

## APPENDIX A

### AFFCO General Draft Conditions: Commentary

Cond No	Suggested Conditions	HRC Draft	Comment on current position – to be updated at the hearing
1	The Permit Holder must undertake the activities in general accordance with the information supplied in the consent application, the Assessment of Environmental Effects dated 31 March 2015, including all concepts, parameters, drawings, activity specifications, proposed mitigation measures, methods concerning how the activity will be conducted and the scale, character and intensity of effects. Where the information is inconsistent with the requirements of specific consent conditions, the conditions prevail.	No change	Accept
2	The Permit Holder must ensure that all treated wastewater, water quality and soil sampling required under these Conditions and the Conditions of Discharge Permits (to water, to land, to air and to groundwater) is collected by a suitably experienced and/or qualified person and analysed by an appropriately accredited, independent laboratory. All analytical methods must be appropriate for treated meatworks effluent, water quality or soil analysis.	No change	Accept
3	No later than 3 months after the grant of this permit, the Permit Holder must submit to the Manawatu-Whanganui Regional Council's Regulatory Manager an Operation and Management Plan detailing (but not limited to) the following items: a. A description of the land treatment system and the river discharge system, including a site map indicating the location of discharge infrastructure, the land treatment area, and monitoring sites; b. Intended operation and maintenance procedures for the land treatment system and the river discharge system, including how the systems will be operated and maintained to comply with these Conditions and the	No later than 3 months after the grant of this permit, the Permit Holder must submit to the Manawatu-Whanganui Regional Council's Regulatory Manager an Operation and Management Plan detailing (but not limited to) the following items: a. A description of the land treatment system and the river discharge system, including a site map indicating the location of discharge infrastructure, the land treatment area, and monitoring sites; b. Intended operation and maintenance procedures for the land treatment system and the river discharge system, including how the systems will be operated and maintained to comply with these Conditions and the Conditions of	

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	<p>Conditions of Discharge Permits (to water, to land, to air and to groundwater);</p> <p>c. The procedures to be implemented to ensure that, where practicable, treated wastewater is discharged as a priority to land in accordance with the Discharge Permit (to land), including record-keeping procedures to demonstrate that the prioritisation has occurred;</p> <p>d. A plan identifying the location and size of each management block within the land treatment area;</p> <p>e. 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;</p> <p>f. Pasture, grazing and harvesting management and maintenance procedures;</p> <p>g. The frequency of flushing of the irrigation pipes and the circumstances under which pipe flushing will occur;</p> <p>h. Measures to ensure the treated wastewater irrigated remains aerobic;</p> <p>i. On-site responsibilities, including operation and maintenance of the wastewater treatment facilities and pipelines to the river and land discharge points;</p> <p>j. 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;</p> <p>k. Monitoring and reporting procedures required to demonstrate compliance with these Conditions and the Conditions of Discharge Permits (to water, to land, to air and to groundwater);</p> <p>l. A description of any other on-farm operations affecting nutrient loading or leaching within the land treatment area (e.g. grazing, crops, fertiliser application);</p> <p>m. A risk assessment plan and contingency plans in the event of system malfunctions or breakdowns;</p>	<p>Discharge Permits (to water, to land, to air and to groundwater);</p> <p>c. The procedures to be implemented to ensure that, where practicable, treated wastewater is discharged as a priority to land in accordance with the Discharge Permit (to land), including record-keeping procedures to demonstrate that the prioritisation has occurred;</p> <p>d. A plan identifying the location and size of each management block within the land treatment area;</p> <p>e. 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;</p> <p>f. Pasture, grazing and harvesting management and maintenance procedures <b><u>to ensure compliance with the nitrogen and phosphorus loading limits identified in consent xxx, condition xxx;</u></b></p> <p>g. The frequency of flushing of the irrigation pipes and the circumstances under which pipe flushing will occur <b><u>to ensure compliance with condition xxx, of consent xxx (discharge to air consent);</u></b></p> <p>h. Measures to ensure the treated wastewater irrigated remains aerobic <b><u>to ensure compliance with condition xxx, of consent xxx (discharge to air);</u></b></p> <p>i. On-site responsibilities, including operation and maintenance of the wastewater treatment facilities and pipelines to the river and land discharge points;</p> <p>j. 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;</p> <p>k. Monitoring and reporting procedures required to demonstrate compliance with these Conditions and the Conditions of Discharge Permits (to water, to land, to air and to groundwater);</p> <p>l. A description of any other on-farm operations affecting nutrient loading or leaching within the land treatment area (e.g. grazing, crops, fertiliser application);</p> <p>m. A risk assessment plan and contingency plans in the event of system malfunctions or breakdowns;</p>	<p>Accept</p> <p>Accept</p> <p>Accept</p>

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	<p>n. Procedures for receiving, recording and responding to all complaints in accordance with Conditions (17 and 18);</p> <p>o. A protocol for managing accidental discovery of artefacts of historic, archaeological or cultural significance during construction;</p> <p>p. Mitigation and contingency measures for controlling odour, aerosols, ponding and run-off in and from the land treatment area;</p> <p>q. Procedures for the wind speed shut-down required by Condition (5) of Discharge Permit (to air);</p> <p>r. Details of how changes in wastewater composition and volume are to be managed; and</p> <p>s. Measures to ensure that the activities do not result in any erosion or scouring of the bed or banks of the Oroua River.</p>	<p>n. Procedures for receiving, recording and responding to all complaints in accordance with Conditions (17 and 18);</p> <p>o. A protocol for managing accidental discovery of artefacts of historic, archaeological or cultural significance during construction;</p> <p>p. Mitigation and contingency measures for controlling odour, aerosols, ponding and run-off in and from the land treatment area;</p> <p>q. Procedures for the wind speed shut-down required by Condition (5) of Discharge Permit (to air);</p> <p>r. Details of how changes in wastewater composition and volume are to be managed; and</p> <p>s. Measures to ensure that the activities do not result in any erosion or scouring of the bed or banks of the Oroua River.</p> <p><u>No later than 3 months after the grant of this permit, the Permit Holder must submit to the Manawatu-Whanganui Regional Council's Regulatory Manager an Odour Management Plan.</u></p>	<p>Reject. Conditions f, g and h are air related. A separate plan is unnecessary and adds another document for operators of the system to consider. It is unclear why this condition is needed in the general conditions and no issues as to odour have been raised in the s42A reports.</p>
4	The Permit Holder must not commence the activities which differ from those authorised by Discharge Permit numbers 4219, 4226, and 6191 until the Manawatu-Whanganui Regional Council's Regulatory Manager has certified in writing that the Operation and Management Plan fulfils the requirements of Condition 3	Delete – this condition is not appropriate. The application is for a new proposed	Accept
5	The Permit Holder must annually review the Operation and Management Plan by 31 October of each year, commencing October 2016, to incorporate any proposed changes to the management of the activities. Following each review, the Operation and Management Plan, including any proposed changes must be submitted to the Manawatu-Whanganui Regional Council's Regulatory Manager for technical re-certification before 30 November of the same year	No change	Accept

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6	<p>The Permit Holder must undertake the activities in accordance with the Operation and Management Plan that is most recently certified pursuant to Conditions 4 or 5.</p> <p>Advice Note: The Regulatory Manager or team representative can be contacted on Freephone 0 505 800 800 or by e mail at compliance.shared@horizons.govt.nz</p>	No change.	Accept
7	The Permit Holder must ensure that the physical infrastructure of the land treatment system and the land treatment area are inspected every week when operational, and the physical infrastructure of the river discharge system is inspected every month, and that relevant parts of the systems are also inspected whenever any alarms associated with the systems are activated.	No change	Accept
8	If any blockages and/or breaks are identified in an inspection under Condition 7 or otherwise, the system affected must cease operation until the blockage and/or break is remedied, and the Permit Holder must notify Manawatu-Whanganui Regional Council's Regulatory Manager within 48 hours of identifying the blockage and/or break.	No change	Accept
9	Records of the inspections made in accordance with Condition 7 and any resulting system maintenance must be kept and made available to the Manawatu-Whanganui Regional Council on request	No change	Accept
10	By 1 July 2016 the Permit Holder must ensure that there is a minimum of 57,600 m3 of storage capacity available for the storage of treated wastewater. This must be "live storage" (that is, storage that is not used for wastewater treatment purposes and which holds treated wastewater that can be used for discharge purposes when conditions allow) provided in addition to the existing treatment volume. At least 500 mm of freeboard must be provided in addition to the 57,600 m3 capacity required for storage. The Permit Holder must irrigate the volume retained in the live storage as soon as practically possible	<p>By 1 July 2016 <del>67 the Consent Holder</del> <b>Permit Holder shall submit a report prepared by suitably qualified and experienced person confirming how the minimum of 57,600 m3 of storage capacity available for the storage of treated wastewater is to be maintained throughout the term of this Permit.</b> This must be "live storage" (that is, storage that is not used for wastewater treatment purposes and which holds treated wastewater that can be used for discharge purposes when conditions allow) provided in addition to the existing treatment volume. At least 500 mm of freeboard must be provided in</p>	Reject. It is unclear why a suitably qualified and experienced engineer needs to submit a report. Further, it is unclear why a report needs to be submitted. This issue is not addressed in the S42A reports.

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		addition to the 57,600 m3 capacity required for storage. The Consent Holder must irrigate the volume retained in the live storage as soon as practically possible	
11	<p>The treated wastewater must meet the following standards prior to discharge to the land treatment area and the Oroua River:</p> <p>a. The concentration of Soluble Carbonaceous five day Biochemical Oxygen Demand (ScBOD5) must not exceed 29 g/m3 in more than 8 out of 12 consecutive samples, or 74 g/m3 in more than 2 out of 12 consecutive samples; b. The concentration of Total Suspended Solids must not exceed 85 g/m3 for more than 8 out of 12 consecutive samples, or 295 g/m3 in more than 2 out of 12 consecutive samples; c. The concentration of Escherischia coli must not exceed 9,500 cfu/100 mL for more than 8 out of 12 consecutive samples, or 20,000 cfu/100 mL in more than 2 out of 12 consecutive samples; d. The concentration of Total Ammoniacal Nitrogen must not exceed 84 g/m3 for more than 8 out of 12 consecutive samples, or shall it exceed 140 g/m3 in more than 2 out of 12 consecutive samples; and e. The concentration of Dissolved Reactive Phosphorus must not exceed 40 g/m3 for more than 8 out of 12 consecutive samples, or 50 g/m3 in more than 2 out of 12 consecutive samples</p> <p>Advice Note : Compliance will be demonstrated based on the samples required by Condition 13 below . There is the potential that water use improvements may result in the same mass being discharged but possibly at a higher concentration. If this occurs then there may be a need for these standards to be revised</p>	No change	Accept
12	Prior to the commencement of the activities, the Permit Holder must install and maintain a sampling port in the pipeline to the land treatment system and the river discharge system.	No change	Accept
13	From the commencement of the activities, the Permit Holder must take samples of treated wastewater from the sampling port (installed in accordance with Condition	No change	Accept

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	<p>12), once per month in any month that a discharge to the land treatment area or the Oroua River occurs, and while the discharge is occurring. The sample must be analysed for:</p> <p>a. Soluble Carbonaceous five day Biochemical Oxygen Demand (ScBOD5); b. Total Suspended Solids; c. Total Nitrogen; d. Nitrate Nitrogen (NO3-N); e. Ammoniacal-Nitrogen (NH4-N); f. Nitrite Nitrogen (NO2-N); g. Total Phosphorus; h. Dissolved Reactive Phosphorus (DRP); i. Sodium (Na); j. Potassium (K); k. Magnesium (Mg); l. Calcium (Ca); m. Escherischia coli; and</p> <p>Particulate Organic Matter.</p>		
14	Prior to the commencement or continuation of the activities, the Permit Holder must install flow meters to measure and record the treated wastewater volume discharged to the land treatment area and the Oroua River. The flow meters must be calibrated to an accuracy of plus or minus 5 % or better and must be maintained at this level of accuracy for the term of Discharge Permits (to water, to land, to air, to groundwater).	No change	Accept
15	Within three months of the grant of this permit, and every 5 years thereafter for the duration of Discharge Permits (to water, to land, to air, and to groundwater), the Permit Holder must have the flow meters required by Condition 14 verified in accordance with the manufacturer's specifications to ensure compliance with Condition 14. The Permit Holder must provide to the Manawatu-Whanganui Regional Council's Environmental Protection Manager, an in-situ flow meter verification certificate confirming the validity of the meters within one month of the verification being completed.	No change	Accept
16	Within three months of the grant of this permit, the Permit Holder must provide the Manawatu-Whanganui Regional Council's Regulatory Manager with near real-time treated wastewater discharge information recorded and collected from the flow meters referred to in Condition 14. This information must be recorded at 15 minute intervals and be provided automatically on a daily	No change	Accept

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	basis in a format compatible with the Manawatu-Whanganui Regional Council's database.		
17	<p>The Permit Holder must maintain and make available to the Manawatu-Whanganui Regional 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:</p> <p>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 e.g. wind speed and direction; f. The likely cause of the effect detected; and Any measures taken to avoid and mitigate the alleged effect</p>	No change	Accept
18	The Permit Holder must notify the Manawatu-Whanganui Regional Council's Regulatory Manager of any complaints within 72 hours of the complaint being received.	The <b>Consent Permit</b> Holder must notify the Manawatu-Whanganui Regional Council's Regulatory Manager of any complaints <u>as soon as practicable and no later than 24 hours of the complaint being received.</u>	Accept in part. A 24 hr reporting time for a complaint is very tight. AFFCO proposes 48 hours as a practical measure given history of no issues.
<b><u>18a.</u></b>		<b><u>Upon receiving an odour complaint the Consent Permit Holder shall carry out an investigation as soon as practicable to determine the cause of the odour complaint. If the cause of the odour can be attributed to the Consent Holder then the Consent Holder must carry out any necessary action to ensure compliance with Condition 4 of the air discharge permit. The Consent Holder shall provide a report to the Manawatu-Wanganui Regional Council Compliance Team leader, within 24 hours of completing an investigation into an odour complaint. This report shall include, but not be limited to those matters identified in condition xxx of the General conditions.</u></b>	Reject. The evidence and section 42A reports is that odour effects will be no more than minor. There is no history of odour complaints.
19	The Permit Holder must immediately notify the Manawatu-Whanganui Regional Council's Regulatory Manager of, and keep a record of, any spillage of material into the wastewater collection system, the	The Permit Holder must immediately notify the Manawatu-Whanganui Regional Council's Regulatory Manager of, <b>and keep a record of</b> , any spillage of material into the wastewater collection system, the wastewater treatment	Accept in part. AFFCO will redraft to make better sense before the hearing and discuss with Horizons as it is unclear why some of the proposed wording has been deleted.

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	wastewater treatment plant, the land treatment system or the river discharge system that causes any damage to pasture in the land treatment area or creates any objectionable odour beyond the property boundary.	plant, the land treatment system or the river discharge system <b><u>is likely or will result in a non-compliance with any of the conditions of the activities authorised by resource consents xxx</u></b>	
20	<p>By 31 October of each year (commencing 31 October 2016) the Permit Holder must provide the Manawatu-Whanganui Regional Council's Regulatory Manager, an annual monitoring report for the 12 month period ending the previous 30 September. The annual monitoring report must include (but not be limited to):</p> <p>a. A summary and interpretation of analyses and records collected in accordance with these Conditions and the Conditions of Discharge Permits (to water, to land, to air, and to groundwater);</p> <p>b. A comment on compliance with each of these Conditions and the Conditions of Discharge Permits (to water, to land, to air, and to groundwater);</p> <p>c. A summary of inspections made on the physical infrastructure in accordance with Condition 7;</p> <p>d. Results of soil sampling required by Condition 16 of Discharge Permit (to land) and an analysis to determine whether any material change in soil quality has occurred and actions taken to remedy any nutrient deficiency or excess;</p> <p>e. Results of groundwater monitoring required by Conditions 17 and 18 of Discharge Permit (to land) and Condition 12 of Discharge Permit (to groundwater), including an assessment of whether there has been a decline in groundwater quality due to the activities;</p> <p>f. Results of surface water monitoring required by Conditions 8 to 11 of Discharge Permit (to water) including an assessment against the One Plan Schedule E water quality targets, focusing on the soluble inorganic nitrogen concentrations;</p> <p>g. A copy of the complaints register required by Condition 17;</p> <p>h. The number, duration and volume of discharges to the Oroua River; and</p> <p>i. A copy of the wind speed shut-off level review required</p>	<p>By 31 October of each year (commencing 31 October 2017) the Permit Holder must provide the Manawatu-Whanganui Regional Council's Regulatory Manager, an annual monitoring report for the 12 month period ending the previous 30 September. The annual monitoring report must include (but not be limited to):</p> <p>a. A summary and interpretation of analyses and records collected in accordance with these Conditions and the Conditions of Discharge Permits (to water, to land, to air, and to groundwater);</p> <p>b. A comment on compliance with each of these Conditions and the Conditions of Discharge Permits (to water, to land, to air, and to groundwater);</p> <p>c. A summary of inspections made on the physical infrastructure in accordance with Condition 7;</p> <p>d. Results of soil sampling required by Condition 16 of Discharge Permit (to land) and an analysis to determine whether any material change in soil quality has occurred and actions taken to remedy any nutrient deficiency or excess;</p> <p>e. Results of groundwater monitoring required by Conditions 17 and 18 of Discharge Permit (to land) and Condition 12 of Discharge Permit (to groundwater), including an assessment of whether there has been a decline in groundwater quality due to the activities;</p> <p>f. Results of surface water monitoring required by Conditions 8 to 11 of Discharge Permit (to water) including an assessment against the One Plan Schedule E water quality targets, focusing on the soluble inorganic nitrogen concentrations;</p> <p>g. A copy of the complaints register required by Condition 17;</p> <p>h. The number, duration and volume of discharges to the Oroua River;</p> <p>i. A copy of the wind speed shut-off level review required</p>	

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	by Condition 6 of Discharge Permit (to air)	by Condition 6 of Discharge Permit (to air); <u>j. A summary of inspections made on the treatment pond system and any system modifications made in accordance with Condition 8 (Discharge Permit to Land where may enter water);</u> <u>k. A copy of the land treatment irrigation and harvest records as required by Condition 19 and 20 of the Discharge Permit (to land); and</u> <u>l. A nutrient budget incorporating details of all applications to land as well as ongoing farm system inputs relevant.</u>	Accept  Reject. Not all of the consented area not all areas will be receiving wastewater. Unclear the benefit of keeping and providing these records.  Accept
21	The Permit Holder will consult with neighbours in regards to any changes in its consents or management of it consents that may impact the neighbours. AFFCO Manawatu will provide an opportunity to meet with neighbours to discuss matters relevant to the activities at least once per year.	No change	Accept
22	In the event of an archaeological site, waahi tapu or koiwi being discovered or disturbed during the activities, the Permit Holder must immediately cease further work in the immediate area and inform Ngati Kauwhata, Tanenuiarangi Manawatu Incorporated, the Manawatu-Whanganui Regional Council's Regulatory Manager, Heritage New Zealand and (in the event that human remains are found) the New Zealand Police. Further work at the site must be suspended while Iwi carry out their procedures for the removal of Taonga. The Manawatu-Whanganui Regional Council's Regulatory Manager will advise the Permit 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.	No change.	Accept
			<b>To address issues raised in the Ngati Kauwhata CIA, the following conditions area proposed:</b>

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			The Permit Holder must every 5 years in July, starting July 2021, investigate and report on the appropriateness of the discharge regime and in particular the appropriateness of the volume of water applied to land, discharged to water and stored. The report shall consider the current portion applied to land and evaluate alternatives that will increase the discharge to land, ideally to 100 % land application.
			<p>The Permit Holder shall provide a copy of the report to Ngāti Kauwhata and Tanenuiarangi Manawatu Incorporated and within 2 months of completing the report, the Permit Holder shall invite representatives of Ngāti Kauwhata and Tanenuiarangi Manawatu Incorporated to consult and meet on the report.</p> <p>Within 8 months of commencing the investigations and report the Permit Holder shall supply a copy of the final report, along with the feedback from consultation with Ngāti Kauwhata and Tanenuiarangi Manawatu Incorporated and, where that feedback has not been adopted the reasons for not adopting it, to the Manawatu-Wanganui Regional Council's Regulatory Manager.</p>
			<p>The Permit Holder must invite Ngāti Kauwhata and Tanenuiarangi Manawatu Inc to work with it (either individually or jointly) in preparing Cultural Health Index Monitoring Protocols within the immediate environs of the AFFCO plant site, including the Oroua River. If the invitation is accepted, within 18 months of the commencement of this consent, the Permit Holder must provide the Manawatu-Wanganui Regional Council's Regulatory Manager with two (unless otherwise agreed) Cultural Health Index Monitoring Protocols, developed in consultation with Ngāti Kauwhata and/or Tanenuiarangi Manawatu Inc respectively. The protocols, as a minimum, must:</p> <p>a. Describe the relationship of Ngāti Kauwhata</p>

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			<p>and/or Tanenuiarangi Manawatu Inc to the land consented for irrigation of wastewater and the adjacent areas of the Otoku Stream and the Oroua River and the the sites of interest to Ngāti Kauwhata and/or Tanenuiarangi Manawatu Inc related to those areas;</p> <p>b. Describe Ngāti Kauwhata and/or Tanenuiarangi Manawatu Inc tikanga relevant to the proposed cultural monitoring, the activities, and the site(s);</p> <p>c. Identify and map (with map references) the site(s) to be monitored (the Permit Holder must be able to legally obtain access to those sites);</p> <p>d. Set out the frequency of monitoring;</p> <p>e. Describe the procedures required to access the application site for the monitoring (in particular health and safety requirements);</p> <p>f. Identify the parameters and methods used for the monitoring; and</p> <p>g. Set out the matters to be included in the Cultural Health Index Monitoring Report and the frequency of the reporting obligations.</p>

## AFFCO Water Discharge: Draft Conditions: Commentary

Cond No	Suggested Conditions	HRC Draft	Comment on current position – to be updated at the hearing
1	Discharge Permit Number shall expire on 1 July 2049.		
2	<p>The activity authorised by this Discharge Permit is restricted to the discharge of treated wastewater to the Oroua River (at approximate map reference NZTM (RE79ts) BM34:1819780E, 5543130N) under the following criteria:</p> <p>a) During the period 1 April to 30 November of any year:</p> <ul style="list-style-type: none"> <li>i. When the river flow is below 7,590 L/s, there shall be no discharge of wastewater; or</li> <li>ii. When the river flow is 7,590 L/s or greater, but less than 16,193 L/s, the discharge rate shall not exceed the lesser rate of 35 L/s or that determined by the equation <math>QOR \times (0.005 / [DRP]_{ww})</math></li> </ul> <p>Where: QOR is the average daily river flow or instantaneous river flow (L/s) in the Oroua River measured at the Kawa Wool monitoring site; and [DRP]<sub>ww</sub> is the concentration of DRP (g/m3) in the treated wastewater from the most recent sample for which a DRP test result has been received by the Permit Holder; or iii. When the river flow is 16,193 L/s or greater, the discharge rate shall not exceed 3,000 m3/d and 35 L/s.</p> <p>b) During the period 1 December to 31 March of any year, when the river flow is greater than 20,913 L/s, the discharge shall not exceed 3,000 m3/d and 35 L/s.</p> <p>c) Compliance with river flow requirements shall be assessed at 9:00 am on the day of any discharge to the</p>	<p>The activity authorised by this Discharge Permit is restricted to the discharge of treated wastewater to the Oroua River (at approximate map reference NZTM (RE79ts) BM34:1819780E, 5543130N) under the following criteria:</p> <p>a) During the period 1 April to 30 November of any year:</p> <ul style="list-style-type: none"> <li>i. When the river flow is below 7,590 L/s, there shall be no discharge of wastewater; or</li> <li>ii. When the river flow is 7,590 L/s or greater, but less than 16,193 L/s, the discharge rate shall not exceed the lesser rate of 35 L/s or that determined by the equation <math>QOR \times (0.005 / [DRP]_{ww})</math></li> </ul> <p>Where: QOR <del>is the average daily</del> <b><u>instantaneous</u></b> river flow or instantaneous river flow (L/s) in the Oroua River measured at the Kawa Wool monitoring site; and [DRP]<sub>ww</sub> is the concentration of DRP (g/m3) in the treated wastewater from the most recent sample for which a DRP test result has been received by the Permit Holder; or iii. When the river flow is 16,193 L/s or greater, the discharge rate shall not exceed 3,000 m3/d and 35 L/s.</p> <p>b) During the period 1 December to 31 March of any year;</p> <ul style="list-style-type: none"> <li>i. when the river flow is greater than 20,913 L/s, the discharge shall not exceed 3,000 m3/d and 35 L/s; and</li> <li><b><u>ii. when the river flow is below 20,913 L/s there shall be no discharge to the Oroua River</u></b></li> </ul> <p>c) Compliance with river flow requirements shall be assessed at 9:00 am <b><u>and checked every 6 hours</u></b></p>	<p>Reject. Subject to discussions with Horizons as to reliability of its data supply. AFFCO has tried to use this approach but the data from Horizons (link that can be automated) is not sufficiently reliable to make this happen at this stage.</p> <p>Accept</p> <p>Reject. As above automated data cannot be</p>

	river for the following 24 hour period. Compliance with DRP requirements shall be based on most recent analysis results	<b>following</b> this on the day of any discharge to the river for the following 24 hour period. Compliance with DRP requirements shall be based on most recent analysis results of treated wastewater.  Comment – minor wording changes added for clarity. Considered appropriate to check flows	reliably provided by Horizons at this stage. Adds significant work for no benefit with implications for periods overnight and during the weekends.
3	The treated wastewater must discharge to the Oroua River through the river discharge structure, as detailed on plan ?.	No change	Accept
4	The maximum daily discharge of meatworks effluent to the Oroua River must not exceed 3,000 m <sup>3</sup> /day and must not exceed a maximum flow rate of 35 L/s	Delete – not required as flow volumes and rates determined by Condition 2	Accept
5	The Permit Holder must, before commencing the activity at the new discharge location, erect a sign or signs, that are visible to river users, on the true left bank of the Oroua River adjacent to the discharge point advising of the presence of the treated wastewater discharge.  The precise wording and location of the signage must be agreed with the Manawatu-Whanganui Regional Council's Regulatory Manager.  The Permit Holder must maintain the signage for the duration of this Permit	The Permit Holder must, before commencing the activity at the new discharge location, erect a sign or signs, that are visible to river users, <del>on the true left bank</del> <b>on both banks</b> of the Oroua River adjacent to the discharge point advising of the presence of the treated wastewater discharge <b>when discharge to water is occurring.</b>  The precise wording and location of the signage must be agreed with the Manawatu-Whanganui Regional Council's Regulatory Manager.  The Permit Holder must maintain the signage for the duration of this Permit  Comment – Considered appropriate to be visible on both sides of the bank to alert users to potential risk, as the actual risk arises when the discharge is occurring the signs would not be needed so could be removed/closed.	Reject. Land access issues and maintenance issues (including vandalism), and the proposed regime at higher flows make this unnecessary and not capable of performance.
6	The zone of reasonable mixing in the waters receiving the treated wastewater is defined as that reach of the Oroua River from the wastewater discharge structure to within a distance of 200 m downstream of the river discharge structure, as shown on Plan ? attached to and forming part of this consent.	No change, other than will provide plan number.	Accept
7	The discharge authorised by this Discharge Permit must not cause any of the following effects: Any emission of objectionable odour; or a. Any of the following effects in the receiving waters, after a reasonable mixing distance of 200	(What AFFCO already had, plus...) ii. bacterial and / or fungal slime growths visible to the naked eye as plumose growths or mats; or iii. the receiving water to become unsuitable for consumption by farm animals; or	To respond after further discussions with Horizons.

	<p>metres:</p> <p>b.</p> <ul style="list-style-type: none"> <li>i. the production of any conspicuous oil or grease films,</li> <li>ii. scums or foams, or</li> <li>iii. floatable or suspended materials.</li> </ul>	<ul style="list-style-type: none"> <li>iv. a reduction in horizontal visibility exceeding 30%; or</li> <li>v. a reduction in QMCI of greater than 20%; or</li> <li>vi. the DO concentration to fall below 70% saturation; or</li> <li>vii. the rolling annual average ammonia concentration to exceed 0.400 g/m3; or</li> <li>viii. the maximum ammonia concentration to exceed 2.1 g/m3; or</li> <li>ix. the Particulate Organic Matter concentration to exceed 5 g/m3 (an average over any 12 month period) when flows are below median flows; or</li> <li>x. the soluble carbonaceous BOD5 concentration due to dissolved organic compounds (that is, material passing through a GF/C filter) to exceed 2 grams per cubic metre at river flows below the 20th FEP; or</li> <li>xii. the maximum cover of visible streambed of periphyton as filamentous algae more than 2cm long to exceed 30% in a run habitat; or</li> <li>xiii. the maximum cover of visible streambed of periphyton as mat algae more than 0.3cm thick to exceed 60% in a run habitat</li> </ul> <p>Comment – more specific and measureable standards in line with recent Feilding decision</p>	
8	<p>The Permit Holder must monitor the following parameters in samples of water from the Oroua River at two sampling locations, comprising one located 200 m upstream of the discharge point, and the second located 200 m downstream of the discharge point:</p> <ul style="list-style-type: none"> <li>a. ScBOD5;</li> <li>b. Total Suspended Solids;</li> <li>c. Nitrate Nitrogen (NO3-N);</li> <li>d. Nitrite Nitrogen (NO2-N);</li> <li>e. Total Ammoniacal-Nitrogen (NH4-N);</li> <li>f. Dissolved Reactive Phosphorus (DRP);</li> <li>g. Escherischia coli; and</li> <li>h. Turbidity.</li> </ul> <p>Sampling must be undertaken 3-monthly during the period of discharge (1 April to 30 November)</p>	<p>(What we already started with, but changing parameters and timing to...)</p> <ul style="list-style-type: none"> <li>i. pH (field measurement);</li> <li>ii. Temperature (field measurement);</li> <li>iii. Dissolved oxygen (field measurement);</li> <li>iv. Total Suspended Solids;</li> <li>v. scBOD5 (Dissolved carbonaceous biochemical oxygen demand being material passed through a GF/C filter);</li> <li>vi. Total Nitrogen;</li> <li>vii. Nitrate Nitrogen;</li> <li>viii. Ammoniacal Nitrogen;</li> <li>ix. Nitrite-Nitrogen;</li> <li>x. Dissolved Reactive Phosphorus;</li> <li>xi. Total Phosphorus;</li> <li>xii. Particulate Organic Matter;</li> <li>xiii. E.coli</li> </ul> <p><u>Sampling must be undertaken monthly</u></p> <p>Comment – to allow for more detailed assessment and allow for potential relationships to be determined. This</p>	To respond after further discussions with Horizons.

		monitoring frequency is consistent with Horizons Regional Council monitoring	
9	<p>The Permit Holder must have an appropriately qualified and experienced freshwater ecologist undertake macroinvertebrate sampling in the Oroua River. The macroinvertebrate assessment must be undertaken following a period of at least three weeks without a flood event and during a period of low flow. The timing of the monitoring must be confirmed by Manawatu-Whanganui Regional Council's Regulatory Manager prior to the commencement of the monitoring.</p> <p>The locations of the assessments and sampling shall be:</p> <ul style="list-style-type: none"> <li>a. upstream of the discharge point in the first riffle upstream within 100 m of the discharge point;</li> <li>b. downstream of the discharge point in the first riffle within 400 m of the discharge point.</li> </ul> <p>Advice Note: A flood event is considered to be when the Oroua River is at 16.08 m<sup>3</sup>/s and low flow is defined as half median flow at the Kawa Wool site</p> <p>The</p>	<p>The Permit Holder must have an appropriately qualified and experienced freshwater ecologist undertake macroinvertebrate sampling in the Oroua River. The macroinvertebrate assessment must be undertaken following a period of at least three weeks without a flood event and during a period of <b><u>low-flow stable flow and when the discharge has been occurring for at least two weeks.</u></b> The timing of the monitoring must be confirmed by Manawatu-Whanganui Regional Council's Regulatory Manager prior to the commencement of the monitoring.</p> <p>The locations of the assessments and sampling shall be:</p> <ul style="list-style-type: none"> <li>a. upstream of the discharge point in the first riffle upstream within 100 m of the discharge point;</li> <li>b. downstream of the discharge point in the first riffle within 400 m of the discharge point.</li> </ul> <p>Advice Note: A flood event is considered to be when the Oroua River is at 16.08 m<sup>3</sup>/s <b><u>and low flow is defined as half median flow at the Kawa Wool site</u></b></p> <p>Comment – Changes to required flow conditions and to ensure that potential effects are being picked up (e.g. discharge has been operating).</p>	To discuss stable flow, and the implications of not having the right conditions for sampling with Horizons (i.e. sampling can't be completed within the allotted time).
10	<p>The Permit Holder must ensure that the macroinvertebrate sampling referred to in Condition 9 above is to be undertaken annually between April and May inclusive beginning during the first year following commencement of the consent. The macroinvertebrate sampling must 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 wade-able streams" (Stark et al. 2001). This shall involve:</p> <ul style="list-style-type: none"> <li>a) Collection of 7 replicate 0.1 m<sup>2</sup> Surber samples at random within a 20 m section of riffle habitat at each sampling site;</li> <li>b) Full count of the macroinvertebrate taxa within each</li> </ul>	No change	Accept

	<p>replicate sample to the taxonomic resolution level specified for use of the Macroinvertebrate Community Index (MCI); and</p> <p>c) Enumeration of the results as taxa richness, MCI, QMCI, %EPT taxa and %EPT individuals.</p> <p>Advice Note: Should annual monitoring show no adverse effects, then the Permit Holder may seek a variation to reduce the frequency of monitoring</p>		
11	<p>No later than three years after the granting of this Discharge Permit, the Permit Holder must engage an appropriately experienced and qualified freshwater ecologist to undertake an assessment of the percentage cover, biomass, chlorophyll a and community composition of periphyton, filamentous algae and cyanobacterial mats in runs. This sampling must be undertaken monthly beginning when the discharge to land commences and shall continue for a 12 month period.</p>	<p>The <del>Consent</del> <b>Permit Holder</b> must engage an appropriately experienced and qualified freshwater ecologist to undertake an assessment of the percentage cover, biomass, chlorophyll a and community composition of periphyton, filamentous algae and cyanobacterial mats in runs. <b><u>Sampling shall be undertaken monthly for 3 consecutive years commencing in 2017 following commencement of discharge to land. An annual report must be submitted to the Manawatu-Whanganui Regional Councils Regulatory Manager by 1 November each year and a final report detailing all results within three months of the final sampling survey.</u></b></p> <p><del>This sampling must be undertaken monthly beginning when the discharge to land commences and shall continue for a 12 month period.</del></p> <p>Comment – To better identify potential effects around periphyton growth a longer sampling period is considered appropriate</p>	<p>To respond after further discussions with Horizons.</p>
12	<p>The sampling required by Condition 11 of this Discharge Permit must include 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 must follow the protocols outlined in Appendix 2 of "A periphyton monitoring plan for the Manawatu-Wanganui Region" (Kilroy et al. 2008). Reported estimates must include:</p> <p>a. Percentage cover of visible stream or river bed by</p>	<p>No change</p>	<p>Accept</p>

	<p>bacterial and/or fungal growths (sewage fungus) visible to the naked eye;</p> <p>b. Percentage cover of visible stream bed by filamentous algae more than 2 cm long;</p> <p>c. Percentage cover of visible stream bed by filamentous algae less than 2 cm long;</p> <p>d. Percentage cover of visible stream bed by diatoms or cyanobacteria mats more than 0.3 cm thick;</p> <p>e. Percentage cover of visible stream bed by diatoms less than 0.3 cm thick; and</p> <p>f. Percentage cover of visible stream bed that is clean</p>		
13	<p>The collection of a periphyton sample must be at the same established monitoring sites and transects as defined in Condition 9 above, using method QM-1b from the Stream Periphyton Monitoring Manual (Biggs &amp; Kilroy 2000). Analysis of periphyton samples must follow the protocols outlined in Appendix 3 of 'A periphyton monitoring plan for the Manawatu/Wanganui Region' (Kilroy et al 2008) and shall involve extraction of chlorophyll a by ethanol.</p>	No change	Accept
14	<p>The Manawatu-Whanganui Regional Council may, under Section 128 of the Act, initiate a review of the Conditions of this Discharge Permit in July 2018 and every 5 years thereafter in the month of July for the duration of this Discharge Permit. The review must be for the purposes of avoiding, remedying or mitigating any adverse effects on the environment, which may arise from the exercise of this Discharge Permit.</p> <p>The review must allow for consideration of the following matters:</p> <p>a. The deletion or amendment of these Conditions;</p> <p>b. Evaluation and modification of these Conditions to ensure that discharges to land authorised by Discharge Permit (to land) are used preferentially over discharges to the Oroua River under this Discharge Permit, to the extent practicable;</p> <p>c. The modification of the monitoring program required by the General Conditions;</p> <p>d. The amendment or addition of new Conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including but not limited to Conditions to mitigate adverse effects attributed to any breach of any</p>	<p>The Manawatu-Whanganui Regional Council may, under Section 128 of the Act, initiate a review of the Conditions of this Discharge Permit <b><u>every five (5) years in July commencing July 2022 the duration of this Discharge Permit.</u></b> The review must be for the purposes of avoiding, remedying or mitigating any adverse effects on the environment, which may arise from the exercise of this Discharge Permit.</p> <p>The review must allow for consideration of the following matters:</p> <p>a. The deletion or amendment of these Conditions;</p> <p>b. Evaluation and modification of these Conditions to ensure that discharges to land authorised by Discharge Permit (to land) are used preferentially over discharges to the Oroua River under this Discharge Permit, to the extent practicable;</p> <p>c. The modification of the monitoring program required by the General Conditions;</p> <p>d. The amendment or addition of new Conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including but not limited to Conditions to mitigate adverse effects attributed to any breach of any conditions; and</p>	<p>Reject. Annual review is excessive and far beyond the minor level of effects of the proposal. Such reviews add considerable cost on the applicant and the community and given the monitoring proposed and the evidence of Mr Lowe and Dr Ausseil such regular reviews are not required.</p> <p>AFFCO will discuss timing with Horizons prior to the hearing and also wording to make it clear it relates solely to more than minor unanticipated adverse effects.</p>

	conditions; and e. The adoption of the Best Practicable Option to prevent or minimise significant adverse effects from the exercise of this Discharge Permit	e. The adoption of the Best Practicable Option to prevent or minimise significant unanticipated adverse effects from the exercise of this Discharge Permit	
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## AFFCO Riverbed Structure: Draft Conditions: Commentary

Cond No	Suggested Conditions	HRC Draft	Comment on current position – to be updated at the hearing
1	The activities authorised by this Land Use Consent are restricted to: a) The installation, operation, and maintenance, of pipelines and an outlet structure (at approximate map reference NZTopo50 BM34: 1819765E, 5543130N), within 8 metres of the true left bank of the Oroua River and Otoku Stream to convey treated wastewater; b) The installation, operation and maintenance of a bed level control structure in the bed of the Otoku Stream at and immediately upstream from its confluence with the Oroua River; and c) The associated temporary discharge of sediment during construction, on the property legally described as "legal river", ID 4105837 (47.2899 ha), being part of the Oroua River bed adjacent to and west of AFFCO New Zealand Ltd site.	No change	Accept
2	The Consent Holder must undertake the activities in general accordance with the information supplied in the consent application, the Assessment of Environmental Effects dated 31 March 2015 including all concepts, parameters, drawings, activity specifications, proposed mitigation measures, methods concerning how the activity will be conducted and the scale, character and intensity of effects. Where the information is inconsistent with the requirements of specific consent conditions, the conditions prevail.	No change	Accept
3	The Consent Holder must complete the construction and commissioning of the works authorised by condition 1(a)-(c) within 4 years from commencement of this consent.	No change	Accept
4	The Consent Holder must ensure the proposed pipeline, outfall structure and bed level control structure is designed in accordance with the Manawatu-Whanganui Regional Council's engineering requirements.	No change	Accept
5	At least 20 working days prior to commencement of the activities, the Consent Holder must provide to the Manawatu/Whanganui Regional Council's Regulatory Manager for certification a copy of the design and	No change	Accept

	specification of all works, as prepared by an appropriately qualified and experienced Engineer. No work may commence until the Manawatu-Whanganui Regional Council's Regulatory Manager certifies in writing that the work may proceed in accordance with the design and specification provided.		
6	<p>At least 20 working days prior to commencement of the activities, the Consent Holder must provide to the Manawatu/Whanganui Regional Council's Regulatory Manager for technical certification an Erosion and Sediment Control Plan (ESCP) to address erosion and sediment control for the land disturbance and vegetation clearance authorised by this Consent. The ESCP must be developed in accordance with the "Greater Wellington Regional Council Guidelines – Guidelines for the Wellington Region 2002 and reprint 2006" and include as a minimum, but not be limited to:</p> <p>a) Details of principles, procedures and practices that will be implemented to minimise the potential for sediment to enter surface water bodies (including drains);</p> <p>b) Provision of a construction timetable for bulk earth disturbance works and establishment of the erosion and sediment control structures;</p> <p>c) Provision of a timetable for progressive site rehabilitation, re-vegetation and stabilisation;</p> <p>d) Rainfall response and contingency measures for managing the stability of the disturbed or excavated areas to prevent sediment release into surface water bodies during high rainfall events;</p> <p>e) A site plan showing:</p> <p>a) the location of surface water bodies (including drains);</p> <p>b) extent of proposed soil disturbance (including borrow areas), vegetation clearance, and cut and fill areas; and</p> <p>c) any temporary or permanent stockpile areas;</p> <p>f) Methods and measures to ensure sediment entering surface water bodies is minimised between 1 December to 28 February (includes contact recreation season); and</p> <p>g) Identification and contact details of personnel responsible for the operation and maintenance of the key erosion and sediment control measures.</p>	<p>At least 20 working days prior to commencement of the activities, the Consent Holder must provide to the Manawatu-Whanganui Regional Council's Regulatory Manager for technical certification an Erosion and Sediment Control Plan (ESCP) to address erosion and sediment control for the land disturbance and vegetation clearance authorised by this Consent. The ESCP must be developed in accordance with the "Greater Wellington Regional Council Guidelines – Guidelines for the Wellington Region 2002 and reprint 2006" and include as a minimum, but not be limited to:</p> <p>a) Details of principles, procedures and practices that will be implemented to minimise the potential for sediment to enter surface water bodies (including drains);</p> <p>b) Provision of a construction timetable for bulk earth disturbance works and establishment of the erosion and sediment control structures;</p> <p>c) Provision of a timetable for progressive site rehabilitation, re-vegetation and stabilisation;</p> <p>d) Rainfall response and contingency measures for managing the stability of the disturbed or excavated areas to prevent sediment release into surface water bodies during high rainfall events;</p> <p>e) A site plan showing:</p> <p>a) the location of surface water bodies (including drains);</p> <p>b) extent of proposed soil disturbance (including borrow areas), vegetation clearance, and cut and fill areas; and</p> <p>c) any temporary or permanent stockpile areas;</p> <p>f) Methods and measures to ensure sediment entering surface water bodies is minimised between 1 December to 28 February (includes contact recreation season); and</p> <p>g) Identification and contact details of personnel responsible for the operation and maintenance of the key erosion and sediment control measures.</p>	Accept
7	The Consent Holder must ensure that no earthworks	No change	Accept

	authorised by this Land Use Consent commence until the Manawatu/Whanganui Regional Council's Regulatory Manager certifies in writing that the ESCP satisfies the requirements of Condition 6.		
8	The Consent Holder must submit any proposed changes to the ESCP to Manawatu-Whanganui Regional Council's Regulatory Manager for technical certification prior to the implementation of any proposed changes.	No change.	Accept
9	The Consent Holder must undertake the activities in accordance with the ESCP most recently certified pursuant to Condition 7 or 8.	No change.	Accept
10	At least 20 working days prior to undertaking any maintenance works associated with the activities, the Consent Holder must provide to Manawatu-Whanganui Regional Council's Regulatory Manager, details of the proposed works and a methodology for undertaking the works, including provision for compliance with these Conditions.	No change	Accept
11	At least 20 working days prior to commencing the activities, the Consent Holder must submit a flood contingency plan to Manawatu-Whanganui Regional Council's Regulatory Manager. The flood contingency plan must include: a) Mechanisms for advance flood warning; b) Provision of relevant contact phone numbers; and c) Methods for removal of machinery, should this be necessary.	No change.	Accept
12	The Consent Holder must complete the construction of the authorised structures as quickly as possible and ensure that all equipment and materials required to complete construction are present on site prior to any works commencing.	No change.	Accept
13	The Consent Holder may only commence works where: a) There is at least four days of settled and/or dry weather forecast by the New Zealand Meteorological service (MetService) for the Oroua River catchment; and, b) The Consent Holder has notified the Manawatu-Whanganui Regional Council's Regulatory Manager and the Area Engineer Central at least two working days prior to the planned commencement of the works.  Advice note: The Regulatory Manager and Area Engineer	No change.	Accept

	– Central can be contacted on Freephone 0508 800 800.		
14	The Consent Holder must ensure that activities which may result in the release of sediment to the Oroua River do not occur between 15 August and 30 November (inclusive).	Comment – unclear what this condition relates to	See condition 20 below – propose the condition is deleted.
15	The Consent Holder must ensure that any material excavated as a result of the activities is lifted clear of all surface water bodies and disposed of in a location where sediment cannot be washed back into surface water.	No change	Accept
16	The Consent Holder must ensure that all bare areas are stabilised within 10 working days of completion of the relevant work.	No change	Accept
17	The Consent Holder must ensure that no holes or mounds are left within any part of the bed of the Oroua River after the completion of the activities.  Advice Note: for the purposes of this condition, any raising of ground levels to construct the authorised structures are not a 'mound'.	No change	Accept
18	The activities must not result in the discharge of contaminants that are toxic to aquatic ecosystems.  Advice note: This includes leakage of fuel, oil and other contaminants from machinery used for the activities.	No change	Accept
19	The Consent Holder must ensure that the activities do not result in suspended sediment being conspicuous during Saturdays, Sundays and public holidays during 1 December to 28 February (inclusive).	No change	Accept
20	During 1 December to 14 August (inclusive) the Consent Holder must ensure that any of the activities causing the discharge of sediment to the Oroua River must not be undertaken for more than 24 hours in total across any given five consecutive days. Advice Note: Sediment release is not permitted between 15 August and 30 November due to the dotterel nesting habitats present within the Oroua River.	Comment – unclear as to why this condition is put forward, as dotterel not recorded as being present in this area and dates don't line up with general dotterel condition. Dotterel conditions generally relate more to gravel extraction.	Accept the comment and propose the condition is deleted.
21	The Consent Holder must ensure that: a) Machinery or vehicles entering any water body have had a stand down period of at least 48 hours since being in contact with another water body other than a water body in the upstream catchment of the Oroua River; b) Following use any machinery or vehicles must have a stand down	No change.	Accept

	period of at least 48 hours prior to use in any catchment, other than a water body in the upstream catchment of the Oroua River; and c) Standard check, clean or dry procedures are used for any vehicles, equipment, clothing or footwear that has been in contact with a water body other than a water body in the upstream catchment of the Oroua River within the past 48 hours.		
22	The Consent Holder must comply with all notices and guidelines issued by Biosecurity New Zealand in relation to avoiding spreading the Pest Organism <i>Didymosphenia geminata</i> , known as "Didymo" (refer to <a href="http://www.biosecurity.govt.nz/didymo">www.biosecurity.govt.nz/didymo</a> ).	No change	Accept
23	The Consent Holder must ensure that no uncured cement or cement based products enter the flowing water in any surface water body (including drains) within the application site during the activities. Any uncured cement placed in or near a watercourse must be placed in such a manner that no concrete or cement leaches out and enters the watercourse. Such measures may include: a) Working during summer low flow conditions; or b) Containing the concrete in a watertight form work.	No change	Accept
24	The Consent Holder must ensure that the activities do not cause any objectionable deposition of dust at or beyond the boundary of the site.  Advice Note: A deposition of dust will only be considered objectionable after a Manawatu-Whanganui Regional Council officer has considered the Frequency, Intensity, Duration, Offensiveness and Location of the deposited dust (i.e. the FIDOL factors).	No change	Accept
25	In the event of an archaeological site, waahi tapu or koiwi being discovered or disturbed during the activities, the Consent Holder must immediately cease further work in the immediate vicinity and inform Ngati Kauwhata, Tanenuiarangi Manawatu Incorporated, the Manawatu-Whanganui Regional Council's Regulatory Manager, Heritage New Zealand and (in the event that human remains are found) the New Zealand Police. Further work at the site must be suspended while iwi carry out their procedures for removal of taonga. The Manawatu-Whanganui Regional Council's Regulatory Manager will advise the Consent Holder when work at the site can	No change	Accept but may shift to general conditions to avoid repetition

	<p>resume.</p> <p>Advice Note: In accordance with Section 14(1) of the Coroners Act 2006, in the event that human remains are found the police should be contacted immediately and all works in the immediate vicinity will cease until advice is given that works can recommence.</p>		
26	Any structures constructed by the activities will remain the responsibility of the Consent Holder and must be maintained so that: a) Any erosion, scour or instability of the river bed or banks that is attributable to the structures is remedied by the Consent Holder within 10 working days, and b) The structural integrity of the structures remains sound.	No change	Accept
27	In the event that any damage is caused to any Manawatu-Whanganui Regional Council stopbank or river protection works as a result of the activities, the Consent Holder must immediately contact the Manawatu-Whanganui Regional Council's Area Engineer Central and repair the damage to the standard required by the Area Engineer.	No change	Accept

## AFFCO Pond Seepage: Draft Conditions: Commentary

Cond No	Suggested Conditions	HRC Draft	Comment on current position – to be updated at the hearing
1	Discharge Permit Number shall expire on 1 July 2049.		
2	<p>The activity authorised by this Discharge Permit is restricted to:</p> <p>a. The discharge of wastewater components by seepage into land in the vicinity of the ponds identified on Plan Number attached to and forming part of this consent; and</p> <p>b. Any discharge undertaken in accordance with this Discharge Permit must occur on land legally described as: Lot 3, DP 89045 (16.7295 ha).</p>	<p><b>This <del>consent</del> permit authorises the discharge into land of wastewater for the purpose of storing and treating wastewater in ponds and to land via seepage from the ponds on property legally described as Lot 3, DP 89045 (hereafter referred to as the property) at approximate map reference BM34 205 432.</b></p> <p><b>Comment – standard wording to be consistent with other recently granted consents for similar activity.</b></p>	Accept.
3	<p>The Permit Holder must undertake the activities in general accordance with the information supplied in the consent application, the Assessment of Environmental Effects dated 31 March 2015 including all concepts, parameters, drawings, activity specifications, proposed mitigation measures, methods concerning how the activity will be conducted and the scale, character and intensity of effects. Where the information is inconsistent with the requirements of specific consent conditions, the conditions prevail.</p> <p>Advice Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Act.</p>	<p>The <del>Consent</del> <b>Permit</b> Holder must undertake the activities in general accordance with the information supplied in the consent application, the Assessment of Environmental Effects dated 31 March 2015 including all concepts, parameters, drawings, activity specifications, proposed mitigation measures, methods concerning how the activity will be conducted and the scale, character and intensity of effects. <b>Where there are any inconsistencies between the information provided by the applicant and conditions of the resource consent, the conditions of the resource consent will apply.</b></p> <p>Advice Note: Any change from the location, design concepts and parameters, implementation and/or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act.</p>	Accept.
4	<p>No later than 3 months following the granting of this permit, the Permit Holder must submit to the Manawatu Whanganui Regional Council's Regulatory Manager for technical certification an Operation and Management Plan detailing (but not limited to) the following items:</p> <p>a. A description of the ponds (wastewater treatment</p>	No change	Accept

	<p>and storage system), including a site map identifying the location ponds and monitoring sites;</p> <p>b. Monitoring procedures covering all aspects of this Discharge Permit to demonstrate compliance with these Conditions;</p> <p>c. A methodology for desludging the ponds and procedures for avoiding damage of the existing clay liner; and</p> <p>d. Procedures to ensure that reporting requirements are met</p>		
5	<p>The Permit Holder must annually review the Operation and Management Plan by 31 October of each year, commencing October 2017, to incorporate any proposed changes to the management of the activities. Following each review, the Operation and Management Plan, including any proposed changes must be submitted to the Manawatu-Whanganui Regional Council's Regulatory Manager for technical re-certification before 30 November of the same year.</p>	No change	Accept, but year will need to change as highlighted.
6	<p>The Permit Holder must undertake the activities in accordance with the Operation and Management Plan that is most recently certified pursuant to Conditions 4 or 5.</p> <p>Advice Note: The Regulatory Manager or team representative can be contacted on Freephone 0505 800 800 or by e - mail at <a href="mailto:compliance.shared@horizons.govt.nz">compliance.shared@horizons.govt.nz</a></p>	No change.	Accept
7	<p>The Permit Holder must ensure that the physical infrastructure of the pond system 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.</p>	No change	Accept
8	<p>Records of the inspections carried out in accordance with Condition 7 and any resulting system modifications must be kept and made available to the Manawatu-Wanganui Regional Council's Regulatory Manager on request</p>	<p>Records of the inspections carried out in accordance with Condition 7 and any resulting system modifications <b><u>must be recorded in the annual report as required by Condition 20 of the General Conditions.</u></b></p>	Accept
9	<p>Monitoring of Wastewater. The Permit Holder must establish a site for sampling each of:</p> <p>a. Aerated pond effluent;</p> <p>b. Anaerobic pond effluent; and</p>	<p>The Consent Holder must establish a site for sampling each of:</p> <p>a. Aerated pond effluent;</p> <p>b. Anaerobic pond effluent; and</p>	<p>Accept in part but AFFCO may move this condition to the general conditions.</p> <p>AFFCO rejects reference to sludge ponds. It is not</p>

	<p>c. Final (discharged) wastewater.</p> <p>Each sample location must be representative of that effluent type and be close to the discharge point of that pond.</p>	<p>c. Final (discharged) wastewater. <u>d. Sludge ponds</u></p> <p>Each sample location must be representative of that effluent type and be close to the discharge point of that pond and be recorded in the management plan required by condition 3 on the general conditions</p>	<p>practical to sample in the ponds due to the nature of the sludge removal process.</p>
9a			<p>AFFCO will discuss with Horizons a new condition to reflect solids monitoring.</p>
10	<p>The Permit Holder must ensure that samples of wastewater are taken from the locations described in Condition 9 in the months of January, April, July, and October and tested for:</p> <p>a. Nitrate/nitrite Nitrogen (NOx-N) - (Not required for anaerobic effluent sample); b. Ammoniacal-Nitrogen (NH4-N); c. Dissolved Reactive Phosphorus (DRP); d. Acid soluble Sodium (Na); and e. Chloride (Cl-)</p>	<p>The Consent Holder must ensure that samples of wastewater are taken from the locations identified from Condition 9 in the months of January, April, July, and October and tested for:</p> <p>a. Nitrate/nitrite Nitrogen (NOx-N) - (Not required for anaerobic effluent sample); b. Ammoniacal-Nitrogen (NH4-N); c. Dissolved Reactive Phosphorus (DRP); d. Acid soluble Sodium (Na); and e. Chloride (Cl-)</p> <p><u>The Consent Holder must ensure that samples of pond solids are taken from the locations described in Condition 9 in the months of January, April, July, and October and tested for:</u></p> <p><u>a. Total Phosphorus (TP);</u> <u>b. Total Nitrogen (T-N);</u> <u>c. Potassium (K)</u></p> <p><u>Comment – pond solids need to be monitored and measured to enable calculation of nutrients being applied to land from this discharge.</u></p>	<p>Accept in part. The methodology for sampling solids is different to wastewater so suggest a separate condition as above.</p>
10a			<p>AFFCO will discuss with Horizons a new condition to reflect solids monitoring.</p>
11	<p>Groundwater quality must be measured at 5 locations from bores identified on Plan ? attached and forming part of these conditions. Groundwater</p>	<p><b>Groundwater Monitoring and Investigations</b></p> <p><b>The <del>Permit</del> Consent Holder shall monitor groundwater quality measured in six locations. Monitoring shall be undertaken from three existing monitoring bores (325273A, 325275B and 325269C) and three new monitoring bores establish</b></p>	<p>Accept in part. Additional groundwater monitoring acceptable. However, it is noted that there is a double up on what is in the land discharge consent. AFFCO will refine before the hearing.</p>

		<p><b>in accordance with Condition xx below.</b></p> <p>Comment – additional monitoring bores are recommended based on advice of Mr Thomas to better capture potential effects.</p>	
11a		<p><b>Within six months of the date of commencement of this consent, the consent holder shall install three new groundwater monitoring wells on the site at or as near as practicable at the locations specified in Appendix 1 and to the following specifications:</b></p> <p><b>a) The monitoring wells shall have a diameter of a sufficient size to enable samples to be taken and shall be installed at the locations identified in xxxx plan.</b></p> <p><b>b) The wells shall be drilled to a depth of up to 10 metres below the summer low ground level and/ shall be screened across the full depth of the water table/aquifer, with a screen length of no more than xxx metres.</b></p> <p><b>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.</b></p> <p><b>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.</b></p> <p><b>e) The wells shall be installed by a suitable qualified person(s) and constructed in accordance with the New Zealand Standard for Drilling Rock and Soil NZS 4411:2001.</b></p> <p><b>Advice Note: Any new bore requires a controlled activity land use consent under Rule 16-14 of the One Plan (2014)</b></p>	<p>Accept with refinement, but AFFCO will delete from discharge to land consent before the hearing. Locations may need to be adjusted to avoid other contaminant inputs and AFFCO will refine to avoid current location double up and provide screen length specification.</p>
11b		<p><b>The Consent Holder shall notify the Manawatu-Wanganui Regional Council's Consents Monitoring Team of the installation, location and depth of any monitoring well's installed under Condition x.</b></p>	<p>Accept</p>

		<b>Advice Note: The Consents Monitoring Team can be notified via 0508 800 800 or <a href="mailto:compliance.shared@horizons.gov.nz">compliance.shared@horizons.gov.nz</a></b>	
12	The Permit Holder must take quarterly groundwater samples in the months of January, April, July, and October in accordance with Condition 12 above and the samples must be analysed for the following: a. Nitrate/nitrite Nitrogen (NO <sub>x</sub> -N); b. Ammoniacal-Nitrogen (NH <sub>4</sub> -N); c. Dissolved Reactive Phosphorus (DRP); d. Sodium (Na); and e. Chloride (Cl <sup>-</sup> ).	The Consent Holder shall take samples quarterly from all bores identified in Condition 11 in the months of January, April, July and October in accordance with the MfE Groundwater sampling protocols (2006) or updated document.	Accept. It is noted this condition does not require monthly sampling.
12a		<b>The Consent Holder shall measure and record the static water level in the bore prior to purging and sampling. Samples collected under Condition 12 shall be analysed for the following parameters:</b> <b>a. Temperature</b> <b>b. pH</b> <b>c. electrical conductivity</b> <b>d. chloride</b> <b>e. nitrate-nitrogen</b> <b>f. ammonia-nitrogen</b> <b>g. nitrite-nitrogen</b> <b>h. dissolved reactive phosphorus</b> <b>i. E.Coli</b>	Accept. AFFCO considers that sodium be included as initially suggested due to the nature of wastes in the area (and possibly include sulphur compounds. To respond after further discussions with Horizons.
12b		<b>Results of monitoring collected in accordance with Condition 12a 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.</b>	Accept
12c		<b>The Consent Holder must monitor the following parameters in samples of water from the Oroua River at four sampling locations, Oroua River upstream of the land irrigation area, Kiwitea Stream, 200 m upstream of the discharge point, and the second located 200 m downstream of the discharge point:</b> <b>i. pH (field measurement);</b> <b>ii. Temperature (field measurement);</b>	To respond after further discussions with Horizons. At this stage the S42A reports do not provide justification for the inclusion of this monitoring, especially the use of the nominated four sites.

		<p>iii. Dissolved oxygen (field measurement);  iv. Total Suspended Solids;  v. scBOD5 (Dissolved carbonaceous biochemical oxygen demand being material passed through a GF/C filter);  vi. Total Nitrogen;  vii. Nitrate Nitrogen;  viii. Ammoniacal Nitrogen;  ix. Nitrite-Nitrogen;  x. Dissolved Reactive Phosphorus;  xi. Total Phosphorus;  xii. Particulate Organic Matter;  xiii. E.coli</p> <p>Sampling must be undertaken monthly</p> <p>Note: The sample points 200m upstream and 200m downstream of the discharge point are the same as required for sampling under Auth xxxx (Discharge to Water).</p>	
12f		<p><b>Permeability Investigations</b></p> <p>Within six months of commencement of this Permit the Consent Holder shall submit to the Manawatu-Whanganui Regional Council's Consents Monitoring Team Leader a methodology to investigate the permeability of all the existing treatment ponds. The plan shall include, but not be limited to –</p> <p>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 24 month period, consideration to be given to measuring pond levels and identify where evaporation rates are to be recorded; or other suitable method to determine permeability of each of the treatment ponds</p> <p>b. The methodology proposed shall be peer reviewed by an independent IPENZ engineer</p> <p>c. Results from the water balance undertaken in accordance with the peer reviewed methodology shall be submitted to the Horizons Regional</p>	To respond after further discussions with Horizons.

		<b>Councils Consents Monitoring Team Leader by 1 November 2019.</b>	
12g		<p><b>By 1 July 2020 the Consent Holder shall submit a report to the Manawatu-Whanganui Regional Council's Consents Monitoring Team Leader, detailing an assessment of environmental effects. The report must be prepared by an independent and suitably experience and qualified water quality scientist(s). The report shall include but not be limited to:</b></p> <p><b>a. An assessment of the effects 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></p> <p><b>b. A comment on the contribution (or not) that the discharge is causing the exceedance of, or adding cumulatively (outside the uncertainty of measurement for the sample) to the exceedance of One Plan Schedule targets</b></p> <p><b>c. An assessment of options to mitigate any more than minor adverse effects, including an assessment from an independent IPENZ engineer as to whether relining existing ponds to a permeability standard of 1x10<sup>-9</sup> m/s is practicable (this shall include an economic assessment).</b></p>	To respond after further discussions with Horizons.
13	Groundwater quality must, subject to landowner approval, be measured in the following neighbouring bores which are identified on Plan Number attached and forming part of these conditions and monitored for the analytes listed in Condition 13	<p>Comment – note that this condition has been put forward as a result of consultation with neighbours, it is in effect an Augier condition. But need sampling frequency proposed and a list of what bores propose to monitor. Invite applicant to specify a frequency as was agreed to with neighbours. The bores should be analysed for the same parameters as 12a for consistency and would provide most useful for comparative analysis, however no detail has been given as to what was agreed to be monitored with neighbours. Include as an advice note that this condition in effect is as a result of a side agreement with neighbours. An option to consider could be to include the specified sampling frequency in the management plan and note that sampling frequency could be changed through this rather than a variation to consent provided agreement from neighbours was provided.</p>	<p>Accept in part. Suggest leave as is but rather than 'must' note that monitoring is subject to approval of the bore owners.</p> <p>The frequency should be the same as the other bores so that all groundwater monitoring is done at the same time.</p>
14	The Manawatu-Whanganui Regional Council may,	The Manawatu-Whanganui Regional Council may, under	Reject. Annual review is excessive and far beyond

	<p>under Section 128 of the Act initiate a review of these conditions every 5 years in the month of July, commencing in July 2018, for the duration of this permit. The review must be for the purposes of avoiding, remedying or mitigating any adverse effects on the environment, which may arise from the exercise of this Discharge Permit.</p> <p>The review must allow for the consideration of the following matters:</p> <ul style="list-style-type: none"> <li>a. The deletion or amendment of these Conditions;</li> <li>b. The modification of the monitoring program required by these Conditions;</li> <li>c. The amendment or addition of new Conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including but not limited to conditions to mitigate adverse effects attributed to any breach of any conditions; or</li> <li>d. The adoption of Best Practicable Option to prevent or minimise adverse effects from the exercise of this Discharge Permit.</li> </ul>	<p>Section 128 of the Act initiate a review of these conditions <u>annually</u> in the month of July, commencing in July 2019, for the duration of this permit. The review must be for the purposes of avoiding, remedying or mitigating any adverse effects on the environment, which may arise from the exercise of this Discharge Permit.</p> <p>The review must allow for the consideration of the following matters:</p> <ul style="list-style-type: none"> <li>a. The deletion or amendment of these Conditions;</li> <li>b. The modification of the monitoring program required by these Conditions;</li> <li>c. The amendment or addition of new Conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including but not limited to conditions to mitigate adverse effects attributed to any breach of any conditions; or</li> <li>d. The adoption of Best Practicable Option to prevent or minimise significant adverse effects from the exercise of this Discharge Permit including any as identified in assessment of effects report required by Condition 12g of this Permit</li> </ul>	<p>the minor level of effects of the proposal. Such reviews add considerable cost on the applicant and the community and given the monitoring proposed and the evidence of Mr Lowe and Dr Ausseil such regular reviews are not required.</p> <p>AFFCO will discuss timing with Horizons prior to the hearing and also wording to make it clear it relates solely to more than minor unanticipated adverse effects.</p>
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## AFFCO Land Discharge: Draft Conditions: Commentary

Cond No	Suggested Conditions	HRC Draft	Comment on current position – to be updated at the hearing
1	Discharge Permit Number shall expire on 1 July 2049.	No change	Accept
2	The activity authorised by this Discharge Permit are restricted to: a) the discharge of treated wastewater by irrigation onto or into land in the land treatment area; and b) the discharge of treated organic solids onto or into land in the land treatment area.	No change	Accept
3	Any discharge undertaken in accordance with Condition 2 shall occur on land legally described as:	Whole lot of legal descriptions; no change	Accept
4	The maximum daily discharge of treated wastewater to the land treatment area shall not exceed 3,000 m <sup>3</sup> / day.	No change	Accept
5	The maximum daily discharge of treated organic solids to the land treatment area shall not be restricted by volume, but by nitrogen loading, which is limited in Condition 19.	<b><u>The consent holder shall ensure</u></b> the maximum daily discharge of treated organic solids <b><u>is undertaken in a manner that complies with the nitrogen and phosphorus loading limits specified in condition 11.</u></b> <b><u>Advise Note: the N and P limits only apply to those areas which are not harvested or cropped.</u></b>	Accept
6	The Permit Holder must undertake the activities in general accordance with the information supplied in the consent application, the Assessment of Environmental Effects dated 31 March 2015 including all concepts, parameters, drawings, activity specifications, proposed mitigation measures, methods concerning how the activity will be conducted and the scale, character and intensity of effects. Where the information is inconsistent with the requirements of specific consent conditions, the conditions prevail. <b><i>Advise Note: Any change from the location, design concepts and parameters, implementation and / or operation may require a new resource consent or a change of consent conditions pursuant to section 127 of the Resource Management Act 1991.</i></b>	No change	Accept
7	The Permit Holder must ensure at all times that the discharge and management of treated wastewater is	No change	Accept

	<p>prioritised in the following order:</p> <ul style="list-style-type: none"> <li>a) Irrigation to land;</li> <li>b) Storage and buffering; and</li> <li>c) Discharge to the Oroua River in accordance with Discharge Permit Number.</li> </ul> <p><b>Advice note:</b> <i>This condition is to show the intent of the Permit Holder to discharge as much as practically possible to land. It reflects the desire of the community and undertaking of the Permit Holder to maximise land application.</i></p>		
8	<p>The Permit Holder must ensure the application rate of treated wastewater onto land or into land does not exceed:</p> <ul style="list-style-type: none"> <li>a) Travelling boom irrigator: <ul style="list-style-type: none"> <li>i. 37 mm/h; and</li> <li>ii. 34 mm in any one application.</li> </ul> </li> <li>b) Sprinkler irrigators: <ul style="list-style-type: none"> <li>iii. 4 mm/h; and</li> <li>iv. 12 mm in any one application.</li> </ul> </li> </ul> <p><b>Advice Note:</b> <i>A hydraulic limit for solids is not appropriate as direct leaching and run off will not occur. Setting an application depth is problematic due to the potential variability of the material and the application method. Consequently limiting the application of material through a nitrogen and phosphorus limit, as proposed in Condition 11, has been adopted.</i></p>	No change	Accept
9	<p>The Permit Holder must ensure that the rate, frequency and method of the discharge of wastewater onto and into land does not result in:</p> <ul style="list-style-type: none"> <li>a) any noticeable contamination of groundwater (when measured between the upstream and downstream monitoring sites as required by Condition 17);</li> <li>b) run-off to surface water or subsurface drains; or</li> <li>c) any ponding on the soil surface (defined as a depth of wastewater greater than 25 mm [covering a continuous area exceeding 10 m2 or a combined area greater than 20 m2] during and following irrigation, or any treated wastewater on the soil surface five hours after irrigation has occurred).</li> </ul>	<p>The <del>Consent</del> <b>Permit</b> Holder must ensure that the rate, frequency and method of the discharge of <b>treated</b> wastewater onto and into land does not result in:</p> <ul style="list-style-type: none"> <li>a) any noticeable contamination of groundwater (when measured between the upstream and downstream monitoring sites as required by Condition 17), <b><u>noticeable contamination is defined as a change greater than xxxx;</u></b></li> <li>b) run-off to surface water or subsurface drains; or</li> <li>c) any ponding on the soil surface (defined as a depth of wastewater greater than 25 mm [covering a continuous area exceeding 10 m2 or a combined area greater than 20 m2] during and following irrigation, or any treated wastewater on the soil surface five hours after irrigation has occurred).</li> </ul>	Accept and AFFCO will discuss a definition of "noticeable" before the hearing.

	<p><b>Advice Note:</b> To establish if there is noticeable contamination of groundwater as a result of treated wastewater being discharged to the site, the results of a minimum of three groundwater monitoring events will be analysed.</p>	<p><b>Advice Note:</b> To establish if there is noticeable contamination of groundwater as a result of treated wastewater being discharged to the site, the results of a minimum of three groundwater monitoring events will be analysed.</p> <p><b>Comment – need to establish an appropriate parameter to define 'noticeable', noted that there are currently background or up gradient effects. Invite the applicant to suggest a suitable measureable standard</b></p>	
10	<p>Prior to the application of treated wastewater to land, the Permit Holder must measure soil moisture levels in representative areas of the land treatment area to ensure that treated wastewater is only applied to land when there is a soil deficit of 2 mm or greater prior to application.</p>	<p>Prior to the application of treated wastewater to land, the <del>Consent</del> <b>Permit</b> Holder must measure soil moisture levels in representative areas of the land treatment area to ensure that treated wastewater is only applied to land <b><u>so that at the completion of irrigation a soil water deficient of 5mm remains on LMU 1 to 3 and at least 1mm remains on LMU 4.</u></b></p> <p><b>Comment</b> – Changes in wording to better reflect management criteria stated in the application</p>	<p>Accept – but want to discuss with HRC staff the methodology of implementing the monitoring regime which might result in refinement of the condition.</p>
11	<p>The Permit Holder must ensure that the nutrient loading resulting from the discharge of treated wastewater and solids onto and into land, does not exceed the following criteria when applied to pasture that is not harvested or areas that are not cropped: (Table and further blurb attached)</p>	<p>No comment other than for consistency refer to treated organic solids</p>	<p>Accept</p>
12	<p>Should the nutrient loading rates in Condition 11 be exceeded, the equivalent additional mass of nutrient loading over and above that in Condition 11 shall be removed from the area to which it is applied in harvested material.</p> <p><b>Advice Note:</b> Nutrient loading over and above the grazed maximum requires harvesting as hay or silage, or some form of crop removal. The efficacy of the additional removal shall be demonstrated by recording the mass of herbage or crop removed and its nutrient concentration. The details of this harvesting regime shall be detailed in the Operation and Management Plan as required by Condition 3 of the General Conditions.</p>	<p>No change</p>	<p>Accept</p>
13	<p>Meeting the requirements of Conditions 11 and 12 shall be determined by calculating the nutrient loading to each block receiving treated wastewater. The nutrient loading will be based on the results of monitoring required in accordance with Condition 13 of the General Conditions</p>	<p>Comment – have added testing in to Condition 13 of the general conditions otherwise was nothing to measure for the organic solids</p>	<p>Accept</p>

	(treated wastewater monitoring) and a record of the volume of treated wastewater or solids applied to each paddock.		
14	<p>The permit holder must ensure that treated wastewater is not discharged to land closer than:</p> <p>a) 20 m from any watercourse, whether flowing continuously or intermittently, including any open drain;</p> <p>b) 20 m from any property boundary where there are no buildings; or</p> <p>c) 200 m from any dwelling house, milking shed or other building on any property bordering the land treatment area when that building is directly downwind</p> <p><b>Advice Note:</b> <i>this condition does not apply to dwellings and buildings within the application site.</i></p>	<p>The permit holder must ensure that treated wastewater <b>or treated organic solids</b> are is not discharged to land closer than:</p> <p>a) 20 m from any watercourse, whether flowing continuously or intermittently, including any open drain;</p> <p>b) 20 m from any property boundary where there are no buildings; or</p> <p>c) 200 m from any dwelling house, milking shed or other building on any property bordering the land treatment area when that building is directly downwind</p> <p><b>Advice Note:</b> <i>this condition does not apply to dwellings and buildings within the application site.</i></p> <p><b>Comment – buffer distances need to refer to organic solids as well</b></p>	Accept
15	<p>The Permit Holder must not discharge treated wastewater to land:</p> <p>a) Within 48 hours after the application of fertiliser;</p> <p>b) Within 24 hours after any harvesting activity;</p> <p>c) Within 48 hours prior to any harvesting activity; or</p> <p>d) When 50 mm or more rainfall has occurred in the previous 24 hour period as recorded at the WWTP.</p>	Comment – include treated organic solids	Accept
16	<p>The Permit Holder must take annual composite soil samples from any Land Management Area that has received treated wastewater and solids within the previous 12 month period (starting 1 October and ending 30 September) for the duration of this Discharge Permit. A minimum of ten 75 mm depth composite samples must be obtained, and must be analysed for the following:</p> <p>a) pH;</p> <p>b) Exchangeable Sodium (Na);</p> <p>c) Exchangeable Sodium percentage (Na);</p> <p>d) Exchangeable Potassium (K);</p> <p>e) Exchangeable Magnesium (Mg);</p> <p>f) Exchangeable Calcium (Ca);</p> <p>g) Phosphorus (Olsen);</p>	<p>The Consent Holder must take annual composite soil samples from any Land Management <u>Unit</u> that has received treated wastewater and solids within the previous 12 month period (starting 1 October and ending 30 September) for the duration of this Discharge Permit. <b><u>Samples has must be taken from a minimum of 3 paddocks in each Land Management Area.</u></b> A minimum of ten 75 mm depth composite samples must be obtained <b><u>from each paddock</u></b>, and must be analysed for the following:</p> <p>a) pH;</p> <p>b) Exchangeable Sodium (Na);</p> <p>c) Exchangeable Sodium percentage (Na);</p> <p>d) Exchangeable Potassium (K);</p> <p>e) Exchangeable Magnesium (Mg);</p> <p>f) Exchangeable Calcium (Ca);</p> <p>g) Phosphorus (Olsen);</p>	Accept

	h) Sulphate-S; i) Total Nitrogen; and j) Cation Exchange Capacity.	h) Sulphate-S; i) Total Nitrogen; and j) Cation Exchange Capacity.	
16a		<p>The <del>Consent</del> <u>Permit</u> Holder must take soil samples from all Land Management Units in 2022 <del>and 2027</del> and thereafter at 5 yearly intervals, a minimum of 3 paddocks in each Land Management shall be sampled. A minimum of ten composite samples collected at a 200-300mm depth must be collected from each paddock and analysed for the following:</p> <p>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; and j) Cation Exchange Capacity.</p> <p>Comment: Need to ensure sufficient composites are sampled per paddock to ensure sampling is representative. Sampling further down the profile at longer intervals gives assurance as to potential effects further down the profile.</p>	Accept
17	Groundwater quality and level shall be monitored at bores identified on Plan ? attached to and forming part of these conditions.	<p><del>The Permit</del> <del>Consent</del> Holder shall monitor groundwater quality measured in <del>seven</del> <b>4</b> locations <del>Monitoring shall be undertaken from three existing monitoring bores (325413, 325416B, 325016 and 325411) and three new monitoring bores establish in accordance with Condition xx below.</del></p> <p>Comment – additional monitoring bores are recommended based on advice of Mr Thomas to better capture potential effects.</p>	Accept in part. The additional bores are appropriate, but it is unclear why they are in the discharge to land consent and not the pond seepage consent.
17a	-	<p><del>Within six months of the date of commencement of this consent, the Permit consent holder shall install three new groundwater monitoring wells on the site at or as near as practicable at the locations specified in Appendix 1 and to the following specifications:</del></p> <p><del>a) The monitoring wells shall have a diameter of not less than 50/100 millimetres / of a sufficient size to enable samples to be taken and shall be installed at</del></p>	Accept in part but should be in the pond seepage consent (see comments on that consent)

		<p><del>the locations identified in xxx plan.</del></p> <p><del>b) The wells shall be drilled to a depth of up to 10 metres below the summer low ground level and/ shall be screened across the full depth of the water table/aquifer, with a screen length of no more than xxx metres.</del></p> <p><del>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.</del></p> <p><del>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.</del></p> <p><del>e) The wells shall be installed by a suitable qualified person(s) and constructed in accordance with the New Zealand Standard for Drilling Rock and Soil NZS 4411:2001.</del></p> <p><b>Advice Note: Any new bore requires a controlled activity land use consent under Rule 16-14 of the One Plan (2014)</b></p>	
17b.		<p><b>The <del>Permit</del> Consent Holder shall notify the Manawatu-Wanganui Regional Council's Consents Monitoring Team of the installation, location and depth of any monitoring well's installed under Condition x17a.</b></p> <p><b>Advice Note: The Consents Monitoring Team can be notified via 0508 800 800 or <a href="mailto:compliance.shared@horizons.gov.nz">compliance.shared@horizons.gov.nz</a></b></p>	Accept
18	<p>The Permit Holder must take quarterly groundwater samples in the months of January, April, July, and October in accordance with Condition 17 above and the samples must 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) Ammoniacal-Nitrogen (NH4-N)</p> <p>f) Chloride (Cl-);</p> <p>g) Escherischia coli; and</p>	<p><b>The <del>Permit</del> Consent Holder shall take samples monthly from all bores identified in Condition 17 until 1 July 2019 and thereafter in the months of January, April, July and October for the remaining duration of the permit. Samples shall be collected in accordance with the MfE Groundwater sampling protocols (2006) or updated protocols document.</b></p>	<p>Reject. Unclear why monthly sampling is required. Monitoring to date shows limited variability. Not justified in S42A reports and different to condition 122 as drafted by Horizons for the pond leakage consent.</p>

	h) Static water level.		
18a		<p>The Consent Holder shall measure and record the static water level in the bore prior to purging and sampling. Samples collected under Condition <del>18</del><sup>12</sup> shall be analyses for the following parameters:</p> <ul style="list-style-type: none"> <li>a. Temperature</li> <li>b. pH</li> <li>c. electrical conductivity</li> <li>d. chloride</li> <li>e. nitrate-nitrogen</li> <li>f. ammonia-nitrogen</li> <li>g. nitrite-nitrogen</li> <li>h. dissolved reactive phosphorus</li> <li>i. E.coli</li> </ul>	Accept
18b		<p><b>Results of monitoring collected in accordance with Condition 18a 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.</b></p> <p><b>Comment – more detailed sample collection is recommended initially; this will assist with the assessment of effects from the discharge to land activity as well as help identify likelihood of groundwater plumes containing elevated nutrient concentration entering the Oroua River. Three years should be sufficient to establish a pattern and then sampling frequency reduces.</b></p>	Accept
18c	No condition requiring surface water monitoring was proposed.	No change	
19	<p>The Permit Holder must maintain a record of all irrigation activities within the land treatment area. This record must include but not be limited to:</p> <ul style="list-style-type: none"> <li>a) The date, time, location and volume of each irrigation application;</li> <li>b) The date, time, location, volume and nitrogen loading of any nitrogenous and phosphorus material applied; and</li> <li>c) The date and time of pipeline flushes when they occur.</li> </ul>	<p>The <del>Permit Consent</del> Holder must maintain a record of all irrigation activities <b>authorised by this resource consent that occur</b> within the land treatment area. This record must include but not be limited to:</p> <ul style="list-style-type: none"> <li>a) The date, time, location and volume of each irrigation <b>and solids</b> application;</li> <li>b) The date, time, location, volume and nitrogen loading of any nitrogenous <b>and phosphorus</b> material applied; and</li> <li>c) The date and time of pipeline flushes when they occur.</li> </ul> <p>Records shall be reported in the annual report as required by</p>	Accept

		Condition 20 of the general conditions	
20	The Permit Holder must maintain a record of all harvest and stock grazing events that occur within the land treatment area. This record must include the date, time, stock numbers, number of bales and mass of harvested material.	The <del>Permit</del> <b>Consent</b> Holder must maintain a record of all harvest and stock grazing events that occur within the land treatment area. This record must include the date, time, stock numbers, number of bales and mass of harvested material. <u>Records shall be reported in the annual report as required by Condition 20 of the general conditions</u>	Reject. The purpose of stock grazing reporting to be discussed with Horizons as seems excessive.
21	The Manawatu-Whanganui Regional Council may, under Section 128 of the Act initiate a review of these conditions every 5 years in the month of July, commencing in July 2018, for the duration of this permit. The review must be for the purposes of avoiding, remedying or mitigating any adverse effects on the environment, which may arise from the exercise of this Discharge Permit. The review must allow for the consideration of the following matters: a) The deletion or amendment of these Conditions; b) Evaluation and modification of these Conditions to ensure that discharges to land are optimised over discharges to the Oroua River under Discharge Permit Number ?; c) The modification of the monitoring program required by these Conditions; d) The amendment or addition of new Conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including but not limited to conditions to mitigate adverse effects attributed to any breach of any conditions; e) The adoption of Best Practicable Option to prevent or minimise adverse effects from the exercise of this Discharge Permit.	The Manawatu-Whanganui Regional Council may, under Section 128 of the Act initiate a review of these conditions <b>every five (5) years</b> in the month of July, commencing in <b>July 2022</b> , for the duration of this permit. The review must be for the purposes of avoiding, remedying or mitigating any adverse effects on the environment, which may arise from the exercise of this Discharge Permit. The review must allow for the consideration of the following matters:  a) The deletion or amendment of these Conditions; b) Evaluation and modification of these Conditions to ensure that discharges to land are optimised over discharges to the Oroua River under Discharge Permit Number ?; c) The modification of the monitoring program required by these Conditions; d) The amendment or addition of new Conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including but not limited to conditions to mitigate adverse effects attributed to any breach of any conditions; e) The adoption of Best Practicable Option to prevent or minimise significant adverse effects from the exercise of this Discharge Permit.  Comment – Suggest annual reviews at this stage, so can consider findings of the various reports that are required and refinement of operation system once more data is collected.	Reject. Annual review is excessive and far beyond the minor level of effects of the proposal. Such reviews add considerable cost on the applicant and the community and given the monitoring proposed and the evidence of Mr Lowe and Dr Ausseil such regular reviews are not required.  AFFCO will discuss timing with Horizons prior to the hearing and also wording to make it clear it relates solely to more than minor unanticipated adverse effects.

## AFFCO Air Discharge: Draft Conditions: Commentary

Cond No	Suggested Conditions	HRC Draft	Comment on current position – to be updated at the hearing
1	Discharge Permit Number shall expire on 1 July 2049.	No change	Accept
2	The activity authorised by this Discharge Permit is restricted to the discharge of aerosols and odour to air associated with the discharge of treated wastewater, pond solids and paunch solids to land.	No change	Accept
3	Any discharge undertaken in accordance with Condition 2 shall occur on land legally described as:	Whole lot of legal descriptions; no change	Accept
4	<p>The Permit Holder must ensure that the activity does not result in offensive or objectionable odour or spray drift at or beyond the property boundary.</p> <p><b>Advice Note:</b> <i>An odour or spray drift will only be considered objectionable after a Manawatu-Whanganui Regional Council officer has considered the Frequency, Intensity Duration, Offensive and Location of the odour or spray drift (i.e. the FIDOL Factors).</i></p>	<p>The Permit Holder must ensure that the activity does not result in offensive or objectionable odour or spray drift at or beyond the property boundary.</p> <p><b>Advice Note:</b> <i>An odour or spray drift will only be considered objectionable after a Manawatu-Whanganui Regional Council <b>enforcement</b> officer has considered the Frequency, Intensity Duration, Offensive and Location of the odour or spray drift (i.e. the FIDOL Factors). <b><u>The property boundary is defined as any property identified in Condition 2.</u></b></i></p>	Accept
5	The Permit Holder must ensure the activity automatically ceases when the 10 minute average wind speed at the maximum height of the sprayed treated wastewater exceeds 12 m/s or higher from a direction whereby the irrigation is within 200 m of the property boundary. The activity can resume 30 minutes after the wind speed drops below the nominated threshold or the wind direction changes.	<p>The Permit Holder must ensure the activity automatically ceases when the 10 minute average wind speed at the maximum height of the sprayed treated wastewater exceeds 12 m/s or higher from a direction whereby the irrigation is within 200 m of the property boundary. The activity can resume 30 minutes after the wind speed drops below the nominated threshold or the wind direction changes.</p> <p><b>Advice Note:</b> <i><b><u>Wind speed as measured by the climate station to be installed in accordance with Condition 7</u></b></i></p>	Accept
6	<p>The Permit Holder must review the adequacy of the wind speed shut-down level and direction in Condition 5 on an annual basis, commencing 1 October 2016. The results of this review must be provided to Manawatu-Whanganui Regional Council's Regulatory Manager in the monitoring report required by General Condition 20.</p> <p><b>Advice Note:</b> <i>If the current wind speed shut-down level and wind direction is deemed inadequate to avoid</i></p>	<p>The Permit Holder must review the adequacy of the wind speed shut-down level and direction in Condition 5 on an annual basis, commencing 1 October <b>2017</b>. The results of this review must be provided to Manawatu-Whanganui Regional Council's Regulatory Manager in the monitoring report required by General Condition 20.</p> <p><b>Advice Note:</b> <i>If the current wind speed shut-down level and wind direction is deemed inadequate to avoid odour or</i></p>	Accept

	<i>odour or spray drift onto adjacent properties following a review under Condition 6, a variation to Condition 5 by way of s127 may be required.</i>	<i>spray drift onto adjacent properties following a review under Condition 6, a variation to Condition 5 by way of s127 may be required.</i>	
7	Prior to commencing the activity, the Permit Holder must install a climate station near the AFFCO wastewater treatment plant that is capable of continuous real time monitoring of wind speed and direction, air temperature and rainfall. Monitoring must be undertaken in accordance with the Good Practice Guide for Air Quality Monitoring and Data Management, Ministry for the Environment, 2009.	No change	Accept
8	The climate station required by Condition 7 must be able to: a) Be remotely accessed via a telemetered link; and b) Be connected to the irrigation controller and be able to shut down automatically when wind conditions described in Condition 5 occur.	No change	Accept
9	The Manawatu-Wanganui Regional Council may, under Section 128 of the Act initiate a review of the Conditions of this discharge Permit every 5 years in the month of July, commencing in July 2018, for the duration of this Discharge Permit. The review must be for the purposes of avoiding, remedying or mitigating any adverse effects on the environment, which may arise from the exercise of this Discharge Permit. The review must allow for the consideration of the following matters: a) The deletion or amendment of these Conditions; b) The amendment or addition of new Conditions as necessary to avoid, remedy or mitigate any adverse effects on the environment, including but not limited to Conditions to mitigate adverse effects attributed to any breach of any Conditions; and c) The adoption of Best Practicable Option to prevent or minimise adverse effects from the exercise of this Discharge Permit.	No change	Accept