) Total Suspended Solids (TSS); (c) Total Nitrogen (TN); (d) Nitrate Nitrogen (NO_3); (e) Ammoniacal Nitrogen (NH_4 N; (f) Dissolved Reactive Phosphorus (DRP);	

	(g) Total Phosphorus (TP); (h) Faecal Coliforms; and (i) *Escherichia coli* (*E. coli*).	
	Reporting and Notification	
66	The Consent Holder must maintain a record of all irrigation activities authorised by this resource consent that occur within the land discharge site. This record must include but not be limited to: (a) The date, time, location and volume of each irrigation; (b) The date, time, location, volume and nitrogen loading of any nitrogenous and phosphorus material applied; and (c) The date and time of pipeline flushes when they occur. Records shall be reported included in the Annual Monitoring Report as required by Condition 29.	
	Odour and Aerosols	
67	The Consent Holder must operate the system at all times such that as a result of the activities associated with the exercise of this consent, including storage and irrigation of wastewater, there shall be no offensive or objectionable odour or spray drift at or beyond the property boundary to which this consent relates. *Advice Note: An odour or spray drift will only be considered offensive or objectionable after a Council enforcement officer has considered the Frequency, Intensity Duration, Offensive and Location of the odour or spray drift (i.e. the FIDOL Factors). The property boundary is defined as the edge of any of the properties identified in Condition 2 adjacent to property that is not identified in Condition 2.*	
68	Prior to the discharge of **treated wastewater** to land the Consent Holder must install a weather station on the site to be used for land application of treated wastewater and maintained at all times to provide data for managing the land application system. At a minimum this must include: a) Wind speed and direction at 6 m above the ground; and b) Rainfall at ground level; and c) Air temperature at 1.5 m and 6 m above ground; and d) Relative humidity	



LEGEND

- Discharge Property
- LMU 3
- Watercourse 2
- Proposed Pipeline Route

CLIENT

CENTRAL HAWKE'S BAY DISTRICT COUNCIL

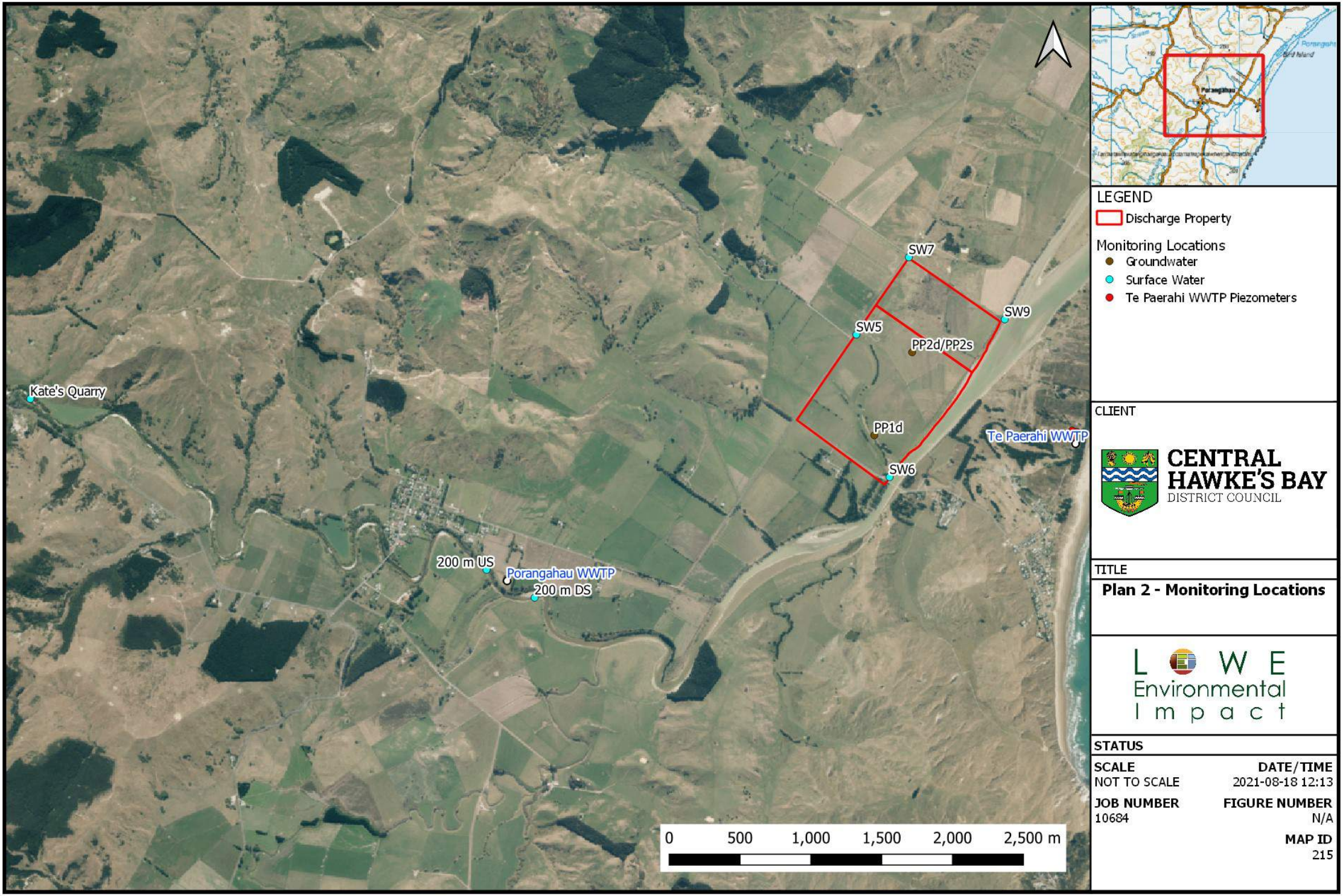
TITLE

Plan 1 - LMU 3 & Watercourse 2 Extent

LOWE Environmental Impact

STATUS

SCALE	**DATE/TIME**
NOT TO SCALE	2021-08-18 12:34
JOB NUMBER	**FIGURE NUMBER**
10684	N/A
	MAP ID
	212



LEGEND

Discharge Property

Monitoring Locations

- Groundwater
- Surface Water
- Te Paerahi WWTP Piezometers

CLIENT

CENTRAL HAWKE'S BAY DISTRICT COUNCIL

TITLE

Plan 2 - Monitoring Locations

L O W E Environmental Impact

STATUS

SCALE	DATE/TIME
NOT TO SCALE	2021-08-18 12:13
JOB NUMBER	**FIGURE NUMBER**
10684	N/A
	MAP ID
	215