

IN THE MATTER

of the Resource Management Act
1991

AND

IN THE MATTER OF

applications for resource consent for
the operation of the Pahiatua
Wastewater Treatment Plant

BY

TARARUA DISTRICT COUNCIL

Applicant

REPLY ON BEHALF OF TARARUA DISTRICT COUNCIL

4 December 2017

BUDDLE FINDLAY
Barristers and Solicitors
Wellington

Solicitors Acting: **David Randal / Esther Bennett**
Email: david.randal@buddlefindlay.com / esther.bennett@buddlefindlay.com
Tel 64-4-499 4242 Fax 64-4-499 4141 PO Box 2694 DX SP20201 Wellington 6140

MAY IT PLEASE THE HEARING PANEL:

INTRODUCTION

1. This reply is filed on behalf of Tararua District Council ("**TDC**" / the "**Applicant**") in support of its applications for resource consent relating to the ongoing operation of the Pahiatua Wastewater Treatment plant ("**WWTP**"; the applications are together referred to as the "**Project**").
2. The opening legal submissions presented for TDC on 23 May 2017 explained, against the relevant factual, legal, and policy background, why granting those applications will accord with Horizons Regional Council's ("**Horizons**") One Plan and promote the sustainable management purpose of the Resource Management Act 1991 ("**RMA**"). In short, the Project is to enable vitally important infrastructure, the WWTP, to continue to operate in an environmentally responsible way.
3. This reply does not repeat those submissions, but rather responds to matters raised by the Panel members, submitters, and Horizons officers during the hearing on 23 to 25 May 2017 and through subsequent engagement processes.
4. As an overall point, TDC acknowledges the questions raised about the potential adverse environmental effects of the Project; clearly, such effects are important matters requiring careful consideration and management. TDC also acknowledges the considered input of submitters and the time they have taken to participate in this process, which has led to close scrutiny of the Project and, in particular, the conditions proposed by TDC (the details of which are discussed below).
5. On any overall assessment, though, the hearing and subsequent processes have served to reinforce that the Project is a sound one. In contrast to the Project's essential benefits, its adverse environmental effects are minimal currently, will be further reduced through the various upgrades and, in any event, will be closely monitored and controlled through conditions.
6. That being the case, the Panel's focus, in terms of the key issues remaining for determination, should be on the conditions proposed to address any potential adverse effects (and the term of the consents), rather than whether or not consents should be granted at all.

7. Against that background, this reply sets out TDC's response in respect of the following matters:
- (a) the effects of the Project on the surface water quality of the Mangatainoka River;
 - (b) the adverse cultural effects of the Project, including an update for the Panel on TDC's discussions with Kahungunu ki Tamaki nui-a-rua ("**Kahungunu**") and Rangitāne o Tamaki nui a Rua ("**Rangitāne**");
 - (c) other effects of the Project and miscellaneous outstanding issues relating to conditions;
 - (d) a specific issue on which the Panel has sought guidance, namely the notification of additional consents sought by TDC;
 - (e) consent term; and
 - (f) the Project's alignment with the One Plan and Part 2 of the RMA.

WATER QUALITY

Introduction

8. A number of submissions in opposition, and a significant part of the hearing, focussed on the Project's effects on the water quality of the Mangatainoka River – appropriately so, given the ecological and corresponding cultural values in the River.¹
9. While some technical disagreements have persisted on points of finer detail, overall the testing of the evidence has supported the evaluation of Dr Olivier Ausseil, the freshwater quality expert giving evidence for TDC, that:
- (a) the existing discharge has minimal adverse effects on the Mangatainoka River; and
 - (b) the enhancements to be delivered through the Project will further reduce any adverse effects of discharges in the future.
10. In terms of the minimal effects of the **existing** discharge, and in light of concerns raised by submitters at the hearing, it is worth summarising the key findings of Dr Ausseil's evidence, as follows:

¹ The Panel heard from the following submitters on this topic: Kahungunu, Rangitāne, Water Protection Society ("**WPS**"), Manawatu Estuary Trust, Charlotte and Coryn Andrews, John Bent, and Fish and Game Council.

- (a) current effects on the Mangatainoka River, in terms of pH, temperature, water clarity, and organic matter deposition are no more than minor;²
- (b) no statistically significant differences in *E-coli* concentrations up- and downstream of the discharge point have been measured;³
- (c) the discharge causes an increase in dissolved reactive phosphorous ("**DRP**") concentrations in the River;
- (d) conversely there is only a minor increase in Soluble Inorganic Nitrogen ("**SIN**") concentration in the River and the discharge's inputs are significantly smaller than those from the Town Creek catchment;⁴
- (e) the One Plan target for periphyton biomass is met overall upstream of the discharge, and met or very marginally exceeded downstream⁵ and, notably, no exceedances of the One Plan target have occurred since 2015 (when TDC installed a clarifier/filter at the WWTP);⁶ even taking the most pessimistic approach, only a relatively minor improvement is required in order to meet the One Plan periphyton targets;
- (f) experts agreed that any effect of the discharge on periphyton growth currently occurs as a consequence of DRP inputs from the discharge, making phosphorus the priority nutrient for further treatment of the discharge;⁷ a reduction in phosphorus content of the discharge (as is being proposed), will lead to substantial reduction in periphyton biomass;⁸
- (g) there is no material or consistent difference in the health of macroinvertebrate communities upstream and downstream, and the data shows the discharge's effects on these communities are "*relatively minor and well within the One Plan QMCI target*";⁹

² Application to discharge treated wastewater, December 2014, 2.1.1; Dr Ausseil's statement of evidence, 28 April 2017, 6.7.

³ Ibid, 6.8.

⁴ Ibid, 4.1(e)-(f), 6.9; Dr Ausseil's supplementary evidence, 23 May 2017, 3.5.

⁵ Dr Ausseil's statement of evidence, 28 April 2017, 4.1(g)(v).

⁶ Ibid, 6.15.

⁷ M Patterson's supplementary evidence, 25 May 2017, 12-13.

⁸ A Canning's supplementary evidence, 19 May 2017, page 3.

⁹ Dr Ausseil's supplementary evidence, 5.4(b).

- (h) although the discharge currently causes a small increase in ammoniacal nitrogen, this is well below the One Plan targets and the risk of ammonia toxicity on aquatic life is low;¹⁰ and
 - (i) the discharge complies with the One Plan targets for ScBOD₅.¹¹
11. Dr Ausseil's assessment of the existing discharge is largely supported by Michael Patterson, for Horizons. Further, the Panel can have a high level of confidence in the assessment, as it is based on an unusually robust amount and range of data,¹² including eight years of monthly periphyton and annual macroinvertebrate data.
12. Any effects of the discharge on the River will be further reduced once the Project's proposed upgrades are installed – including improvements to the chemical dosing, lamella clarifier, micro-filter and UV systems, as well as a new 'polishing' wetland – and discharge quality standards recommended by John Crawford, the wastewater engineering expert giving evidence for TDC, are implemented. For instance:
- (a) any current effect on visual clarity in the River will be further reduced;¹³
 - (b) DRP concentrations in the discharge will be reduced at least threefold, which will in turn reduce any effects the discharge may currently have on periphyton growth sufficiently that the One Plan targets are no longer likely to be breached, noting again that only a small reduction in periphyton biomass is required;¹⁴
 - (c) any potential, yet purely hypothetical and theoretical, effect of the discharge on dissolved oxygen ("**DO**") concentration in the River will be reduced to the extent that is practicable as a consequence of the reductions in periphyton growth;¹⁵
 - (d) *E-coli* concentrations in the discharge will be reduced through the UV treatment process to a point where any (again, theoretical) effect on in-river *E-coli* concentrations is of no material concern;¹⁶
 - (e) shifting the discharge point from Town Creek to the proposed

¹⁰ Dr Ausseil's statement of evidence, 4.1(c).

¹¹ Application to discharge treated wastewater, December 2014, 2.1.7.

¹² Dr Ausseil's supplementary evidence, 5.2-5.3.

¹³ Dr Ausseil's supplementary evidence, 5.4(a).

¹⁴ M. Patterson's supplementary evidence, 12.

¹⁵ Dr Ausseil's statement of evidence, 4.3(c), 7.5(c); Dr Ausseil's supplementary evidence, 7.9.

¹⁶ Dr Ausseil's statement of evidence, 4.4, 7.3.

location will enable a more direct measurement of the actual effects of the discharge on water quality and ecology;¹⁷ and

- (f) One Plan and s107(1)(g) targets and standards regarding macroinvertebrate communities will continue to be met in future.¹⁸
13. In summary, the experts agree that most water quality and ecological parameters indicate no more than minor effects from the discharge. The only effect currently of potential concern (the discharge's very mild effect on periphyton growth) will be addressed by the proposed upgrades.
14. The only uncertainty raised by Horizons related to potential effects on DO, and this was initially communicated in evidence at the May hearing – at a time where TDC had no practical means of addressing that uncertainty.
15. In any case, the proposed upgrades (in particular the significant reduction in DRP in the discharge) will address this potential effect to the extent practicable. A similar situation arose in the Environment Court's 2016 decision in *Manawatu District Council v Manawatu District Council ("Feilding")* where the Court found although there was "some residual uncertainty" around potential future effects on periphyton and macroinvertebrate values in Schedule B of the One Plan, only future monitoring could lift that uncertainty and "*In the meantime, it is pure conjecture to assume that future effects will be significant, although that possibility does exist.*"¹⁹
16. Overall, though, any differences in opinion remaining between the experts are confined to a number of technical details, which themselves have been narrowed through further engagement about conditions since the hearing, as discussed below.

Conditions proposed by TDC

17. TDC's final set of proposed conditions is attached as **Appendix 1**. These conditions have been informed by:
- (a) Horizons' comments of 25 August 2017 on the previous set of conditions TDC sent to Horizons on 18 August 2017; and
- (b) comments received from submitters, namely Dr Chris Teo-Sherrell

¹⁷ Dr Ausseil's statement of evidence, 6.2; Dr Ausseil's supplementary evidence, 4.1.

¹⁸ Dr Ausseil's statement of evidence, 7.6; Dr Ausseil's supplementary evidence, 5.4(b).

¹⁹ *Manawatu District Council & Others v Manawatu District Council & Others* [2016] NZEnvC 53, [118]-[119].

(representing WPS), Phil Teal (representing Fish and Game), and Kahungunu.²⁰

18. Where changes to the conditions suggested by Horizons or submitters have been adopted by TDC, those changes are incorporated in **Appendix 1** accordingly. Any suggested changes not adopted by TDC, and some changes meriting further clarification, are explained below (in some detail, with a view to assisting the Panel in its decision-making).
19. For clarity, references in this section to numbered conditions are references to the Condition Schedule ATH-199501433.02 (Discharge to Water Permit) except where stated otherwise.
20. The condition details regarding water quality to be resolved relate to:
 - (a) treated wastewater standards (conditions 1 to 4);
 - (b) the wastewater treatment process (conditions 5 and 5(a));²¹
 - (c) receiving water quality (condition 8);
 - (d) compliance, river monitoring, and sampling (conditions 9, 11, 12, 17 to 17(a), 20, and 22 to 23(a));²² and
 - (e) reporting (condition 27).

Treated wastewater standards

21. While not a point of disagreement between the two Councils, Horizons has queried the increase (in conditions 1(a) and 3(a)) from a 15 g/m³ threshold for allowable ammoniacal nitrogen (NH₄-N) levels, to 18 g/m³.²³
22. Kahungunu and WPS have also identified this issue in their respective comments on the conditions. Kahungunu prefers the previous 15 g/m³ standard.²⁴ WPS's view is that neither standard is suitable as allocable concentrations should be based on recent past performance.²⁵
23. TDC agrees with Horizons and WPS that the figures must be based on actual performance of the plant. The figures TDC proposes are, and have

²⁰ Pursuant to the Panel's direction TDC sent its previous set of draft conditions to Horizons on 18 August 2017 for comment. The conditions (with Horizons' comments) were then circulated to submitters on 28 August 2017. No further comments to those mentioned in this paragraph were received, with the exception of a general comment from Christina Paton which said "*All read and agreed.*"

²¹ 5(a) is a condition proposed by Horizons.

²² 17(a) and 23(a) are conditions proposed by Horizons.

²³ Pahiatua Wastewater Conditions – Discharge to Water 25 August 2017 – TDC Conditions, incorporating HDC comment, page 1.

²⁴ Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, TDC and HRC – Kahungunu comments, page 1.

²⁵ Water Protection Society Comments on 2017/8/27 version of Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, page 1.

always been, intended to reflect the current quality of the discharge.

24. The increase for allowable ammoniacal nitrogen simply reflects the fact that the numbers originally listed in Mr Crawford's evidence were based on analysis of a very limited dataset, further data has been gathered since, and the new numbers better reflect the actual characteristics of the discharge and the operational reality of the WWTP. More specifically, they also provide a better perspective on the more difficult winter operating conditions.
25. Importantly, the discharge's quality with regards to ammoniacal nitrogen has not changed and is not proposed to increase; the change is only an increase on paper, not in reality.
26. Imposing ammoniacal nitrogen standards that are unable to be met would place TDC in a non-compliance situation for little or no environmental gain.²⁶ In order to ensure conditions are set that are clear and enforceable, the figures proposed by Mr Crawford (the only expert qualified to give evidence in wastewater treatment) ought to be adopted.
27. Further, WPS has queried the utility of condition 2 and how it interacts with condition 11, noting there will not be 12 consecutive samples taken before 1 July 2018.²⁷ TDC takes this point however notes that, short of extending the timeframes in condition 2 (which would not serve any of the parties' interests), there does not appear to be a suitable alternative.
28. WPS also opposes condition 3(a) on the basis it considers there is a lack of improvement in ammoniacal nitrogen proposed.²⁸ WPS requests that the approach employed be a *"fail safe or protection of the environment"* approach, rather than a *"the benefit of the doubt to the polluter"* one.
29. As above, the discharge quality as it pertains to ammoniacal quality has not, and will not, change. The ammoniacal nitrogen concentrations in the River are well below thresholds of ecological relevance and within the One Plan thresholds. This conclusion is based on actual monitoring data; there is no benefit of doubt to the polluter, and the end-of-pipe standard is demonstrably protective of the environment.
30. A minor tightening of the conditions that were circulated to Horizons on 18

²⁶ As above, ammoniacal nitrogen concentrations in the Mangatainoka River are well below One Plan targets).

²⁷ Water Protection Society Comments on 2017/8/27 version of Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, page 1

²⁸ Ibid.

August 2017 relates to *E-coli* sampling standards set out in conditions 2(a) and 4(a). In the previous set of conditions the standard in both cases was "(...) *no more than 2000/100mL in more than 2 out of 12 consecutive samples.*"

31. On reflection, and bearing in mind these standards are based on expected performance of the system, the conditions now put forward are as follows:
 - (a) In condition 2(a), which sets the standard until 30 June 2018 "*The concentration of E-coli shall not exceed 600/100mL in more than 8 out of 12 samples, and no more than 2000/100mL in more than 2 out of 12 consecutive samples*"; and
 - (b) In condition 4(a), which sets the standard from 1 July 2018 and thereafter "*The concentration of E-coli shall not exceed 260/100mL in more than 8 out of 12 samples, and no more than 1000/100mL in more than 2 out of 12 consecutive samples*"
32. In any event, the operators will need to adhere strictly to a preventative maintenance schedule and in fact it is the median number (the 2 out of 12 figure – which is low in both cases) that will form the operational target and thus be of most importance.
33. For the compliance monitoring point (see Advice Notes for conditions 3 and 4 of **Appendix 1**), Dr Ausseil and Roger MacGibbon (the restoration ecologist giving evidence for TDC) advised during the hearing that this is best placed at the end of the wastewater treatment process, which is a more controlled environment.
34. Mr Patterson, in response, preferred the end of the wetland for the compliance monitoring point. WPS also favoured the approach of having the monitoring point at the end of the wetland directly prior to discharge to the river, noting this was the point at which the effects on the river would be determined.²⁹
35. The experts have since reached agreement that the appropriate monitoring point for compliance is immediately downstream of the UV treatment plant (see conditions 3 and 4 of **Appendix 1**). No comments have been received from submitters opposing this outcome.

²⁹ Oral submission from the Water Protection Society on the Pahiatua WWTP Resource Consent Applications, paragraph 65. Note WPS uses the terminology "effluent quality monitoring point" which is believed to refer to the compliance monitoring point.

Wastewater treatment process

36. Horizons has suggested splitting condition 5 into two parts – 5 and 5(a). TDC accepts this change, however proposes some minor wording amendments to both 5 and 5(a) for clarity. These changes do not alter the substantive effect of the conditions as proposed by Horizons.
37. WPS has raised a concern that there is no mention of the wastewater passing through the P removal units prior to UV treatment, which is a necessary precursor.³⁰
38. To be clear, TDC has no intention to bypass the clarifier, which forms part of the treatment process. However, the conditions are intended to set performance standards the permit holder is required to meet and it would be unusual and unnecessary to impose a condition stipulating the intricacies of the treatment process in this level of detail; such detail will be addressed in the Operation and Management Plan ("**OMP**").

Receiving water quality

Significant adverse effects on aquatic life

39. Horizons proposes an addition to condition 8, namely:
"The treated wastewater discharge shall not cause...after the reasonable mixing distance of 200m:

d. any significant adverse effects on aquatic life."
40. Horizons acknowledges "*significant adverse effects on aquatic life*" are covered in the existing conditions, but prefers this additional condition on the basis that it allows for future scientific measures to be incorporated.
41. TDC's final set of conditions does not adopt this proposed change.
42. While TDC appreciates Horizons' suggested addition reflects section 107(1)(g) wording, the requirement to ensure there are no "*significant adverse effects on aquatic life*" is already (as Horizons recognises) sufficiently captured by TDC's proposed condition 8(i).
43. Condition 8(i), which precludes the effect of "*a reduction in QMCI of greater than 20%*", has been crafted to accord with the One Plan target. That target was specifically developed to provide an applicable numerical

³⁰ Water Protection Society Comments on 2017/8/27 version of Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, page 1.

translation of the section 107(1)(g) standard.³¹ Condition 8(i) on its proposed wording is therefore the appropriate gauge to be used for assessing significant adverse effects on aquatic life in the context of a point-source discharge under the One Plan.

44. Again, in Dr Ausseil's expert opinion, the section 107(1)(g) standard is being met and will continue to be met following the upgrades.³²
45. In addition, not only is there no apparent dispute between the experts that macroinvertebrates are commonly considered an overall indicator of stream ecosystem health,³³ but the approach proposed by TDC (and consistent with the One Plan) is also the approach:
 - (a) accepted by the Environment Court (and indeed favoured by Horizons) in the recent *Feilding* case;³⁴ and
 - (b) favoured by Horizons in its Feilding Meat Processing Plant decision.³⁵
46. Finally, Horizons' proposed condition 8(d) (which again, is in stark contrast to its position in previous cases) is unnecessary and its insertion would only add confusion and uncertainty to how "*significant adverse effects on aquatic life*" should be assessed.
47. WPS also considers clarity around what constitutes "*significant adverse effects*" is required, drawing attention to the "*drawn-out, costly debate that MWRC experienced with PNCC*".³⁶ TDC agrees with WPS on this point.
48. To be clear, TDC is not and cannot be required to meet a hypothetical unknown future standard. It is required to meet the relevant legislation, regulations and statutory planning documents. In meeting condition 8(i), TDC will comply with the requirements of the One Plan and section 107(1)(g).
49. The suggested addition of condition 8(d) is unnecessary and unclear. Good practice requires conditions to be set that are clear, enforceable,

³¹ Dr Ausseil's supplementary evidence, 5.4(b).

³² *Ibid.*

³³ *Ibid.*

³⁴ *Manawatu District Council & Others v Manawatu District Council & Others* [2016] NZEnvC 53, at [18]-[119], [199]; [2016] NZEnvC 230, condition W13(e).

³⁵ Decision Report Feilding Meat Processing Plant, AFFCO New Zealand Limited's Resource Consent Applications to Manawatu-Wanganui Regional Council, 3 February 2017, at [77] "*Mr Logan Brown told us that at the time the One Plan was being developed it was proposed that if the targets were complied with, the effects of an activity on the receiving water body were likely to be no more than minor.*"

³⁶ Water Protection Society Comments on 2017/8/27 version of Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, page 1.

and that serve a clear resource management purpose. As such, TDC does not support this inclusion.

Chlorophyll

50. Phil Teal, representing Fish and Game, submits condition 8(h) (TDC's condition 8(g)) proposes a chlorophyll concentration limit that is too high and seeks that the Phosphorous concentrations be adjusted to achieve a lower limit. Mr Teal proposes a condition that reads:³⁷

*"Levels of nutrients discharged into the river that may result in excessive Periphyton and algal growths – to achieve an MCI target of 120 then **Chlorophyll a should be kept below 50 mg/m²** and to achieve that, **in-stream nutrient concentrations will need to be reduce[sic] to 0.1 mg/L for SIN and DRP 0.0006 mg/L.**"*

51. This was a matter raised previously by Fish and Game (in Mr Canning's evidence of 8 May 2017) and Dr Ausseil's response to that suggestion is set out in full at paragraphs 6.3 to 6.6 of his supplementary evidence dated 23 May 2017. In summary:

- (a) the 50mg/m² target is very unlikely to be achievable in the Mangatainoka River, both upstream and downstream of the discharge, therefore the proposed nutrient concentrations are simply not realistic;³⁸ and
- (b) by requesting such a condition, Fish and Game is essentially asking the Panel to amend the One Plan targets for this water management zone, which it cannot do.

52. Further, short of placing TDC in a position of non-compliance it is unclear what purpose imposing such a condition would serve.

53. For these reasons, and the reasons set out in Dr Ausseil's supplementary evidence, TDC does not support the inclusion of Fish and Game's proposed condition.

SIN and DRP targets

54. WPS objects to the omission in condition 8 of SIN and DRP targets.³⁹ TDC does not consider it necessary to include these targets in the

³⁷ Fish and Game comments on conditions contained in email to Carina Hickey dated 8 September 2017.

³⁸ Dr Ausseil's supplementary evidence, 23 May 2017, 6.3 (c)

³⁹ Water Protection Society Comments on 2017/8/27 version of Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, pages 1-2.

conditions and notes this issue was thoroughly canvassed in the similar *Feilding* case, ultimately resulting in the Environment Court accepting that such an inclusion was unnecessary.⁴⁰

Toxicants

55. Horizons proposes the insertion of condition 8(k), which reads:

"The treated wastewater discharge shall not cause...

k. the concentration of toxicants to exceed the trigger values for freshwater for the protection of 99% of species (ANZECC 2000)."

56. TDC does not recommend this condition for several reasons:

- (a) It is very unspecific, as the ANZECC Guidelines set trigger values for hundreds of metals and organic and inorganic contaminants. Horizons has provided no technical evidence to support this insertion, however TDC understands from post-hearing conferencing that Horizons' concerns are limited to aluminium, in the case that alum is used as a flocculant in the treatment process. If that is the case, any condition set should:
 - (i) specifically refer to aluminium;
 - (ii) be only triggered if aluminium is used in the treatment process; and
 - (iii) be consistent with the correct application of the ANZECC Guidelines, as explained below.
- (b) It appears to be founded on an incorrect interpretation of the ANZECC 2000 Guidelines:
 - (i) the condition proposed by Horizons seems to set the ANZECC trigger values as absolute standards applicable to single samples;
 - (ii) this goes against the principles under which the ANZECC trigger values were developed, and the assessment criteria set by the guidelines. For instance, metal trigger values should be compared to median concentrations⁴¹, not single samples as would be the case under Horizons' proposed condition; and

⁴⁰ *Manawatu District Council & Others v Manawatu District Council & Others* [2016] NZEnvC 53, at [121].

⁴¹ ANZECC Guidelines (2000), page 3.4-15: "Judgment on whether a chemical concentration exceeds a guideline value should not rely on results of analysis of a single sample, except possibly if the concentration is

- (iii) the ANZECC trigger values are not designed to be used as standards. They are trigger values, to be used as part of a risk assessment process. If a trigger value is exceeded, it simply means that the risk of effects cannot be discounted as low, and further assessment is required, until either the risk of effect can be discounted, or mitigation is implemented⁴².
 - (c) This suggested insertion is directly contrary to Horizons' position in recent cases, for example in the *Feilding* case, where a condition risk-based approach was agreed to by Horizons, as set out above.
57. If the Panel is minded to adopt a condition to manage the potential effects of aluminium used in the treatment process, then a condition based on condition W19 of Permit 106948 for the Feilding WWTP discharge to the Oroua River (which was agreed by Horizons) would be appropriate as it correctly reflects the ANZECC Guidelines framework.⁴³ This condition should only be triggered if alum is used in the treatment process.
58. However, given there is no evidence of any appreciable quantity of toxicants entering or exiting the WWTP, or issues associated with aluminium toxicity downstream of other water or wastewater treatment plants using alum in the region, TDC's view is this is not necessary and does not propose such a condition in Appendix 1.
59. It is noted this issue was not raised during the hearing, therefore TDC has not had the opportunity to provide technical evidence addressing the matter (nor has the Panel received such evidence from Horizons or other parties). Accordingly, TDC submits that to impose the condition Horizons now seeks, without all parties being afforded the chance to give evidence, would result in an unfair and incomplete process.

Compliance, river monitoring and sampling

60. During the hearing Dr Ausseil recommended a stepped approach to monitoring comprising spot monitoring and, in the event of any issues, continuous DO monitoring. Both Dr Ausseil and Mr MacGibbon recommend having monitoring points both before and after the wastewater treatment wetland (prior to the biodiversity wetland), before the discharge

high enough to potentially cause acute toxicity. It is better to collect a number of samples and to compare the median value with the guideline value”.

⁴² Refer to Section 3.4.3.2 of the ANZECC Guidelines: “Decision Tree for applying the Guideline Trigger Values”

⁴³ The relevant condition (W19) of the *Feilding* conditions is attached as **Appendix 3**.

enters water. This is reflected in Conditions 9 and 17.

61. TDC has concerns with some of Horizons' proposed amendments to condition 9 (compliance).
62. Horizons proposes the insertion of a new condition (condition 9(d)) which reads:

"Within one week of the result being received, notify the Manawatu-Wanganui Regional Council's Environmental Regulation Manager of the exceedance, with a written comment outlining mitigation measures taken and if required, further proposed measures to remedy the problem. The written statement shall include but is not limited to mitigation proposed, and a timeline for proposed remediation."

63. Horizons reasons that a process step is required here to ensure that if an issue is found with the discharge there is a way to resolve it within a week.
64. This proposed amendment changes and extends the scope of condition 9. Condition 9 is intended to capture how compliance with condition 8 should be measured, and not the steps required in the event of non-compliance.
65. Nor is this the appropriate place to set out how non-compliance will be dealt with; to do so would be duplicative as condition 8 in the general conditions schedule (APP-2005011178.01) already captures this matter.
66. For ease of reference, condition 8 in the general conditions schedule covers TDC's annual environmental reporting requirements to Horizons and to the Tararua District Wastewater Forum, which includes the requirement to include in the monitoring report:

"b. An assessment of compliance against conditions of this consent"

and

"c. A comment on any non-compliance and any additional monitoring or remedial action undertaken or planned."

67. That condition (which Horizons and TDC agree on) applies to all permits under application, including the discharge to water permit. TDC's view is it would be unnecessary and convoluted to include two separate conditions in two separate places dealing with responses to non-compliance. The OMP will also, as set out in condition 4 of the general conditions schedule, detail procedures for reporting non-compliance.

68. Further, the one week timeframe proposed by Horizons in its condition 9(d) to develop a full mitigation response is unrealistic and unlikely to be able to be met except in the most straightforward situations. TDC does not adopt this proposed sub-condition in its final set of conditions.
69. Horizons' proposed new sub-condition 9(e), which reads "*The findings and if required, further proposed measures to remedy the problem, shall be reported in the annual report required by condition [2XX] of the general conditions*" is not adopted either, for the same reasons as set out above in relation to 9(d).
70. WPS, represented by Dr Teo-Sherrell, has also made suggestions for the compliance conditions:⁴⁴
- (a) relating to the cross-referencing between conditions;
 - (b) that "*Wilcoxon-Sign-Ranked test*" be included in condition 9(d) before "*result*"; and
 - (c) that the condition setting out how compliance with periphyton biomass levels will be assessed ought to be justified in light of the latest scientific research on periphyton removal and river flow.
71. The first two points raised have been resolved in TDC's final set of conditions.
72. For compliance with periphyton biomass levels (the third point), the condition must be clear and enforceable. WPS's proposed change would introduce significant uncertainty for all parties and is therefore not supported by TDC. TDC supports the approach adopted in the NPSFM compliance framework (8% of samples over a minimum of 3 years), which is based on the latest scientific research.
73. It is also noted that general condition 16 provides for reviews of the conditions for the purpose of assessing the conditions' effectiveness. Should any new research come to light that may require the amendment of any of the conditions, condition 16 would allow for that amendment.
74. Horizons and TDC agree on the proposed wording of condition 11 (relating to grab samples). WPS has suggested a minor wording change – the removal of "*and at the frequencies*" – on the basis it is redundant. TDC accepts this proposed change and it is reflected in the final conditions.

⁴⁴ Please note WPS' suggestions relate to Horizons' comments and proposed amendments to the conditions.

75. Horizons and TDC agree on the proposed wording of condition 12 (relating to flow meters). WPS has suggested the following changes:⁴⁵
- (a) the condition should refer to at least two flow meters;
 - (b) the wording "*by an accredited installer*" ought to be deleted as this is already covered by condition 13; and
 - (c) the exact position of the outflow flow meter is unclear and this needs to be specified with respect to the UV treatment unit and the wetlands.
76. TDC's final set of conditions reflects WPS's second suggestion.
77. Horizons proposes Table 2, contained in condition 17, be renamed "*Table 2: Effluent and River Monitoring*". TDC is content with this change and has amended the heading of the condition for consistency.
78. TDC does not, however, adopt the proposed insertion of toxicants as a constituent within that table for the reasons set out above.
79. Horizons reasons that "*in the absence of knowledge of what chemical will be used for dosing (alum or ferric chloride)*", it is necessary to include "*toxicants*" in the way proposed. Such an approach is uncertain and far too wide-reaching, particularly given it appears to have been proposed to address a single issue – the dosing agent. Further, no evidence is offered in support of Horizons' position.
80. Mr Crawford's view is that ferric chloride is unlikely to be used for practical reasons but, in any event, Dr Ausseil's view is that if ferric were used, it would not require any monitoring as iron is not generally viewed as toxic to aquatic life.
81. TDC's final proposed condition 17 incorporates amendments to ensure consistency with conditions 1 to 4, and 8-9 (in relation to compliance and frequency of sampling).
82. Horizons proposes the inclusion of condition 17a, which sets out requirements for TDC to assess dissolved aluminium monitoring results, investigate any significant increases and propose measures to address those increases. TDC does not adopt this condition as again, no evidence has been offered to suggest any material issue and in TDC's view this is

⁴⁵ Water Protection Society Comments on 2017/8/27 version of Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, page 2.

unnecessary.

83. For condition 20 (macroinvertebrate sampling), Horizons proposes an amendment requiring annual macroinvertebrate sampling. In Horizons' view three-yearly sampling would not allow any assessment of trends or seasonal variation to occur.
84. TDC considers this amendment is unnecessary, and three years of monitoring at the beginning of the consent, followed by three-yearly sampling, will be sufficient to characterise any (very unlikely) change caused by the new sampling point and keep track of any changes during the remainder of the consent's term.
85. TDC does not adopt this proposed amendment and notes that any monitoring methods and frequency implemented should be proportionate to the risk of effects. In this case eight years' worth of monitoring data has not demonstrated any problems, therefore annual monitoring would be excessive.
86. Similarly, the monthly periphyton monitoring for the term of the consent required by condition 21 sets out a very significant monitoring requirement (and associated costs), which is out of proportion to the scale and significance of effects on periphyton growth, both currently and after the upgrades are fully commissioned. As with the macroinvertebrate monitoring requirements, three years of monitoring at the beginning of the consent, followed by three-yearly sampling, will be sufficient to characterise the effects of the discharge and keep track of any changes during the remainder of the consent's term.
87. Horizons suggests a minor change to condition 22 in that it proposes an 11 day – rather than 10 day – monitoring period. TDC does not object to this change and therefore it is reflected in the final set of conditions. WPS queries the shift from 10 to 11 days.⁴⁶
88. For continuous DO monitoring, Horizons has suggested the inclusion of note “a” stipulating what is to be included in the report to Horizons' Regulatory Manager.
89. TDC adopts this note in its final conditions with the following amendments:

⁴⁶ Water Protection Society Comments on 2017/8/27 version of Condition Schedule ATH-199501433.02 – Pahiatua Wastewater Treatment Plant – Discharge to Water Permit, page 3.

"The report shall include but is not limited to:

- a. *Equivalence testing (with a 10% interval) on a rolling 7 day mean minimum calculated for both upstream and downstream; and an assessment of the 1 day mean minimum for upstream and downstream over the monitoring period, to ascertain whether **there are any significant differences between the upstream and the downstream site.** ~~the discharge is having an effect on DO in the receiving environment.~~"*

90. TDC's wording change is proposed to more accurately reflect the purpose of the statistical test, which is to ascertain any significant differences between the upstream and downstream sites. A statistical test in itself is incapable of determining whether a change is having an effect on the receiving environment.
91. Horizons proposes a new condition (23a) which sets out proposed measures for instances where DO may reach Band D.⁴⁷
92. TDC does not adopt this condition on the basis there may be site-specific factors beyond TDC's control such as depth, velocity, and groundwater which may cause changes in DO along the reach of the river, independently of the actual effects of the discharge.
93. In light of the fact that upstream of the discharge point the Mangatainoka River is, at times, in band D, including a condition like the one Horizons proposes would mean that any minor variation in DO levels may put TDC in a position of non-compliance.
94. Further, while Horizons presented evidence to the Panel on the need to undertake monitoring, no evidence was presented on the setting of an additional standard, which in effect is what the proposed condition 23a does.

Reporting

95. Condition 27 requires that TDC report back to Horizons' Regulatory Manager by 31 October of each year with a summary of all monitoring information. There is no dispute between TDC and Horizons on the wording of this condition, however WPS has queried why the report cannot be provided as soon as it is completed.

⁴⁷ NPSFM (2014).

96. TDC's view is that the conditions should set a date at which the report is due to provide certainty to all parties. Typically these reports require a significant amount of work, and a fixed date allows TDC and their consultants to organise the work to a known timeline.

Other matters relevant to water quality – sections 105 and 107

97. As the Project includes applications for discharge permits, the Panel must have regard to the matters set out in section 105, i.e. the nature of the discharge and sensitivity of the receiving environment to adverse effects, TDC's reasons for the proposal, and any possible alternative methods of discharge.
98. Those matters are discussed in TDC's opening submissions at paragraphs 45 to 46, and the analysis is not repeated here, except to reiterate (as detailed above) that any adverse effects of the discharge on the receiving environment will be minimal and acceptable.
99. Likewise, TDC's position remains that section 107 is not triggered in this case; there is no probative evidence before the Panel that the discharges will give rise to any of the effects listed in section 107(c) to (g) (and the latest changes to the proposed conditions further enhance the Project in this regard).

Conclusion on water quality

100. TDC has worked hard, guided by relevant experts, to ensure that the Project will further reduce its already relatively minor adverse effects on the Mangatainoka River. The WWTP upgrades specifically target the contaminant of most concern (DRP) to reduce the only effect (periphyton growth) that may currently exceed, albeit marginally at worst, the One Plan targets. This has been achieved, and accordingly the Project is strongly aligned with the relevant objectives and policies in the One Plan as well as the relevant RMA provisions.

CULTURAL EFFECTS

Introduction

101. The other key issue before the Panel is the Project's effects on Māori cultural values, in respect of which the Panel has had the benefit of submissions from tangata whenua – Kahungunu and Rangitāne – as well as the 'downstream perspective' offered by Te Roopu Taiao o Ngāti

Whakatere.

102. It can be challenging to reconcile the inherent tension between the need to dispose of wastewater from large inland communities safely and efficiently, and the deeply significant connections that tangata whenua have with rivers.
103. TDC has worked hard to do so in this case; the Council greatly values its relationships with tangata whenua and has sought to develop the Project in a way that appropriately mitigates adverse effects on cultural values. TDC is very grateful to Rangitāne and Kahungunu for their ongoing guidance to that end.
104. TDC nonetheless acknowledges the concerns of tangata whenua raised in their submissions and, fundamentally, their strong preference for discharges of wastewater to the Mangatainoka River to be avoided. The Panel has heard evidence about TDC's investigation into possible alternatives and the prohibitive cost, unable to be sustained by the rate-paying communities of the District, of a full land application system.
105. This practical reality is reflected in the submissions of tangata whenua which, while critical of aspects of the Project, do not oppose outright the granting of consent. TDC acknowledges the comments made on Rangitāne's behalf, for example, in its Cultural Values Assessment, recognising that options for land-based application are limited by the cost and availability of suitable land.⁴⁸
106. This reply addresses the following matters relating to cultural effects:
 - (a) a recap and update for the Panel on engagement processes, which are ongoing;
 - (b) a summary of the ways in which the Project will mitigate adverse effects on cultural values in the River; and
 - (c) how the proposed conditions enshrine opportunities for the ongoing exercise of kaitiakitanga, in the context of the Project.

Ongoing engagement

107. The Panel will recall the steps taken by TDC since the hearing was adjourned to clarify certain matters relating to cultural effects and, in particular, obtain further tangata whenua input into the design of the

⁴⁸ Cultural Values Assessment by Peter McBurney for Rangitāne at page 57.

wetland that is proposed to 'polish' the treated wastewater prior to discharge to the River. To recap:

- (a) the Panel asked TDC, following the hearing, to:
 - (i) set out possible options and timeframes for a process of further engagement between TDC and tangata whenua;
 - (ii) explain how Policy 5-11 of the One Plan applies to the proposed wetland; and
 - (iii) advise on the status of the Manawatū River Leaders Accord Action Plan and Te Kāuru draft river management plan;
- (b) counsel for TDC filed a memorandum addressing those matters on 29 May 2017;
- (c) in its Memorandum 4, dated 5 July 2017, the Panel directed TDC to engage further with tangata whenua about the proposed wetland and report back by 11 August 2017;
- (d) counsel for TDC filed a further memorandum dated 11 August 2017 outlining further engagement with Rangitāne and Kahungunu; and
- (e) subsequently TDC's proposed conditions have been updated, including to strengthen the monitoring and mitigation of cultural effects, and circulated among the parties for comment (as discussed further below).

108. TDC has since been in further contact with Rangitāne about the wetland design, and with both iwi about establishing a working group to share information and otherwise foster a collaborative approach in relation to other wastewater consents being sought by TDC (drawing on the experiences of this Project). Despite the challenge of aligning schedules in the lead-up to Christmas, iwi have given initial feedback about the working group process, and a meeting is scheduled for 11 December 2017.

109. TDC remains committed to ongoing engagement and constructive dialogue with Rangitāne and Kahungunu throughout the implementation of the Project.

Mitigation of adverse cultural effects

110. Iwi submitters have informed the Panel about the ways in which various discharges to the Mangatainoka River have adversely affected its physical

and spiritual health, customary practices such as baptisms and the gathering of kai and, by extension, tangata whenua themselves.

111. While the current discharge from the WWTP does not contribute significantly, in a physical sense, to reduced water quality in the River, the Project will achieve important reductions in adverse cultural effects, both physically and metaphysically.
112. The physical enhancements have been traversed in the section on water quality above; it will not be lost on the Panel that the significant improvements in the quality of the wastewater being discharged, and the reduction in nutrients and contaminants entering the River, also mitigate the adverse effects on the relationship of tangata whenua with the River (and downstream effects, such as on Ngāti Whakare). In this regard, the CVA prepared for Rangitāne expressly notes the efforts made by TDC to improve the discharge standards.
113. TDC nonetheless acknowledges that human wastewater is distinct from other types of discharges, in terms of metaphysical effects on the mauri of the River. It has sought to address this issue, guided by Policy 5-11 (and, linked to that Policy, Chapter 2) of the One Plan, by incorporating a 'biodiversity wetland' system into the Project design and thus ensuring passage of the wastewater through or over land. To reiterate, the Project meets Policy 5-11 as explained in detail in counsel's memorandum of 29 May 2017, and accompanying information from Mr MacGibbon.
114. TDC will obviously continue to engage with Rangitāne and Kahungunu about the implementation of the wetland, given that its primary purpose is to mitigate metaphysical effects of concern to tangata whenua – the relevant conditions are discussed below.

TDC's proposed conditions

115. Since the hearing, TDC has been working on a revised set of proposed conditions, including to address effects on cultural values. TDC is grateful for the feedback received on the proposed conditions from submitters and MWRC, many of which have been accepted by TDC and incorporated into the condition set in **Appendix 1**. Any residual points of disagreement between the parties are noted and explained below.

116. TDC seeks through the conditions to facilitate the exercise of kaitiakitanga by Rangitāne and Kahungunu, and recognise and provide for their relationship with the River, in the following broad ways:

- (a) Iwi will be invited to play a central role in a Tararua District Wastewater Forum ("**TDWF**"), which will receive information and provide feedback about the operation of the WWTP.⁴⁹ One particular task of the TDWF will be to consider a report prepared by TDC three years prior to the expiration of these consents, following an investigation into alternative methods of treatment and discharge, including land-based disposal favoured by iwi.⁵⁰
- (b) As noted above, further advice will be sought from iwi regarding the detailed design and implementation of the wetland, including input into the planting plan, and it is hoped that iwi will attend the site prior to construction and participate in planting.⁵¹
- (c) A condition is now proposed to formalise monitoring of the cultural health of the River, in relation to the Project, over the life of the consent,⁵² as explained in greater detail below.

117. That newly proposed condition responds to a number of comments made by Kahungunu on the conditions, broadly relating to its desire to monitor and/or assess cultural effects of the Project.⁵³

118. TDC now proposes condition 17 (in the general conditions schedule) which invites Kahungunu and Rangitāne to work with it in preparing Cultural Health Index Monitoring Protocols within the immediate environs of the WWTP site, including the Mangatainoka River. In summary, the protocols will (as a minimum) describe the relationship of Kahungunu and Rangitāne to the land and River, and establish a system of monitoring the Project's cultural effects, including by:

⁴⁹ See general conditions 6, 10-15. TDC notes that Kahungunu has expressed a preference for direct consultation as a Treaty partner rather than participating in the TDWF. TDC acknowledges this preference and notes there is no obligation to participate in TDWF meetings. TDC intends to continue building iwi relationships and considers that retaining the condition inviting all stakeholders to the TDWF reflects the inclusive and non-obligatory nature that TDC envisages for the TDWF.

⁵⁰ See general condition 6.

⁵¹ See pond and wetland seepage conditions 7, 9 and in particular condition 8.

⁵² See general condition 17

⁵³ Refer to Kahungunu comments on general condition 4(f) and pond and wetland seepage condition 8; MWRC proposed general conditions 15(a) and 15(b) (not included in TDC condition set); and Kahungunu proposed pond and wetland seepage conditions 2B and 4B (also not included in TDC condition set).

- (a) describing the tikanga relevant to the proposed cultural monitoring, the activities, and the site(s);
- (b) identifying and mapping the site(s) to be monitored;
- (c) recording the frequency of monitoring;
- (d) describing the site access procedures;
- (e) identifying the parameters and methods used for the monitoring; and
- (f) setting out the matters to be included in any Cultural Health Index Monitoring Report and the frequency of the reporting.

119. The Cultural Health Index Monitoring Protocols will ensure that further discussions will focus on how Kahungunu and Rangitāne can carry out their kaitiaki role in respect of the River, by reference to the Project, and that information stemming from Te Ao Māori will be brought to bear in TDC's implementation of the consents.

Conclusion on cultural effects

120. The Project will thus mitigate adverse effects on the cultural health of the Mangatainoka River, and put in place processes formalising aspects of the kaitiaki role of tangata whenua in respect of the River. These outcomes reflect the respectful approach taken by TDC towards tangata whenua and the cultural values inherent in the River.

121. The Project thus accords strongly with all relevant objectives and policies of the One Plan, including Objective 2-1 and Policies 2-1 to 2-4 and 5-11.

122. To the extent that the One Plan does not cover the field in terms of Part 2 matters, enabling the Project would recognise and provide for the relationship of Kahungunu and Rangitāne with the Mangatainoka River (and indeed that of Ngāti Whakarete with the Manawatū River), and respect and enhance the kaitiaki role of iwi.

OTHER EFFECTS AND CONDITION ISSUES

Introduction

123. There are no other adverse environmental effects of the Project requiring a substantive response (over and above the opening submissions and evidence presented for TDC), including in respect of odour, recreation and amenity, and soil disturbance. See, for example:

- (a) condition schedule ATH-2016200772.00 (Discharge to Air) – there is no disagreement between parties on this set of conditions;
- (b) condition 7 of schedule APP-2005011178.01 (General Conditions); Horizons and TDC are in agreement on the wording of this proposed condition which provides for a recreational user's investigation;⁵⁴ and
- (c) condition schedule ATH-2017201455.00 (Earthworks); all conditions dealing with soil disturbance effects are agreed between the parties; where there are conditions in this schedule that still require explanation (or comments that require a response), these are minor and are addressed either below or in the attached **Appendix 2**.

124. There remain, however, a number of miscellaneous points of disagreement between the parties about the conditions, not discussed in the water quality and cultural effects sections above. Again, these are relatively minor matters, but for completeness are traversed below or, in respect of minor comments by WPS, in **Appendix 2**.

Reporting and reviews

125. In relation to condition 6 of the General Conditions schedule (which provides for an investigation of alternative treatment and discharge options), Horizons suggests aligning the timing of this reporting with conditions 15a and 15b. TDC does not recommend the adoption of those conditions (as discussed below) and, as such, considers it unnecessary to amend the timing of the reporting requirement in condition 6.
126. Conditions 15a and 15b, proposed by Horizons, envisage a 'self-audit' performance review of the WWTP to be undertaken three years prior to permit expiry and to be provided to Horizons' Regulatory Manager and the TDWF. The justification offered by Horizons for these inclusions is that similar conditions were granted in 2013 in relation to the Fonterra Pahiatua Discharge Permit 106632.
127. Conditions 15a and 15b have not been included in TDC's proposed conditions. Such conditions are unnecessary because, firstly, other conditions already address the concern these conditions are directed at, for example condition 16 which provides for reviews of the conditions. Secondly, the information that would be gathered during the self-audit

⁵⁴ WPS has commented on this condition. TDC's response is set out in the attached **Appendix 2**.

exercise would be necessarily gathered at the time of an application for consent renewal in any event, resulting in a duplicative and costly exercise.

128. As a further point, the mere fact that a certain condition was accepted by another consent holder in an entirely different set of circumstances is not in itself a sufficient basis for accepting it in these circumstances.⁵⁵ No persuasive policy or technical reasoning has been offered by Horizons in relation to the proposed inclusion of conditions 15a and 15b, or indeed as to why the Fonterra decision should be considered a useful precedent in this case. It is also questionable what resource management purpose the proposed condition would serve, in that the discharge does not currently cause any effects that are more than minor.
129. Horizons also proposes significant amendments to condition 16 of the General Conditions schedule, which deals with reviews under section 128 of the RMA. TDC does not agree to or adopt those changes.
130. Condition 16, as proposed by TDC, was deliberately crafted to provide a clear interpretation of section 128. In TDC's view the wording suggested by Horizons is unnecessary and duplicative, in that it covers concerns that are already adequately dealt with by the RMA. To accept Horizons' proposed changes to condition 16 would result in double-handling and would risk confusion and misinterpretation.
131. Kahungunu has indicated a preference, in terms of condition 16, for a definitive requirement for a review of conditions in 2020 and 2024. Again, TDC's choice of wording was intentional and appropriately reflects section 128 of the RMA. That section provides a discretion for Horizons to initiate a review *"at any time or times specified"* and for specified purposes. To make the changes sought by Kahungunu (and put in place mandatory reviews) would cut across the meaning and purpose of section 128, as well as commit TDC and Horizons (and their ratepayers' funds) to costly regulatory processes.
132. TDC therefore seeks the retention of condition 16 as it is currently drafted.

Pond and wetland seepage

133. Horizons proposes the addition of *"(...) and an independent and suitably*

⁵⁵ The Fonterra case addressed matters relating to stormwater discharges and discharge of food processing waste to land.

experienced and qualified water scientist(s)" in condition 1(b) of Schedules ATH-2016200747.00 and ATH-2017201456.00 (Discharge to Land – Pond and Wetland Seepage).

134. In TDC's view this inserts an additional, onerous, step in the permeability investigation process; one which is unnecessary in the context of the condition. Further, in TDC's view the exercise set out in condition 1 is not one a water quality scientist is suitably qualified to add input to. As such TDC does not adopt this change in its final set of conditions.

Groundwater monitoring

135. Horizons proposes amendments to condition 3 of Schedules ATH-2016200747.00 and ATH-2017201456.00, which provides for the installation of groundwater monitoring wells on the site. As part of those changes, Horizons has referred to "***Plan ATH-199501433.02 A***" ("**the Plan**") specifying locations of "*at least two groundwater monitoring wells on the site (...)*" Horizons' other proposed changes relate to the dimensions of the monitoring wells.
136. Horizons provided the Panel with a revised copy of the Plan on Wednesday 29 November 2017, and this was subsequently circulated to TDC. The Plan marks the location of three proposed groundwater wells.
137. While TDC is largely content with the changes to condition 3 proposed by Horizons, it does not agree to the details and locations specified in the Plan.
138. Condition 3 provides that the consent holder shall install "*at least two*" groundwater wells, while the corresponding Plan specifies three wells. TDC's position remains that two wells are sufficient for groundwater monitoring, particularly in light of the further work TDC has done on conditions relating to seepage. For instance, TDC's proposed condition 1 (relating to permeability investigations) provides for investigations into the rate of leakage from treatment ponds. In TDC's view that is a more appropriate and useful way of monitoring groundwater.
139. Further, requiring the installation of three wells as specified on the Plan would not only impose an additional and undue cost on TDC, but it would also fail to serve its intended purpose due to the marked locations. It is difficult to envisage how two nearby downgradient wells (and a third upgradient well) would result in any superior monitoring than one down-

gradient well and one up-gradient well.

Wetland monitoring

140. Horizons proposes amendments to condition 9 (in Schedules ATH-2016200747.00 and ATH-2017201456.00) as well as three new conditions relating to wetland monitoring; conditions 10, 11 and 12. Horizons explains, in relation to the proposed conditions 11 and 12, that it agrees in principle with TDC's conditions 5 and 6 (relating to sample monitoring) but considers they were more suited to an amalgamation with wetland monitoring provisions and moved to the end of the schedule. WPS also preferred the approach recommended by Horizons, but noted (in relation to Horizons' proposed condition 12) that there should be a reference to both conditions 4 and 9 (not just 9).
141. In TDC's view the amendments proposed by Horizons are overly burdensome and unnecessary, and TDC does not adopt these amendments in its final set of conditions on that basis (noting also that there will be seasonal differences so six monthly monitoring is unlikely to provide much guidance).
142. However, with a view to addressing both Horizons' and WPS' concerns TDC has made the following amendments to its final set of proposed conditions:
- (a) In condition 5: *"Results from the monitoring required by conditions 4 and 9 shall be transferred within ten working days..."*
 - (b) In condition 6: *"Results from the monitoring required by conditions 4 and 9 shall be transferred within 10 working days..."*
 - (c) In condition 9: This would now provide for ongoing monitoring every three years, after the first two years following wetland establishment.

NOTIFICATION OF ADDITIONAL CONSENTS

143. The Panel has sought TDC's comment⁵⁶ on queries raised in the letter from Mr Black, on behalf of Kahungunu, dated 7 August 2017 regarding the notification of additional consents.
144. As the Panel will recall, resource consent applications for this proposal have been lodged in stages. TDC sought consent:

⁵⁶ via an email sent from Carina Hickey to Tabitha Manderson and Rob Green on 8 November 2017.

- (a) in December 2014, to discharge treated wastewater to the Mangatainoka River, and to discharge contaminants (mainly odour) to air;
 - (b) in December 2015, relating to seepage from the existing ponds; and
 - (c) in April 2017, relating to construction of a wetland and seepage from that wetland.
145. The 2014 and 2015 applications were publically notified in April 2016. As at the commencement of the hearing in May 2017, no notification decision had been made in respect of the applications lodged in April 2017.
146. A further layer of complexity arose when TDC advised the Panel and parties, prior to the hearing in May 2017, of further modifications to aspects of the proposal, namely:
- (a) a proposed change in the configuration of the wetland on land currently owned by the Morrisons (i.e. a change to the activities sought to be authorised through the April 2017 applications); and
 - (b) an associated change to the location of the discharge point to the Mangatainoka River, to avoid the neighbouring Managh property (i.e. a change to the activity originally described in the December 2014 applications).
147. As noted in the opening legal submissions for TDC, it is not uncommon for applicants to adapt a proposal (and sometimes apply for additional consents) to address stakeholder concerns and other issues that may arise, ultimately to achieve better environmental outcomes.
148. Nonetheless, TDC understands Mr Black to be of the view that:⁵⁷
- (a) changes to the configuration of the proposed wetland and to the discharge location to the Mangatainoka River are not within the scope of the original applications as notified; and
 - (b) persons who did not submit on the applications as lodged may be affected by the changes and prejudiced by not being notified of them.

⁵⁷ Mr Black's letter raises various other concerns, including in respect of the use of sections 37 and 37A(5) of the RMA. TDC understands other comments to relate to its applications regarding the Eketahuna Wastewater Treatment Plant.

149. The key issues raised in Mr Black's letter were traversed at the beginning of the hearing on 23 May 2017, namely whether changes to the original proposal are within the scope of the applications lodged in 2014 and 2015, and whether the April 2017 applications should be notified.
150. The opening submissions for TDC explained that changes to proposals are within the jurisdiction of the consent authority if they are fairly and reasonably within the scope of the original application. This entails considering whether the altered proposal has adverse effects of a significantly different character or significantly greater scale or intensity than the original proposal.
151. In this case, the proposed changes have not in any way altered the character of adverse effects or increased their scale and intensity; rather, the changes are designed to avoid adverse effects on the Managh land neighbouring the WWTP.
152. In terms of potential notification of the April 2017 applications, counsel for TDC raised this point with the Panel at the outset of the hearing, in order to clarify whether the hearing could proceed (which it could only do, in effect, if the April 2017 applications were **not** to be notified). Counsel's understanding from the discussion that ensued between the Panel, Horizons officers, and counsel for TDC was as follows:
- (a) the April 2017 applications would be decided by the Panel, along with the earlier applications;
 - (b) the Panel would also have delegated authority from Horizons to make the notification decision in respect of the April 2017 applications;
 - (c) Horizons officers had identified two potentially affected persons in relation to the application to discharge wastewater to land from the wetland, namely:
 - (i) the Morrisons, the landowners of the relevant site; and
 - (ii) the Managhs, who own the neighbouring land;
 - (d) however, neither the Morrisons nor the Managhs could be considered affected persons in this case, because:
 - (i) the Morrisons had provided their formal written approval to the proposal, as modified; and

- (ii) as Mr MacGibbon explained, the proposed changes resulted in adverse effects on the Managhs being avoided (which indeed was the purpose of the changes); and
- (e) Horizons officers had not identified any affected persons in respect of the application for earthworks to construct the wetland (given the Morrisons' written approval, discussed above).

153. It is important, however, that the decision not to notify the April 2017 applications is formally documented; counsel are grateful to Mr Black for drawing this matter to the attention of the Panel and the parties.

CONSENT TERM

154. TDC seeks a 15-year consent term for the Project's discharge permits,⁵⁸ and Ms Manderson's report of 1 May 2017⁵⁹ provided her expert planning analysis of why this term, with review dates aligned with the common catchment expiry date, meets Policy 5-12 of the One Plan.

155. From a legal perspective, the case of *Bright Wood NZ Ltd v Southland Regional Council*⁶⁰ is authority for the proposition that consent should be granted for such a term as best accords with the sustainable management purpose of the RMA.

156. Given the relatively modest term sought for the consents, and the conditions enabling review on the common catchment expiry dates, it is unlikely that curtailing the consent term would best achieve sustainable management; this is particularly so given the essential nature of the WWTP, its fundamental benefits, and the value of TDC's significant investment in its wastewater infrastructure.

CONCLUSION

157. Again, it is unnecessary to repeat the analysis set out in the opening legal submissions for TDC about key decision-making considerations for the Panel, in terms of:

- (a) the application of section 104 to the applications, generally;
- (b) the meaning of "*subject to Part 2*";
- (c) the application of relevant One Plan provisions; and

⁵⁸ TDC also seeks a five-year consent term for the earthworks land use consent.

⁵⁹ Paragraphs 9.9 to 9.19.

⁶⁰ *Bright Wood NZ Ltd v Southland Regional Council*, EnvC Chch C143/99, 17 August 1999.

- (d) the significant investment TDC has made in the WWTP and associated infrastructure, and will make in implementing the proposed upgrades, which is relevant under section 104(2A).
158. There is no real dispute, on the evidence heard by the Panel, about these matters, or whether granting the applications would accord with the One Plan and further the purpose of the RMA.
159. As counsel noted in opening, granting consent for the Project will promote sustainable management, in the local context, in a fundamental way, because the appropriate collection, treatment, and disposal of Pahiatua's wastewater is essential to enable people and communities to provide for their social, economic, and cultural wellbeing, and for their health and safety. That is recognised through Objective 3-1 and Policy 3-3 of the Regional Policy Statement in the One Plan, which must be given appropriate weight by the Panel.
160. Rather, it falls to the Panel to adjudicate on a number of relatively minor differences between TDC, Horizons, and submitters about how conditions should best be worded to ensure appropriate ongoing management of the WWTP and its effects.
161. The final conditions put forward by TDC, in **Appendix 1**, have been shaped by considerable input from independent experts, Horizons officers, and submitters, and represent a very robust framework for managing the ongoing effects (minimal as they are) of the Project. They should be endorsed by the Panel, for the reasons set out in detail earlier in this reply, and give the Panel comfort to grant consent for the full (15- and 5-year) terms sought by TDC.
162. Lastly, TDC wishes to express its gratitude to the Panel, submitters, and Horizons officers for their consideration of the applications, the highly professional and courteous manner in which the hearing was conducted, and the constructive process of honing the proposed conditions.

DATED this 4th day of December 2017

A handwritten signature in blue ink, appearing to be 'D G Randal', with a large loop at the end.A handwritten signature in blue ink, appearing to be 'E L Bennett', with a large loop at the end.

D G Randal / E L Bennett

Counsel for Tararua District Council

APPENDIX 1: UPDATED SUITE OF CONDITIONS PROPOSED BY TDC

Refer to attached sheet.

APPENDIX 2: REPLY TO OTHER COMMENTS MADE BY WPS ON CONDITIONS

- 1.1 WPS provided comments on the draft conditions circulated to parties on 18 August 2017.
- 1.2 A number of those comments have been given effect in TDC's final set of proposed conditions, in **Appendix 1**. Other comments have been addressed in the body of TDC's reply.
- 1.3 For completeness, TDC's reply to the balance of WPS's comments is set out in the table below.

Condition number	Condition description or text	WPS's comment and TDC's reply
General conditions		
Condition 2	<p><i>"The wastewater discharge authorised by these permits shall be limited to:</i></p> <p><i>a. A maximum 12-month rolling median daily (midnight to midnight) discharge of 1000 cubic metres;</i></p> <p><i>b. A 95th percentile daily flow of 1,800m³/day."</i></p>	<p>WPS seeks that the discharge be related to river flow.</p> <p>TDC's reply: The discharge regime provided by condition 2 is agreed to be appropriate by TDC and Horizons experts, taking into account river flows, discharge volumes, and the observed effects (or lack thereof) of past discharges.</p>
Condition 7	<p>Condition requiring recreational user's investigation, with advice note reading <i>"Survey may include visual observations taken during monthly monitoring as required by Condition XX"</i></p>	<p>WPS comments that the survey should not only consider observations made during monthly visits.</p> <p>TDC's reply: No strict parameters are required for the survey, and clearly there are efficiencies in prompting visual observations from a recreational effects perspective during monitoring of other effects.</p>
Condition 17 (term)	Proposed condition as to term.	WPS seeks a 5-7-year term imposed on the permits.

Condition number	Condition description or text	WPS's comment and TDC's reply
		<p>TDC's case as to term is set out in the body of the reply, above.</p>
Discharge to land permit (pond and wetland seepage)		
Condition 1	<p>Proposed condition relating to investigating the permeability of existing treatment ponds.</p> <p>The condition requires a plan to be submitted to Horizons, which must include a water balance methodology for each pond, with <i>"consideration to be given to (...) measurement and recording of representative evaporation rates"</i>.</p>	<p>WPS seeks that the condition require measurement of daily evaporation rates.</p> <p>TDC's reply: The proposed condition as framed does not preclude measurement of evaporation rates, but such a prescriptive approach could add cost to TDC's ratepayers and is not warranted on the evidence before the Panel, which does not disclose any significant or material adverse effect of this discharge.</p>
Condition 3	Condition relating to groundwater monitoring bores, which refers to the use of PVC (or a similar inert material) for borehole casings.	<p>WPS seeks that the reference to PVC be removed, in favour of the reference to inert materials, given issues regarding the manufacture and lack of recyclability of PVC.</p> <p>TDC's reply: The condition does not preclude the use of materials other than PVC. That said, PVC is relatively cost-effective and durable, and its use in bore casings is standard practice.</p>
Condition 4	Condition requiring samples to be collected from bores.	<p>WPS seeks changes to the condition for clarity.</p> <p>TDC's reply:</p>

Condition number	Condition description or text	WPS's comment and TDC's reply
		The condition is sufficiently clear as to the monitoring obligations on TDC.
Condition 7	Wetland development and maintenance condition, which records that <i>"planting in the treatment wetland shall be at a density of 2 plants per square metre (...)"</i>	<p>WPS seeks a number of minor clarifications, which are reflected in the updated proposed wording.</p> <p>Otherwise, WPS queries the appropriateness of the plant density requirement.</p> <p>TDC's reply: The density is based on the expert advice of Mr MacGibbon, and is intended to optimise performance of the wetland.</p>
Earthworks consent		
Condition 6	Condition requiring TDC to arrange a pre-construction site meeting and invite various people, including the contractor.	<p>WPS seeks that the condition require attendance of the contractor(s).</p> <p>TDC's reply: The condition cannot lawfully require action by a third party, as such a condition could frustrate the grant of consent. In practical terms, however, it is inconceivable that TDC's contractor would not attend such a site meeting (and so no change is required to the condition).</p>
Condition 12	Condition requiring TDC to contact Horizons' regulatory team prior to commencement of works.	<p>WPS seeks that the condition state the purpose of contacting the regulatory team.</p> <p>TDC's reply: The purpose is implicit (ie to give Horizons prior notice of works to enable planning for</p>

Condition number	Condition description or text	WPS's comment and TDC's reply
		any compliance monitoring), so no change is required.
Condition 35 (term)	Condition as to expiry of the earthworks consent, sought by Horizons.	<p>Horizons seeks that the consent expire on 1 July 2019, and WPS agrees.</p> <p>TDC's case as to term is set out in the body of the reply, above. It seeks a five-year term of consent for earthworks, to allow time for any requisite land agreement(s) to be finalised and construction works undertaken.</p>

APPENDIX 3: *FEILDING* CONDITIONS – CONDITION W19

From the date of granting this permit:

- a) The permit holder shall assess **annually** the dissolved aluminium in-river monitoring results against a trigger concentration of 0.055 g/m³ and run a Wilcoxon Signed Rank test on the last ten consecutive samples to determine if there are any significant increases in dissolved aluminium concentration between upstream and downstream results.
- b) In the event that a significant increase is detected between upstream and downstream results, an investigation into the risk of toxic effects due to dissolved aluminium shall be undertaken within one month of detecting the significant increase. The findings shall be reported in the annual report required by Condition W29.
- c) The investigations shall be consistent with the ANZECC guidelines framework (2000) and shall consider, but not be limited to, water chemistry aspects (such as pH, water hardness, dissolved versus total concentrations etc.), and, if and as required, biological aspects.
- d) If the investigation in b) and c) shows a likelihood of toxic effects then measures to address that situation shall be proposed by the permit holder and implemented to certification by the Regulatory Manager,

Advice Note: *To perform the statistical test, analysis needs to be against a minimum of ten upstream and downstream paired results from the monthly sampling.*