

1. Condition Schedule APP-1993001253.02 and APP-2017201372.00 – Pahiatua Wastewater Treatment Plant General Conditions applying to all Permits

Condition #	
<i>Descriptive Specification</i>	
1	<p>The activity authorised by these permits shall be undertaken in general accordance with the application and Assessment of Environmental Effects received on 1 April 2015 and supplementary documents received:</p> <ul style="list-style-type: none"> a. On 11 December 2015, being a response to the s92 further information request of June 2015; b. On 12 April 2017, being a response to the s92 further information request of November 2016; c. Further information received on 28 April 2017 included in the s41B hearing report; and d. The revised wetland location plan tabled at the hearing on 23-25 May 2017. <p>Where the application is inconsistent with the requirements of the conditions, the conditions will prevail.</p>
2	<p>The wastewater discharge authorised by these permits shall be limited to:</p> <ul style="list-style-type: none"> a. A maximum 12 month rolling median daily (midnight to midnight) discharge of 1000 cubic metres; b. A 95th percentile daily flow of 1,800 m³/day, at approximate map reference NZTopo50 BM35:408-194.
<i>Management and Operation</i>	
3	<p>Within three months of commencement of these permits the Consent Holder shall submit a plan detailing the final plant structured optimisation programme. The optimisation programme shall be completed by 1 July 2018. The plan shall specify a suitably qualified operations technician who will implement the structured optimisation programme. The plan shall specify a stepwise optimisation process of the Chemical dosing system, lamella clarifier operation, micro-filter operation and UV disinfection, which shall be implemented as part of the optimisation programme.</p>

4	<p>WWTP Operations and Management Plan</p> <p>Within six months of commencement of these permits the consent holder shall prepare, and forward to Manawatu-Wanganui Regional Council's Regulatory Manager, an Operation and Management Plan (OMP). The OMP shall include but not be limited to:</p> <ol style="list-style-type: none"> a. A description of the entire treatment system facility, b. Plans of the treatment facility, c. A description of routine inspection and maintenance procedures to be undertaken with respect to the treatment plant and discharge components, d. Records of the commissioning and optimisation programme (in accordance with condition 3), e. Procedures for recording routine maintenance and all repairs that are undertaken f. A description of monitoring, including cultural monitoring location and frequency, and record keeping of that monitoring, including a map showing details of monitoring locations, g. Procedures for reporting compliance purposes, h. A description of procedures for reporting non-compliances to Horizons Regional Council, i. Procedures for reviewing and updating the Operations and Management Plan, <p>Any updates to the Plan shall be forwarded to Manawatu-Wanganui Regional Council within two months of their completion.</p>
5	<p>The OMP required by condition 4 shall be certified in writing by the Manawatu-Wanganui Regional Council's Regulatory Manager or his agent acting in a technical certification capacity.</p> <p>ADVICE NOTE: Technical certification is limited to those matters relating to how the applicant intends to comply with the conditions of consent.</p>
6	<p>The consent holder shall undertake all activities authorised by these permits in accordance with the certified OMP.</p>
7	<p>The consent holder shall ensure that a copy of the OMP, including any amendments, is kept onsite. This copy shall be updated within 5 working days of any amendments being made. Any updates to the Plan shall be forwarded to the Manawatu-Wanganui Regional Council within two months of an amendment.</p>
8	<p>Within three months of commencement of these permits, the permit holder shall install signage advising river users that treated wastewater is being discharged at the location.</p>

	<p>ADVICE NOTE: Signage shall be installed at the current discharge location into Town Creek and at the new discharge location once operational, at which time the Town Creek signage may be removed.</p>
9	<p>By 30 June 2027, the permit holder shall have completed an investigation into alternative methods of treatment and discharge, including land based disposal. The alternative disposal feasibility study shall inform the permit holder's decision on the best practicable option for treatment and disposal from the Pahiatua Wastewater Treatment Plant. The findings of the feasibility study shall be provided to the Tararua District Wastewater Forum (TDWF), and to the Regulatory Manager of the Manawatu-Wanganui Regional Council within two months of its completion.</p>
10	<p>Within three years of commencement of discharge of treated wastewater from the wetland to the Mangatainoka River, the permit holder shall have completed a recreational user's investigation of the Mangatainoka River 500m upstream and 500m downstream of the discharge point.</p> <p>ADVICE NOTE: Survey may include visual observations take during monthly monitoring as required by Condition 21 of ATH-199501433.02</p>
11	<p>By 31 October of each year, the Consent Holder shall provide to the Regulatory Manager of the Manawatu-Wanganui Regional Council Consents Monitoring Team and the Tararua District Wastewater Forum (TDWF), an Annual Environmental Report for the 12 month period ending 30 June of that year. The monitoring report shall include but not conditibe limited to:</p> <ol style="list-style-type: none"> a. A summary of analyses and records collected in accordance with conditions of these permits; b. An assessment of compliance against conditions of these permits; c. A comment on any non-compliance and any additional monitoring or remedial action undertaken or planned; and d. A record of any complaints that are received relating to the operation of the Pahiatua WWTP; <p>ADVICE NOTE: For remedial actions to be undertaken an overview on timing of actions, including reference to appropriate Asset Management Plans would be required</p>
12.	<p>Within 3 months of these permits commencing, the Permit Holder shall install a pond level sensor alarm on Pond 3. The sensor shall provide a continuous measure of pond level to the Supervisory Control and Data Acquisition (SCADA) system. The sensor shall provide the following alarm functions:</p>

	<p>a. Alert level at 500mm below overflow,</p> <p>b. High level at 300mm below overflow, and</p> <p>c. High-high level (Overflow imminent) at 100mm below overflow</p> <p>ADVICE NOTE: In relation to the sensor, the measurement and poling rates need not be high.</p>
13	<p>Tararua District Wastewater Forum (TDWF)</p> <p>The Consent Holder shall initiate the inaugural meeting of the Tararua District Wastewater Forum (TDWF) on or before 31 October in the year either or both of the Pahiatua (APP-1993001253.02) or Eketahuna application (APP-2005011178.01) commence.</p> <p>ADVICE NOTE: The inaugural TDWF meeting shall be initiated following commencement of the earliest application to be authorised.</p>
14	<p>The Consent Holder shall secure the services of an independent facilitator who is responsible for facilitating discussions any time the forum meets.</p>
15	<p>The permit holder shall, for all TDWF meetings, provide the venue and administrative support, including but not limited to recording attendees and circulating notes and outcomes discussed at the forum meeting.</p>
16.	<p>Two weeks prior to hosting any meeting of the TDWF, the permit holder shall by way of formal correspondence issue invitations to the following parties:</p> <ol style="list-style-type: none"> a. Kahungunu ki Tamaki nui-a-rua Trust and Rangitāne o Tamaki nui a Rua Inc, b. Water & Environmental Care Ass. Inc, c. Water Protection Society Inc, d. MidCentral District Health Board, e. Manawatu Estuary Trust, f. Wellington Fish and Game, g. John Bent, h. Christina Paton, i. Te Roopu Taiao o Ngati Whakatere, j. Corny and Charlotte Andrews, k. A representative of Horizons Regional Council as the regulatory authority, l. A representative of the Tararua District Council as the permit holder, and m. Manawatu River Accord participants.

17	In addition to condition 16 above, the permit holder shall place in the Manawatu Standard and the Bush Telegraph a public notice advising of the date, time, location and purpose of the TDWF meeting.
18	The permit holder shall ensure that at least one TDWF meeting shall occur annually. ADVICE NOTE: Meeting frequency can be amended if participants in the TDWF agree.
<i>Duration and Reviews</i>	
19	By 30 June 2027 , the permit holder shall have completed a performance review of the operation of Pahiatua Wastewater Treatment Plant. In particular, the performance review shall evaluate: a) The effectiveness of the conditions of these Permits in avoiding, remedying and mitigating any adverse effects on the environment, including cultural effects; b) The Permit Holder's record of compliance with these Permit conditions; c) The effectiveness of the Permit Holder's methods in achieving the One Plan schedule E targets downstream of the discharge point; d) Based on available monitoring and state of the environment data, the condition of the Mangatainoka River catchment (including groundwater resources) downstream of the discharge; e) Based on the Permit Holder's monitoring records for the preceding years, whether there is any discernible correlation between the discharges and the quality of any downstream water body and any downgradient groundwater; and; f) Whether any amendments are required or recommended to any conditions of consent to address any significant adverse effects on the environment.
20	No later than two months following completion of the performance review, the Permit Holder shall forward to the Manawatu-Wanganui Regional Council's Regulatory Manager and the Tararua District Wastewater Forum (TDWF), a report detailing the findings of the review accompanied by an audit of the performance review prepared by an appropriately qualified and experienced water quality scientist.
21	The Manawatu-Wanganui Regional Council may, pursuant to section 128 of the Act, initiate a review of any conditions of these permits in the month of July 2020, July 2024 and July 2027 . Any review shall be for the purpose of reviewing the effectiveness of the conditions in avoiding, or mitigating any adverse effects on the environment, which may arise as a result of the exercise of this permit. The review of conditions shall be for the purpose of:

	<ul style="list-style-type: none"> a. The modification of the monitoring program, including reviewing the frequency of the monitoring or the determinants required; b. Requiring compliance with any relevant rule of an operative Regional Plan; c. The amendment, deletion or addition of new conditions as necessary to avoid, remedy or mitigate any adverse effect on the environment but not limited to conditions to mitigate adverse effects attributed to any breach of any condition; d. Addressing any adverse effects on the environment which may arise that are appropriately addressed at a later stage; e. Requiring the permit holder to adopt the best practicable option to remove or reduce any adverse effects on the environment; f. Assessing the performance of the wastewater treatment plant in terms of the quality of the effluent being discharged to the receiving environment; g. Reviewing the effectiveness of the standards in the conditions of this permit in addressing the adverse effects on the Mangatainoka River; h. The review may result in any of the following outcomes to ensure that any significant adverse effects are appropriately mitigated: <ul style="list-style-type: none"> i. The deletion or amendment of any conditions of the permits; ii. The addition of new conditions of consent including conditions imposing more stringent discharge quality standards or more stringent receiving water standards; and/or iii. The addition of new conditions requiring the permit holder to adopt the best practicable option.
22	Discharge to water permit ATH-199501433.02 , Discharge to air permit ATH-2016200747.00 , and Discharge to land permits ATH-2016200772.00 and ATH-2017201544.00 shall expire on 1 July 2030 .
23	Land use consent ATH-2017201543.00 shall expire on 1 July 2019 .

2. Condition Schedule ATH-2016200772.00 – Pahiatua Wastewater Treatment Plant Discharge to Air Permit

Condition #	
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Pre-Development Assurance

1.	<p>Within two months of the granting of this permit, the permit holder shall provide an Odour Operation and Management Plan (OMP) for certification to the Regulatory Manager of the Manawatu-Wanganui Regional Council. The purpose of the OMP shall be to detail the measures the permit holder intends to take to avoid and mitigate the potential for odour from the wastewater treatment plant and ponds. The Operation and Management Plan shall include, but not be limited to the following:</p> <ul style="list-style-type: none"> a. Details of regular inspections, plant maintenance and cleaning as required to avoid offensive odours; b. Responsibilities of on-site staff; c. Monitoring procedures; d. Contingency procedures in the event of equipment failures; e. A complaints procedure including; <ul style="list-style-type: none"> i. Provision of a 24 hour telephone contact number, ii. A stated commitment by the permit holder to respond to odour complaints within a specified time period, iii. Actions to be taken by the permit holder to verify complaints iv. Provision for recording the responses made by the permit holder to complaints, and v. Records of actions taken by the permit holder to address the sources of any verified odour; f. Management procedures for storage and handling of primary screenings and other solid wastes handling; and g. Procedures for monitoring and managing pond sludge levels to minimize the risk of upset conditions in the ponds resulting in offensive odours.
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Environmental Standards

2.	<p>The discharge to air authorised by this consent shall not cause the emission of odour that, in the opinion of the Manawatu-Wanganui Regional Council’s Consents Monitoring Officer, is offensive or objectionable at or beyond the property boundary of the Pahiatua Wastewater Treatment Plant site.</p> <p>ADVICE NOTE: When considering if an odour is objectionable or offensive, the Manawatu-Wanganui Regional Council will take into consideration the FIDOL factors: frequency, intensity, duration, offensiveness and location.</p>
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2. Condition Schedule ATH-2016200772.00 – Pahiatua Wastewater Treatment Plant Discharge to Air Permit

Condition #	
3	<p>The Consent Holder shall keep a complaints register to record complaints relating to discharges of odour or contaminant gases to air arising from the Wastewater Treatment Plant. The register shall include:</p> <ul style="list-style-type: none"> a. The details of the complainant if given; b. The location of where the contaminant, e.g. odour, was detected; c. A description of the wind speed and direction when the alleged adverse effect was detected by the complainant; d. The date and time of the detection; e. The most likely cause of the discharge detected; f. The dissolved oxygen levels in both ponds; and g. If applicable, any corrective action undertaken by the Consent Holder to avoid, remedy or mitigate the adverse environmental effect detected by the Complainant.
4	<p>The Consent Holder shall advise the Manawatu-Wanganui Regional Council's Regulatory Manager within 24 hours of any complaints relating to air discharges being received.</p>
5	<p>A copy of information recorded in the complaints register shall be included in the Annual Environmental Report required by condition 11 of the General Conditions. The Annual Environmental Report shall be provided to the Regulatory Manager by 31 October of each year.</p>
6	<p>The Consent Holder shall continuously monitor Dissolved Oxygen in the wastewater storage ponds and ensure that the Dissolved Oxygen measurement is at or above 0.5 mg/L.</p>
7	<p>In the event that any dissolved oxygen measurement is less than 0.5 mg/L, the consent holder shall take appropriate action to raise the dissolved oxygen as necessary to avoid the occurrence of an incident likely to cause non-compliance with conditions 2 and 6.</p>
8	<p>The consent holder shall advise the Regulatory Manager at least fourteen (14) days prior to undertaking any pond desludging works. The consent holder shall include as part of this advice, notice to the Regional Council of the method or methods proposed for sludge removal, the likely duration of the activity and the methods that will be used</p>

2. Condition Schedule ATH-2016200772.00 – Pahiatua Wastewater Treatment Plant Discharge to Air Permit	
Condition #	
	to manage the discharge of odour that has the potential to cause non-compliance with condition 2.

3. Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit

Condition #	
1.	<p>Until 30 June 2018, the treated wastewater shall meet the following standards:</p> <ul style="list-style-type: none"> a. The concentration of ammoniacal-nitrogen (NH₄-N) shall not exceed 10 g/m³ in more than 8 out of 12 consecutive samples, and no more than 18 g/m³ in more than 2 out of 12 consecutive samples; b. The concentration of soluble carbonaceous BOD₅ (ScBOD₅) shall not exceed 23 g/ m³ in more than 8 out of 12 consecutive samples; and no more than 31 g/ m³ in more than 2 out of 12 consecutive samples; and c. The concentration of total suspended solids shall not exceed 41 g/m³ in more than 8 out of 12 consecutive samples, and no more than 65 g/m³ in more than 2 out of 12 consecutive samples. <p>ADVICE NOTE: Compliance shall be based on grab samples taken immediately downstream of the UV treatment plant.</p>
2	<p>Until 30 June 2018, the treated wastewater discharge shall meet the following standards when flow in the Mangatainoka River as measured at “Mangatainoka at Pahiatua Town Bridge” flow recording station is at or below the 20th flow exceedance percentile flow:</p> <ul style="list-style-type: none"> a. The concentration of E.coli shall not exceed 600/100ml in more than 8 out of 12 samples, and no more than 2000/100ml in more than 2 out of 12 consecutive samples; and b. The concentration of DRP shall not exceed 1 g/m³ in more than 8 out of 12 samples, and no more than 2 g/m³ in more than 2 out of 12 consecutive samples.
3.	<p>By 1 July 2018 and thereafter, the treated wastewater shall meet the following standards:</p> <ul style="list-style-type: none"> a. The concentration of ammoniacal-nitrogen (NH₄-N) shall not exceed 10 g/m³ in more than 8 out of 12 consecutive samples, and no more than 18 g/m³ in more than 2 out of 12 consecutive samples; b. The concentration of soluble carbonaceous BOD₅ (sCBOD₅) shall not exceed 5 g/ m³ in more than 8 out of 12 consecutive samples; and no more than 8 g/m³ in more than 2 out of 12 consecutive samples; and

	<p>c. The concentration of total suspended solids shall not exceed 15 g/m³ in more than 8 out of 12 consecutive samples, and no more than 30 g/m³ in more than 2 out of 12 consecutive samples.</p> <p>ADVICE NOTE: Compliance shall be based on grab samples taken immediately downstream of the UV treatment plant.</p>
4	<p>By 1 July 2018 and thereafter, the treated wastewater discharge shall meet the following standards when flow in the Mangatainoka River as measured at “Mangatainoka at Pahiatua Town Bridge” flow recording station is at or below the 20th flow exceedance percentile flow:</p> <p>a. The concentration of E.coli shall not exceed 260/100ml in more than 8 out of 12 samples, and no more than 2000/100ml in more than 2 out of 12 consecutive samples; and</p> <p>b. The concentration of DRP shall not exceed 0.5 g/m³ in more than 8 out of 12 samples, and no more than 1.0 g/m³ in more than 2 out of 12 consecutive samples.</p> <p>ADVICE NOTE: Compliance with condition 2 and 4 will be based on the flow at the “Mangatainoka at Pahiatua Town Bridge” flow recording station being less than 23.3m³/s. Compliance shall be based on grab samples taken immediately downstream of the UV treatment plant.</p>
5.	<p>From 1 July 2018 all wastewater discharged shall pass through the primary screening unit, the oxidation ponds, and the UV disinfection unit.</p>
6.	<p>By 1 July 2019 and thereafter, all wastewater discharged shall pass through the primary screening unit, the oxidation ponds, the UV disinfection unit, the wetland complex and discharge via the unlined wetland section.</p>
7.	<p>The UV disinfection unit shall be equipped with a UV sensor to monitor UV transmission or intensity through the wastewater during operation.</p>
8.	<p>The UV sensor shall be monitored continuously, and shall be programmed with an alarm notifying the consent holder if the applied UV dose decreases below the manufacturer’s recommended dose for a period of more than 24 hours.</p> <p>ADVICE NOTE: It is expected that this alarm setting will be of the order of 30 mJ/cm².</p>

Receiving Water Quality

9. The treated wastewater discharge shall not cause any of the following in the Mangatainoka River at the river flows outlined in Table 1, and after the reasonable mixing distance of 200m;
- a. the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
 - b. bacterial and / or fungal slime growths visible to the naked eye as plumose growths or mats; or
 - c. any emission or objectionable odour; or
 - d. a reduction in horizontal visibility, defined as the horizontal sighting range of a black disc, by more than 20%; or
 - e. the ammoniacal nitrogen (NH₄-N) concentration to exceed 2.1 g/m³ at any time, or to exceed 0.4 g/m³ on an rolling annual average ; or
 - f. the average particulate organic matter concentration to exceed 5 g/m³ at flows below median; or
 - g. the Chlorophyll a. to exceed 120 mg/m² on more than 16% of occasions during the months December to May inclusive taken over these months for a period of at least three years in accordance with condition **24**; or
 - h. the cover of filamentous mats greater than 2 cm long to exceed 30% or cover of mats greater than 3mm thick to exceed 60%; or
 - i. a reduction in Quantitative Macroinvertebrate Community Index (QMCI) of greater than 20%; or
 - j. the annual average ScBOD₅ concentration to exceed 1.5 g/m³ at flows below the 20th FEP.

Table 1

Condition	Contaminant or Effect (abbreviated, for reference only)	River Flows	Zone Reasonable Mixing downstream of
(a)	Films, scums, foams	All	200 metres
(b)	Bacterial/fungal slime growths	All	200 metres
(c)	Objectionable odour	All	200 metres

	(d)	Horizontal visibility reduction	All	200 metres
	(e)	Ammoniacal-nitrogen	All	200 metres
	(f)	Particulate organic matter	At or below the median	200 metres
	(g)	Periphyton biomass	All	200 metres
	(h)	Periphyton cover	All	200 metres
	(i)	QMCI reduction	All	200 metres
	(j)	SC BOD ₅	At or below the 20th FEP	200 metres

10. Compliance with condition 9 shall be assessed as follows:

- a. If clause **9.d** (change in horizontal visibility of more than 20% between upstream and downstream of the discharge) is exceeded, the consent holder shall:
 - i) immediately repeat the horizontal visibility measurement upstream and downstream of the discharge; and
 - ii) If a greater than 20% reduction in horizontal visibility is confirmed by the second measurement, the consent holder shall assess whether the discharge is the cause for the reduction in horizontal visibility, based on the results of water quality analyses undertaken the same day under condition **19** of this consent, and any additional measurements, other observations or photographs.
- b. If the consent holder is unable to comply with the limits in condition 9e (ammoniacal nitrogen), **9.f** (Particulate Organic Matter) or **9.j** (ScBOD₅) due to upstream exceedances, the consent holder shall use a Wilcoxon Signed Rank test to determine if there are any statistically significant increases or decreases between upstream and downstream.
- c. If it is determined that there are significant increases or decreases in accordance with the Wilcoxon Signed Rank test ($p=0.05$ or lower), the consent holder shall undertake an investigation into the effects of the discharge from the Pahiatua WWTP compared with upstream to investigate the possible cause of the exceedance.
- d. Within 15 working days of the result being received, notify the Manawatu-Wanganui Regional Council's Environmental Regulatory Manager of the

	<p>exceedance, with a written comment outlining mitigation measures taken and if required, further proposed measures to remedy the problem. The written statement shall include but is not limited to mitigation proposed, and a timeline for proposed remediation; and</p> <p>e. The findings and if required, further proposed measures to remedy the problem, shall be reported in the annual report required by condition 11 of the general conditions.</p> <p>f. If the limits in clause 9.h are exceeded downstream of the discharge, the consent holder shall assess whether a more than 15 point increase in the percentage cover by filamentous algae over 2 cm long or mat over 0.3 cm thick has occurred between upstream and downstream of the discharge on that sampling occasion. The assessment shall be conducted on the basis of an equivalence test using no less than 20 individual visual observations collected upstream and downstream.</p> <p>g. Compliance with the limit in clause 9h shall be determined using equivalence testing at the 20% interval.</p> <p>h. Compliance with clause 9.g (periphyton biomass) shall be assessed on the basis of monthly measurements collected under condition 24. Any missing monthly measurements due to high flow conditions (defined as being equal to or greater than 23.3 m³/s in the Mangatainoka River at Pahiatua Town Bridge) on the day of monitoring shall be assumed to have a biomass of less than 120 mg/m².</p> <p>ADVICE NOTE: A statistically significant difference is defined as a P value equal to or less than 0.05.</p>
11	<p>The consent holder shall establish and maintain safe access to a sampling port at the end of the wastewater treatment system post UV. The sampling location shall be identified in the OMP required under condition 4 of the General Conditions.</p>
12.	<p>The consent holder shall take monthly grab samples of the treated wastewater within 20m downstream of the UV treatment plant. The samples shall be analysed for the constituents and at the frequencies listed in Table 2 to assess compliance with conditions 9 and 10 of this permit.</p>
13.	<p>The surface discharge from the wetland shall be sampled for soluble inorganic nitrogen and dissolved reactive phosphorus on the same day as the sampling of the treated wastewater specified in condition 12. The vegetation and soils within the wetland and the depth and flow of treated wastewater through the maturation ponds and wetland shall be managed by the consent holder to ensure that the wetland does not cause an increase in the median annual concentrations of soluble inorganic nitrogen or dissolved reactive phosphorus that discharge to the river relative to the</p>

	median annual concentrations in the discharge from the wastewater treatment plant as sampled in condition 12 .
14.	Within three months of commencement of this permit, the permit holder shall have two flow meters installed, by an accredited installer. The installer must ensure the flow meters are located on the inflow and outflow line. The flow meters must have a pulse counter output traceably calibrated to +/- 5 % or better. The flow meters shall be capable of providing daily inflow and discharge volumes use as well as a pulse counter output. The flow meter on the outflow line shall be positioned to measure the entire volume of treated sewage effluent discharged into the surface water of the Mangatainoka River as authorised by this permit.
15.	The consent holder shall ensure the flow meter required by condition 14 , is installed by an Irrigation New Zealand Blue Tick accredited installer and be installed in accordance with the standards set out in the Ministry for the Environment Guidelines Resource Management (Measurement and Reporting of Water Takes) Regulations 2010.
16.	Within three months of commencement of this permit, the permit holder shall install and maintain, in a fully operational condition, a GPRS data logger / telemetry unit compatible with the Manawatu-Wanganui Regional Council's Telemetry system on the discharge line traceable to +/- 5 % or better. ADVICE NOTE: This unit, which is attached to the pulse counter output, will be monitored by the Manawatu-Wanganui Regional Council to ensure compliance with the resource consent conditions.
17.	Where telemetry equipment fails for reasons other than fair wear and tear, replacement or repair will be at the consent holder's expense and replacement will be within five working days.
18.	With the exception of network power failure or network maintenance the consent holder shall ensure that power supply is maintained at the site at all times. ADVICE NOTE: If power supply is lost at the site due to consent holder negligence or abuse and telemetry units require recalibration by Manawatu-Wanganui Regional Council staff the costs associated will be recovered from the consent holder.
<i>River Monitoring</i>	
19.	The consent holder shall take samples from the Mangatainoka River at approximately Easting: 1840568, Northing: 5519399 (NZTM) upstream (Site A) and at Easting:

1841026, Northing: 5519774 (NZTM) approximately 200 metres downstream (Site B) of the discharge point to the Mangatainoka River, and a sample of the discharge at the Discharge Point as shown on **Plan ATH-199501433.02 A** attached to and forming part of these consent conditions. The samples shall be analysed for the constituents and at the frequency listed in **Table 2** to assess compliance with condition **9** of this consent.

Table 2: Effluent and River Monitoring

Constituent	Wastewater - Monthly	River - Monthly
ScBOD ₅	X	X
Dissolved oxygen		X
Total ammoniacal nitrogen (TNH4-N)	X	X
Nitrite-nitrogen	X	X
Nitrate - nitrogen	X	X
TN	X	X
TSS	X	X
Horizontal visibility (black disc)		X
Particulate organic matter	X	X
DRP	X	X
Total Phosphorus	X	X
<i>E.coli</i>	X	X
pH		X
Conductivity		X
Temperature		X

ADVICE NOTE: pH, temperature, horizontal visibility and dissolved oxygen shall be measured on site, directly in the river.

	<p>ADVICE NOTE: It is preferable that the downstream sample is collected before the upstream sample so that disturbed sediment does not impact the downstream sampling result.</p>
20.	<p>From the date this consent commences:</p> <ol style="list-style-type: none"> a. The consent holder shall assess annually for the first three years of this consent, and thereafter once every three years, the dissolved aluminium in-river monitoring results against a trigger concentration of 0.055 g/m³ and run a Wilcoxon Signed Rank test on the last ten consecutive samples to determine if there are any significant increases in dissolved aluminium concentration between upstream and downstream results. b. In the event that a significant increase is detected between upstream and downstream results, an investigation into the risk of toxic effects due to dissolved aluminium shall be undertaken within one month of detecting the significant increase. The findings shall be reported in the annual report required by condition 11 of the general conditions. c. If the investigation in b) shows a likelihood of toxic effects then measures to address that situation shall be proposed by the consent holder and implemented subject to certification by the Manawatu-Wanganui Regulatory Manager. <p>ADVICE NOTE: To perform the statistical test, analysis needs to be against a minimum of ten upstream and downstream paired results from the monthly sampling.</p>
21.	<p>All wastewater and river water quality analyses shall be undertaken by an appropriate accredited laboratory. All methodologies adopted shall be appropriate for either wastewater or river water analyses respectively and the soluble cBOD₅ shall be GF/C filtered. The methodologies shall be determined in consultation with the Manawatu-Wanganui Regional Council's Regulatory Manager.</p>
22.	<p>The consent holder shall have an appropriately experienced and qualified freshwater ecologist undertake macroinvertebrate sampling in the Mangatainoka River. The macroinvertebrate assessment shall be undertaken following a period of at least three weeks without a significant flood event (defined as an instantaneous river flow exceeding three times the median flow, defined as 26.7 m³/s in the Mangatainoka River at Pahiatua Town Bridge) and during a period of low flow (at least one week below ½ median flow in the Mangatainoka River at Pahiatua Town Bridge defined as 4.45 m³/s).</p>

<p>23.</p>	<p>Macroinvertebrate sampling referred to in condition 22 is to be undertaken annually between January and March inclusive when a discharge is occurring for three years following commencement of consent. Thereafter macroinvertebrate sampling shall be undertaken every three years between January and March inclusive and in any other year if one or more of the parameters of condition 9 are exceeded. 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:</p> <ol style="list-style-type: none"> a. collection of five replicate 0.1 m² Surber samples at random within a 20 m 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). c. enumeration of the results as taxa richness, MCI, QMCI, %EPT taxa and %EPT individuals. d. Analysis of the QMCI results using equivalence testing at the 20% interval.
<p>24.</p>	<p>The consent holder shall have an appropriately experienced and qualified freshwater ecologist undertake monthly assessments in each of the months from December to May inclusive of the percentage cover, biomass, chlorophyll a, Ash Free Dry Weight (AFDW) and community composition of periphyton, filamentous algae and cyanobacterial mats in run habitat, as close as possible to the sites selected under condition 23 above regardless of flows. The periphyton and algae assessment is to include:</p> <ol style="list-style-type: none"> a. a visual assessment of the percentage cover of both filamentous algae and algal mats (to the nearest 5%) at 5 points across each of four transects encompassing run habitat, and extending across the width of the river at each sampling site. The visual monitoring methods shall follow the protocols outlined in Appendix 2 of “A periphyton monitoring plan for the Manawatu-Wanganui Region” (Kilroy et al. 2008). Reported estimates shall include: <ol style="list-style-type: none"> i. percentage cover of visible stream or river bed by bacterial and/or fungal growths (sewage fungus) visible to the naked eye; ii. percentage cover of visible stream or river bed by filamentous algae more than 2 cm long; iii. percentage cover of visible stream or river bed by diatoms or cyanobacteria mats more than 0.3 cm thick;

	<ul style="list-style-type: none"> iv. percentage cover of visible stream or river bed by diatoms less than 0.3 cm thick; and v. percentage cover of visible stream or river bed that is clean. <p>b. the collection of a periphyton sample at the same established monitoring sites and transects as defined in condition 23 above, using method QM-1b from the Stream Periphyton Monitoring Manual (Biggs & Kilroy 2000). Analysis of periphyton samples shall follow the Biggs & Kilroy (2000) guidelines for chlorophyll a analysis.</p>															
25.	<p>The consent holder shall have an appropriately experienced and qualified person undertake a one off continuous dissolved oxygen monitoring programme at the points upstream and downstream of the discharge at the points specified in condition 23. This is to be undertaken following a period of at least three weeks without a significant flood event (defined as an instantaneous river flow exceeding three times the median flow, defined as 26.7 m³/s in the Mangatainoka River at Pahiatua Town Bridge) and during a period of low flow (at least one week below ½ median flow in the Mangatainoka River at Pahiatua Town Bridge defined as 4.45 m³/s). Monitoring is to occur for no less than 11 days in the period of January to April in the first year where flows permit following completion of plant upgrades.</p>															
26.	<p>The continuous dissolved oxygen monitoring is to be undertaken in accordance with the National Environmental Monitoring Standards document for Measuring, Processing and Archiving of Dissolved Oxygen Data (version 2, dated July 2016).</p> <p>The monitoring results shall be compared against the thresholds in the National Policy Statement for Freshwater Management (2017) for Dissolved Oxygen as follows. The results shall be summarised in a short report to be provided to the Manawatu-Wanganui Regional Council's Regulatory Manager within three months of the monitoring taking place.</p> <table border="1" data-bbox="328 1597 1024 2092"> <thead> <tr> <th data-bbox="328 1597 435 1765">Band</th> <th data-bbox="435 1597 740 1765">7 Day mean Minimum (mg/L)</th> <th data-bbox="740 1597 1024 1765">1 day minimum (mg/L)</th> </tr> </thead> <tbody> <tr> <td data-bbox="328 1765 435 1848">A</td> <td data-bbox="435 1765 740 1848">≥ 8.0</td> <td data-bbox="740 1765 1024 1848">7.5</td> </tr> <tr> <td data-bbox="328 1848 435 1930">B</td> <td data-bbox="435 1848 740 1930">≥ 7.0 and ≤ 8.0</td> <td data-bbox="740 1848 1024 1930">≥ 5.0 and ≤ 7.5</td> </tr> <tr> <td data-bbox="328 1930 435 2013">C</td> <td data-bbox="435 1930 740 2013">≥ 5.0 and ≤ 7.0</td> <td data-bbox="740 1930 1024 2013">≥ 4.0 and ≤ 5.0</td> </tr> <tr> <td data-bbox="328 2013 435 2092">D</td> <td data-bbox="435 2013 740 2092"><5.0</td> <td data-bbox="740 2013 1024 2092">< 4.0</td> </tr> </tbody> </table>	Band	7 Day mean Minimum (mg/L)	1 day minimum (mg/L)	A	≥ 8.0	7.5	B	≥ 7.0 and ≤ 8.0	≥ 5.0 and ≤ 7.5	C	≥ 5.0 and ≤ 7.0	≥ 4.0 and ≤ 5.0	D	<5.0	< 4.0
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	<p>The report shall include but is not limited to:</p> <p>a. Equivalence testing (with a 10% interval) on a rolling 7 day mean minimum calculated for both upstream and downstream; and an assessment of the 1 day mean minimum for upstream and downstream over the monitoring period, to ascertain whether the discharge is having an impact on DO in the receiving environment.</p>
27.	<p>The consent holder shall notify the Manawatu-Wanganui Regional Council's Regulatory Manager within two working days of any non-compliance occurring or when it becomes certain that a breach of consent conditions is about to occur. For conditions requiring compliance with a particular water quality standard, notification is required within two working days of receipt of the water quality analysis from the laboratory.</p>
Monitoring	
28.	<p>The consent holder shall make results of monitoring undertaken required by conditions 19 and 20 of these consents available to the Manawatu-Wanganui Regional Council's Regulatory Manager on request, and data records for each three month period ending March, June, September and December shall be forwarded to Manawatu-Wanganui Regional Council's Regulatory Manager in a suitable electronic format, within 14 days after the end of each three monthly period.</p>
29.	<p>By 31 October each year, commencing 2018 the consent holder shall prepare a report that summarises and assesses all of the monitoring information required under conditions 22, 23, 24 and 25 of these consents. This report should be included in the Annual Environmental Report required by condition 11 of the general conditions.</p>
30.	<p>By 1 July 2020 the Consent Holder shall submit to the Manawatu-Wanganui Regional Council's Regulatory Manager and the Tararua Wastewater Forum, a report detailing an assessment of effects of the discharge on the tikanga Māori values held by Kahungunu ki Tāmaki-nui-a-Rua nui-a-rua and Rangitāne o Tamaki nui a Rua Inc.</p> <p>The report shall include but not be limited to:</p> <p>a. An assessment of the effects of the current discharge (2017 - 18) from the Ponds on tikanga Māori values associated with the groundwater, and with the surface water of the Mangatainoka River;</p> <p>b. An assessment of the effects of the discharge from the Ponds and the constructed wetland on tikanga Māori values associated with the groundwater, and with the surface water of the Mangatainoka River (2019 – 2020);</p>

	<p>c. Any recommendations for improving either the efficacy of the wetland and/or modifications to further mitigate any adverse cultural effects of the discharge; and</p> <p>d. Comment on the technical reports and scientific information gathered by the Consent Holder up to 31 March 2020.</p>
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4. Condition Schedule ATH-2016200747.00 and ATH-2017201544.00 – Pahiatua Wastewater Treatment Plant Discharge to Land Permit - Pond and Wetland Seepage

Condition #	
Descriptive Specification	
1.	<p>Permeability Investigations</p> <p>Within six months of commencement of this Permit the Consent Holder shall submit to the Manawatu-Wanganui Regional Council’s Regulatory Manager a plan to investigate the rate of leakage of all the existing treatment ponds. The plan shall include, but not be limited to:</p> <ul style="list-style-type: none"> a. A methodology for a water balance to be undertaken for each of the ponds. As a minimum inflows and outflows from the treatment system shall be recorded over a 12 month period, as shall local daily rainfall. Consideration to be given to measuring pond levels and measurement and recording of representative evaporation rates; or other suitable method to determine rate of leakage of each of the treatment ponds. b. The methodology proposed shall be peer reviewed by an independent IPENZ Chartered engineer. c. Results from the water balance undertaken in accordance with the peer reviewed methodology shall be submitted to the Manawatu-Wanganui Regional Council's Regulatory Manager and the Tararua Wastewater Forum within six months of the completion of the 12 month monitoring period.
2.	<p>By 1 July 2020 the Consent Holder shall submit a report to the Manawatu-Wanganui Regional Council’s Regulatory Manager and Tararua Wastewater Forum, detailing an assessment of environmental effects. The report must be prepared by an independent and suitably experienced and qualified water quality scientist(s). The report shall include but not be limited to:</p> <ul style="list-style-type: none"> a. An assessment of the effects of the discharge from the ponds on both groundwater and surface water as is able to be determined from the analyses and records collected in accordance with conditions of these permits b. A comment on the extent to which the discharge from the existing ponds and/or constructed wetland is causing, or contributing to, (outside the uncertainty of measurement for the sample) the exceedance of One Plan Schedule targets

	<p>c. An assessment of options to mitigate any more than minor adverse effects, including an assessment from an independent IPENZ Chartered geotechnical engineer as to whether relining existing ponds to a permeability standard of 1×10^{-9} m/s is practicable (this shall include an economic assessment).</p>
<p>3.</p>	<p>Within three months of the date of commencement of this consent, the consent holder shall install three groundwater monitoring wells on the site at or as near as practicable at the locations specified on Plan ATH-199501433.02 A and to the following specifications:</p> <p>a. The monitoring wells shall have an internal diameter of not less than 50 millimetres of a sufficient size to enable samples to be taken and shall be installed at the locations identified on Plan ATH-199501433.02 A.</p> <p>b. The wells shall be screened across the summer low ground water table and shall have a minimum of 1 m of screen above the water table and 2 m below it.</p> <p>c. The borehole casing shall be constructed of polyvinyl chloride (PVC) or a similar inert material and shall be capped and secured to prevent entry of surface water.</p> <p>d. A concrete pad at least 0.3 metres radius shall be constructed around the bore head of the monitoring well at ground level, to prevent leakage around the casing. The concrete pad shall slope away from the bore.</p> <p>e. The wells shall be installed by a suitably qualified person(s) and constructed in accordance with the New Zealand Standard for Drilling Rock and Soil NZS 4411:2001.</p>
<p>4.</p>	<p>Monitoring Provision</p> <p>Samples collected under condition 3 shall be analysed for the following:</p> <p>a. Total Phosphorus (TP)</p> <p>b. Dissolved Reactive Phosphorus (DRP)</p> <p>c. Total Nitrogen (TN)</p> <p>d. Nitrate Nitrogen (NO₃-N)</p> <p>e. Nitrite Nitrogen (NO₂N)</p> <p>f. Ammoniacal Nitrogen (NH₄-N)</p> <p>g. Escherichia coli (E. coli)</p> <p>h. Dissolved oxygen (field measurements)</p> <p>i. Electrical Conductivity (EC) (field measurements)</p> <p>j. Chloride</p> <p>k. Static water level</p> <p>l. pH (field measurement and laboratory measurement)</p>

5.	<p>The Consent Holder shall take samples quarterly from all bores identified in condition 3 in the months of January, April, July and October in accordance with the MfE Groundwater sampling protocols (2006) or updated document. Sampling shall be undertaken quarterly for a period of two years following commencement of consent, thereafter reducing to six-monthly in January and July.</p>
6.	<p>Wetland Development and Maintenance</p> <p>Within 12 months of commencement of this permit, this consent holder shall submit to the Manawatu-Wanganui Regional Council a technical management plan (TMP) for certification for both the treatment and biodiversity wetlands. The wetlands are to be designed in general accordance with Plan ATH-199501433.02 A attached to and forming part of this consent. The management plan shall include but not be limited to information demonstrating the following matters –</p> <p>Construction and Establishment phase of treatment wetland</p> <ol style="list-style-type: none"> a. Final details of the construction design of the treatment wetland; <ol style="list-style-type: none"> i) The design shall demonstrate that, once constructed, the average water depth shall not exceed 300mm and the maximum water depth shall not exceed 500mm. ii) A functional explanation of the hydraulic structures (weirs) that will be utilised to ensure the depths are not exceeded shall be provided b. Final design details of the weirs, each weir shall be built with a reinforced spillway; <ol style="list-style-type: none"> i) The final design shall demonstrate that the width to length ratio of between 1:3 and 1: 10 will be achieved. c. The final treatment wetland surface area shall be not less than 5000m²; d. Information demonstrating that 95% of the expected maximum treated wastewater flow shall be retained in the wetland for not less than 24 hours; e. The plan shall contain a specific planting plan to demonstrate how the vegetation to be planted shall be established within 6 months of the completion of the bulk earthworks associated with treatment wetland such that the treated wastewater shall pass through the wetland no later than 1 July 2019. f. Planting in the treatment wetland shall be at a density of not less than two plants per square metre and the entire base of the wetland shall be planted g. Details shall be provided of the source of clay material to be used to line the treatment wetland and anticipated permeability to be achieved once constructed. This is to include confirmation that the source of clay is not ‘dispersive’ in nature. h. The plan shall demonstrate that the topsoil stripped to allow for the formation of the wetland shall be re-laid prior to planting

- i. Information demonstrating how the treatment plant shall be managed so as to allow for gradual introduction of the treated wastewater to the treatment wetland to allow for planted seedlings to adapt to the fully saturated conditions

ADVICE NOTE: While a width to length ratio of between 1:3 and 1:5 is optimal for the purposes of design, a ratio of up to 1:10 is acceptable and may be necessary in portions of the wetland depending on local ground conditions, such as substrate encountered.

Management of the treatment wetland

- a. Vegetation in the treatment wetland shall be maintained so that the wetted area remains open to sunlight;
- b. Once established, the vegetation shall be pruned not less than once every five years. Material that is pruned shall be removed from the site to a suitable facility;
- c. Weeding is to be undertaken manually not less than twice a year during the first three seasons following planting, and thereafter once annually; and
- d. In-fill planting shall be undertaken annually during the management phase to replace gaps formed due to plant mortality.

Construction and Establishment of biodiversity wetland

- a. Final details of the biodiversity wetland including construction of bunds to prevent the treated wastewater down lateral drains;
- b. Construction of final culvert or weir structure at the outlet;
- c. Details of erosion resistant structure linking the treatment wetland with the biodiversity wetland;
- d. Details of fencing to exclude stock from the wetland; and
- e. A specific planting plan to demonstrate how the vegetation in the biodiversity wetland shall be established within 2 years of the completion of the earthworks associated with the biodiversity wetland. This shall include details of comments received in accordance with the engagement condition **9** below.

Management Plan of the biodiversity wetland

- a. Weed removal shall be undertaken annually within the biodiversity wetland to prevent the establishment of invasive weed species including, but not confined to, willows.
- b. In-fill planting shall be undertaken annually for at least the first 3 years following planting to replace plants that have died.

	<p>ADVICE NOTE: The final outlet structure from the biodiversity wetland may require Land Use Consent</p> <p>ADVICE NOTE: The longer planting period for the biodiversity wetland recognises that species likely to be planted in this area require a longer period to be established.</p>
7.	<p>The Technical Management Plan (TMP) required by condition 6 shall be certified in writing by the Manawatu-Wanganui Regional Council's Regulatory Manager.</p> <p>ADVICE NOTE: Technical certification is limited to those matters relating to how the applicant intends to comply with the conditions of consent.</p>
8.	<p>The consent holder shall undertake all activities authorised by this permit in accordance with the certified TMP.</p>
9.	<p>Engagement</p> <p>In finalising the technical management plan for the wetlands in condition 6 above the Consent Holder shall undertake the following engagement actions</p> <ol style="list-style-type: none"> a. By 1 June 2018 the Consent Holder shall forward a copy of the draft planting plan for the establishment of the biodiversity wetland to a Kahungunu ki Tamaki nui-a-rua Trust and Rangitāne o Tamaki nui a Rua Inc to comment and request for responses to be provided to the Consent Holder by 31 July 2018. b. A finalised planting plan shall be prepared and submitted to Manawatu-Wanganui Regional Council's Regulatory Manager, as part of the technical management plan required by condition 6 above no later than 31 October 2018. This shall include a commentary on any comments received and inputs from Kahungunu ki Tamaki nui-a-rua Trust and Rangitāne o Tamaki nui a Rua Inc. Where requested changes are not able to be incorporated an explanation for this shall be provided. The finalised planting plan shall be incorporated into the technical development plan required by condition 6 above. c. The consent holder shall inform Kahungunu ki Tamaki nui-a-rua Trust and Rangitāne o Tamaki nui a Rua Inc of the commencement of construction of the wetlands four weeks prior to the commencement, and shall invite representatives to attend an opening of the site prior to construction commencing. d. The consent holder shall invite representatives of Kahungunu ki Tamaki nui-a-rua Trust and Rangitāne o Tamaki nui a Rua Inc to participate in the supervised

	planting of both the wetlands. All planting is to be overseen by a suitably qualified person and subject to all relevant Health and Safety procedures.
10	<p>Wetland Monitoring</p> <p>Commencing July 2019, the Consent Holder shall undertake sampling of the treated wastewater from the wetland in the months of July, October, January, April. Sampling shall be undertaken quarterly for a period of two years following commencement of consent, thereafter reducing to six-monthly in January and April.</p> <p>Samples collected shall be analysed for the following:</p> <ol style="list-style-type: none"> a. ScBOD5 b. Dissolved oxygen c. Total ammoniacal nitrogen (TNH4-N) d. Nitrite-nitrogen e. Nitrate - nitrogen f. TN g. TSS h. Particulate organic matter i. DRP j. Total Phosphorus k. E.coli <p>ADVICE NOTE: The sampling point shall be from the drop down structure between the treatment wetland and biodiversity wetland.</p>
11.	All wastewater and bore water quality analyses shall be undertaken by an appropriate accredited laboratory
12.	Results of the monitoring required by conditions 4 and 10 of this permit shall be transferred within ten working days of their receipt to the Manawatu-Wanganui Regional Council in a format compatible with the Manawatu-Wanganui Regional Council systems.
13.	The results from the monitoring required by conditions 4 and 10 of this permit shall be collated, analysed and interpreted and included in the Annual Report, as required by condition 11 in the General Conditions to these permits.

5. Condition Schedule ATH-2017201543.00 – Pahiatua Wastewater Treatment Plant Earthworks Consent

Condition #	
Descriptive Specification	
1.	<p>This land use consent authorises the following activities:</p> <p>a. Land disturbance including earthworks and cut and fill associated with the creation of a wetland, such works shall be undertaken on the property legally described as Lot 1 DP 52391 near Pahiatua Wastewater Treatment Plant, Julia Street, Pahiatua at approximate map reference NZTopo50 BM35:407-192 (hereafter referred to as the property).</p>
2.	<p>The consent holder must undertake the activity in general accordance with the consent application including all accompanying plans and documents first lodged with the Manawatu-Wanganui Regional Council on 12 April 2017 and:</p> <p>a. Further information received on 28 April 2017 included in the s41B hearing report; and</p> <p>b. The revised wetland location plan tabled at the hearing on 23-25 May 2017.</p> <p>ADVICE NOTE: Where there may be inconsistencies between information provided by the applicant and conditions of the resource consent, the conditions of the resource consent will apply.</p> <p>ADVICE NOTE: Any variance from the location, design concepts and parameters, implementation and or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.</p>
Pre-Development Assurance	
3	<p>The consent holder shall be responsible for all contracted operations related to the exercise of this resource consent, and shall ensure contractors are made aware of the conditions of this resource consent and ensure compliance with those conditions.</p>
4.	<p>A copy of this consent shall be kept onsite at all times that physical works authorised by this resource consent are being undertaken and shall be produced without unreasonable delay upon request from a servant or agent of the Manawatu-Wanganui Regional Council.</p> <p>ADVICE NOTE: An electronic version on a smartphone or tablet is acceptable.</p>

5.	<p>Prior to activities commencing as authorised by this resource consent, the consent holder shall appoint a representative(s) who shall be the Manawatu-Wanganui Council’s principal contact person(s) in regard to matters relating to this resource consent. The consent holder shall inform the Manawatu-Wanganui Regional Council’s Regulatory Manager of the representative’s name and how they can be contacted, 5 working days prior to the resource consent being exercised. Should that person(s) change during the term of this resource consent, the consent holder shall immediately inform the Manawatu-Wanganui Regional Council’s Regulatory Manager and shall also give written notice to the Manawatu-Wanganui Regional Council’s Regulatory Manager of the new representative’s name and how they can be contacted.</p>
6	<p>The consent holder shall arrange and conduct a pre-construction site meeting and invite the Manawatu-Wanganui Regional Council’s Regulatory Manager, the site representative(s) nominated under condition 5 of this consent, the contractor, and any other party representing the consent holder prior to any work authorised by this consent commencing on site.</p> <p>ADVICE NOTE: In the case that any of the invited parties, other than the site representative does not attend this meeting, the consent holder will have complied with this condition, provided the invitation requirement is met.</p>
7.	<p>The consent holder shall provide the Manawatu-Wanganui Regional Council’s Regulatory Manager with a revised and updated “Erosion and Sediment Control Plan” (E&SCP) 20 working days prior to the commencement of activities authorised by this resource consent. The E&SCP shall be based upon and include, specific principles and practices which are appropriate for the activities authorised by this consent and contained within the Greater Wellington Regional Council document titled “Erosion & Sediment Control – Guidelines for the Wellington Region dated September 2002 & Reprint 2006”. The updated E&SCP shall address the following aspects relating to the works:</p> <ul style="list-style-type: none"> a. Details of all principles, procedures and practices that will be implemented to undertake erosion and sediment control to minimise the potential for sediment discharge from the site, including flocculation; b. The design criteria and dimensions of all key erosion and sediment control structures; c. A site contour plan of a suitable scale to identify; <ul style="list-style-type: none"> i. The locations of waterways; ii. The extent of soil disturbance and vegetation removal;

	<ul style="list-style-type: none"> iii. Any “no go” and/or buffer areas to be maintained undisturbed adjacent to watercourses; iv. Areas of cut and fill; v. Locations of topsoil stockpiles; vi. All key erosion and sediment control structures; vii. The boundaries and area of catchments contributing to all stormwater impoundment structures; viii. The locations of all specific points of discharge to the environment; and ix. Any other relevant site information <ul style="list-style-type: none"> d. Construction timetable for the erosion and sediment control works and the bulk earthworks proposed; e. Timetable and nature of progressive site rehabilitation and re-vegetation proposed; f. Maintenance, monitoring and reporting procedures; g. Rainfall response and contingency measures including procedures to minimise adverse effects in the event of extreme rainfall events and/or the failure of any key erosion and sediment control structures; h. Procedures and timing for review and/or amendment to the E&SCP; and i. Identification and contact details of personnel responsible for the operation and maintenance of all key erosion and sediment control structures.
8.	The E&SCP required by condition 7 shall be certified in writing by the Manawatu-Wanganui Regional Council’s Regulatory Manager prior to any activities authorised by this resource consent commencing.
9	The consent holder shall undertake all earthworks authorised by this consent in accordance with the certified E&SCP.
10.	Any changes proposed to the E&SCP required by condition 7 shall be confirmed in writing by the consent holder and certified in writing by the Manawatu-Wanganui Regional Council’s Regulatory Manager or his agent acting in a technical certification capacity, prior to the implementation of any changes proposed.
11.	The consent holder shall ensure that a copy of the certified E&SCP, including any certified amendments, is kept onsite and this copy is updated within five (5) working days of any amendments being certified.
12.	The consent holder shall contact the Manawatu-Wanganui Regional Council’s Regulatory Team five (5) working days prior to the commencement of the

	<p>construction, installation and disturbance works authorised by this consent and on completion of the works.</p> <p>ADVICE NOTE: The Regulatory Team can be contacted on 0508 800 800, -OR- compliance.shared@horizons.govt.nz.</p>
<i>Environmental Standards</i>	
13.	The consent holder shall ensure that the soluble aluminium concentration of any discharge from a sediment retention pond or decanting earth bund that is treated with an aluminium based flocculent shall not exceed 0.2 grams per cubic metre.
14.	The consent holder shall ensure that the pH of any discharge from and sediment control structure treated with any flocculent shall be no less than 5.5 or greater than 8.5 pH units.
15.	<p>The consent holder shall ensure that the suspended solids concentration of any discharge from any sediment control device, including but not limited to sediment retention ponds, decanting earth bunds does not exceed 150 grams per cubic metre.</p> <p>ADVICE NOTE: The above suspended solids consent limit does not apply during storm events where silt laden stormwater is discharging over the emergency spillway.</p>
16.	The consent holder shall ensure that sediment losses discharged from the site during storm events greater than the 5 per cent AEP are minimised by adhering to the E&SCP.
17.	The consent holder shall ensure that all cleanfill material deposited at the site is free of pest plants identified in the Manawatu-Wanganui Regional Council Pest Plant Strategy, combustible, putrescible (except that cleanfill material may contain up to 5% by weight putrescible matter), degradable or leachable components, hazardous substances products or materials derived from hazardous waste treatment, hazardous waste stabilisation or hazardous waste disposal practices, materials that may present a risk to human health, or liquid waste.
18.	The consent holder shall ensure that sediment losses to surface water arising from the exercise of this resource consent are minimised during the duration of the works and during the term of this consent. In this regard, erosion and sediment control measures shall be established and maintained in accordance with the certified E&SCP.

19.	All earthmoving machinery, pumps, generators and ancillary equipment shall be operated in a manner, which ensures spillages of fuel, oil and similar contaminants are prevented, particularly during refuelling and machinery servicing and maintenance. Refuelling and lubrication activities shall be carried out away from any water body, ephemeral water body, or overland flow path, such that any spillage can be contained so that it does not enter surface water.
20.	The consent holder shall ensure that, as far as practicable, all clean water run-off from stabilised surfaces including catchment areas above the site shall be diverted away from the exposed areas via a stabilised system to prevent erosion. The consent holder shall also ensure the outfall(s) of these systems are protected against erosion.
21.	The consent holder shall ensure that all sediment laden run-off from the site is treated by sediment retention structures. These structures are to be fully operational before bulk earthworks commence and shall be maintained to perform at least at 80% of their operational capacity and be designed in accordance with the certified E&SCP.
22.	The consent holder shall ensure that all erosion and sediment control structures are inspected on a weekly basis and within 24 hours of each rainstorm event that is likely to impair the function or performance of the controls.
23.	<p>The consent holder shall carry out monitoring and maintenance of erosion and sediment controls in accordance with the conditions of this resource consent and shall maintain records detailing:</p> <ul style="list-style-type: none"> a. The date, time and results of the monitoring undertaken; and b. The erosion and sediment controls that required maintenance; and c. The date and time when the maintenance was completed. <p>These records shall be provided to the Manawatu-Wanganui Regional Council's Regulatory Manager at all reasonable times and within 72 hours of a written request to do so.</p>
24.	<p>Earthworks shall not be conducted during the period 1 May to 30 September inclusive during any year that this resource consent is current, apart from necessary maintenance works, unless certified in writing by the Manawatu-Wanganui Regional Council's Regulatory Manager.</p> <p>ADVICE NOTE: Maintenance is defined in the One Plan 2014.</p>
25.	Requests to undertake earthworks during the period 1 May to 30 September inclusive, for any year that these resource consents are current, shall be submitted in

	<p>writing to the Manawatu-Wanganui Regional Council by 1 April and shall be in the form of amendments to the certified E&SCP in accordance with condition 7 of this consent.</p> <p>ADVICE NOTE: In considering a request for the continuation of winter earthworks, the Manawatu-Wanganui Regional Council will consider a number of factors; including:</p> <ul style="list-style-type: none"> • The nature of the site and the winter soil disturbance works proposed; • The quality of the existing/proposed erosion and sediment controls; • The compliance history of the site/operator; • Seasonal/local soil and weather conditions; • Soil moisture content and runoff/ponding potential; • Effects on the cultural values of tangata whenua; • Sensitivity of the receiving environment; and • Any other relevant factor.
<i>Post-development assurance</i>	
26.	<p>Notwithstanding condition 28, the consent holder shall ensure those areas of the site where earthworks have been completed shall be stabilised against erosion as soon as practically possible and within a period not exceeding 14 days after completion of any works authorised by this resource consent. Stabilisation shall be undertaken by providing adequate measures (vegetative and/or structural) that will minimise sediment runoff and erosion to the satisfaction of the Manawatu-Wanganui Regional Council acting in a technical certification capacity. The consent holder shall monitor and maintain the site until vegetation is established to such an extent that it prevents erosion and prevents sediment from entering any water body.</p>
27.	<p>The removal of any erosion and sediment control measures from any area where soil has been disturbed as a result of the exercise of this resource consent shall only occur after consultation and technical certification has been obtained from the Manawatu-Wanganui Regional Council. In this respect, the main issues that will be considered include:</p> <ol style="list-style-type: none"> a. The quality of the soil stabilisation and/or covering vegetation; b. The quality of the water discharged from the rehabilitated land; and c. The quality of the receiving water.
28.	<p>Re-vegetation and/or stabilisation of all disturbed areas is to be completed in accordance with the measures detailed in the certified E&SCP.</p>
29.	<p>The works shall remain the responsibility of the consent holder and shall be maintained so that any erosion, scour or instability of the works that is attributable to the works</p>

	carried out as part of this consent is remedied by the consent holder within ten (10) working days.
30.	The consent holder shall ensure that the site is appropriately stabilised by 30 April of each year unless otherwise certified in writing by the Manawatu-Wanganui Regional Council. Stabilisation shall be undertaken by providing adequate measures (vegetative and/or structural and including, pavement, metalling, hydro-seeding, re-vegetation and mulching) that will minimise erosion of exposed soil to the extent practical.