BEFORE THE MANAWATU-WANGANUI REGIONAL COUNCIL

IN THE MATTER OF	an application for resource consent in relation to the discharge of treated meat works effluent to the Oroua River, discharge of treated wastewater onto and into land that may enter groundwater, discharge of odours and aerosols into air, land use consent for a discharge structure in the bank of the Oroua River and a bed level control structure in the Otoku Stream from the AFFCO Plant, Feilding

OPENING SUBMISSIONS ON BEHALF OF AFFCO NEW ZEALAND LIMITED
14 NOVEMBER 2016

BUDDLE FINDLAY
Barristers and Solicitors
Wellington

Solicitors Acting: **David Allen / Annie O'Connor**
Email: david.allen@buddlefindlay.com
Tel 64-4-499 4242 Fax 64-4-499 4141 PO Box 2694 DX SP20201 Wellington 6140

INTRODUCTION

1. On 31 March 2015, AFFCO New Zealand Limited ("**AFFCO**") lodged applications with the Manawatu-Wanganui Regional Council ("**Horizons**") for resource consents in relation to AFFCO's "Aorangi" meat processing plant located at 198 Campbell Road, Feilding ("**Aorangi plant**"). The consent applications relate to refinement of the existing combined land and water discharge ("**CLAWD**") system for treated wastewater and associated solid wastes from the Aorangi plant (the "**Project**").

2. AFFCO's application relates to five separate but related activities requiring resource consents. The Project involves:

   (a) the discharge of treated wastewater, effluent sludge, and paunch material to land by irrigation and direct application;

   (b) the discharge of odours and aerosols to the air arising from the discharge of treated wastewater, effluent sludge and paunch material to land;

   (c) the discharge of treated wastewater to groundwater by seepage from the wastewater treatment plant ponds;

   (d) the discharge of treated wastewater to the Oroua River at times of above median flow; and

   (e) the construction of a discharge diffuser and bed level control structure in the bed of the Otoku Stream, immediately upstream from its confluence with the Oroua River.

3. In support of the applications, these submissions:

   (a) set out the background and context to the consent applications;

   (b) describe the statutory framework for the Hearing Panel's ("**Panel**") decision;

   (c) summarise AFFCO's evidence in relation to the key issues for determination by the Panel;

   (d) identify relevant district and regional planning documents;

   (e) address other matters relevant to the Panel's decision; and

(f) address the application of Part 2 of the Resource Management Act 1991 ("**RMA**") to the Project.

Summary of submissions

4. There has been a meat processing plant at the Aorangi site since 1916 (100 years this year). The Aorangi plant is a significant physical resource in both the district and region, and is valued at approximately $130m. It directly employs 380 people and has significant additional economic benefits for the district and region through supporting the agricultural sector.

5. The Aorangi plant has been, and with the Project will continue to be, an industry and national leader in applying wastewater to land, having started more than 30 years ago (at a time when most systems remained direct to surface water). This gives considerable assurance as to AFFCO's ability to sustainably manage the CLAWD system, as well as to its effects. AFFCO has proactively made significant modifications to improve its discharge regime over the years (including increasing the discharge to land) and is committed to continuing to look at options to reduce (and potentially one day avoid) discharges to surface water as the industry and technology changes.

6. The proposed treated wastewater discharge regime significantly improves the water quality effects of the existing system on the Oroua River by enhancing discharges to land and altering the discharge regime to the Oroua River so that no discharges occur below the median flow, and most discharges occur at times when the River is in flood (greater than 20% Flow Exceedance Percentile ("**20th FEP**")[1]). This is in comparison to the current regime where discharges may occur at river levels of half median flow. In terms of average discharge volume this equates to a 77.3% reduction in current volumes below the 20th FEP and a 181.8% increase in discharge volumes above the 20th FEP. This is significant as the risk of adverse effects caused by the discharge is greatest at times of low river flow and least at high river flows. It also reflects the One Plan whereby the water quality targets for DRP, SIN, POM, ScBOD5, water clarity and E Coli do not apply above the 20th FEP and is consistent with the Oroua Water Management Zone, zone wide value of the capacity of the River to assimilate pollution.

[1] This is the same as the measure Q20 used in **Dr Ausseil's** evidence.

7. The benefits of the Project are that it:

(a) provides for the long term sustainable use of the soils of the surrounding farmland and reduces the need for clean water irrigation of that farmland, providing efficient use of the wastewater for the benefit of the landowners and the environment;

(b) significantly reduces the existing water quality effects on the Oroua River, for example:

(i) in summer months, as no discharge will occur at flows below three times the median flow, the discharge will comply with all One Plan water quality targets containing flow cut-offs, and is not expected to result in any more than minor effects;

(ii) during the other months of the year, the proposed scenario eliminates any discharge to the Oroua River at flows below 7,590 l/s (the median flow) and therefore avoids any risk of directly causing effects during the most sensitive times;

(iii) it is predicted that the proposed discharge will cause lesser effects on water clarity and concentrations of ScBOD^5, POM, total ammonia-nitrogen and E. Coli than the current discharge so is unlikely to cause any significant effects (with the current discharges unlikely to cause any One Plan breaches);

(iv) below the 20th FEP flow (above the 20th FEP the One Plan does not have DRP and SIN targets) DRP and SIN concentrations are predicted to be on average 87% less than the current discharge, with the greatest improvements (93% and 94%) occurring in the remaining (as summer is avoided) sensitive for periphyton growth months of April and May with the increases in concentrations of DRP and SIN during those months likely to be minor in nature and unlikely to be confidently detected against background concentrations;

(v) the effects on periphyton will be significantly less than the current discharge (as the fundamental combination of factors for growth has been significantly reduced) with increases in the order of 0-4% and in the April and May period specifically the discharge is predicted to increase average biomass by 3.2% and peak biomass by 0.1%, such increases being very unlikely to be

detectable and the risk of causing One Plan target exceedances is relatively low; and

(vi) the proposed discharge regime will significantly mitigate the known mechanisms of effects of the discharge on macro invertebrate communities;

(c) reduces potential cumulative effects with the Feilding WWTP (i.e measured downstream of the Feilding WWTP) on the Oroua River, with the combined predicted effects being:

(i) for SIN concentrations, a reduction in the combined effects against the One Plan target levels from the current 120% to 38% for flows less than the 20th FEP. Overall, the One Plan target is predicted to be marginally met downstream of the Feilding WWTP; and

(ii) for DRP the concentration increase caused by the two discharges combined is predicted to reduce from 120% of the One Plan target currently to 33%. Overall, the One Plan target is still predicted to be exceeded downstream of Feilding, but by a significantly lesser amount.

(d) reduces effects of the discharges on the Manawatu River as a whole from:

(i) about 0.8% of the SIN load at Shannon (< 20th FEP) to 0.2%; and

(ii) about 3.6% of the DRP load at Shannon (< 20th FEP) to 0.8%.

(e) achieves the above environmental benefits in a manner, and with flexibility, that provides for the ongoing viability of the Aorangi plant (and hence maintains, and allows scope to improve, the significant social and economic benefits associated with the plant's operation).

8. These significant water quality benefits of the Project are not driven by significant effects of the existing CLAWD system but rather by AFFCO, in line with the One Plan, seeking to achieve further significant enhancement in the water quality of the Oroua River. Given the significant enhancement of existing water quality achieved by the Project, AFFCO is doing its fair share in improving water quality in the Oroua River and delivering, or moving towards, the One Plan targets and doing so in a manner consistent with the

One Plan value of the assimilative capacity of the Oroua River. Sustainable management requires all activities that discharge to the River, including diffuse discharges, to also do their fair share in enhancing the existing water quality so One Plan targets and values are ultimately achieved.

9. The Project provides for cultural values by including:

   (a) a discharge solution that removes the existing discharge from the Otoku Stream;

   (b) a design solution that provides for fish passage from the Oroua River to the Otoku Stream (presently such passage does not exist);

   (c) a discharge solution that uses a land passage system on the banks of the Oroua River so there is land passage of treated wastewater before it enters the River;

   (d) a discharge system that, as explained above, significantly reduces the effects of the existing discharge on the Oroua River below 20th FEP flows; and

   (e) conditions that:

      (i) require AFFCO to, every 5 years, investigate in consultation with tangata whenua the potential to apply more wastewater to land; and

      (ii) provide for cultural health index monitoring to better recognise tangata whenua's kaitiaki role with the river and area and to better identify the health status of the river as it relates to tangata whenua.

10. The Project achieves the sustainable management purpose of the RMA. In particular, the Project:

   (a) enables people and communities to provide for their social and economic wellbeing, in particular through the direct employment of 380 people, but more broadly supporting the economically significant agricultural sector in the district and region;

   (b) sustains the potential of natural and physical resources to meet the needs of future generations, particularly by enhancing irrigation to land and significantly reducing water quality and cultural effects of the discharge of contaminants to the Oroua River;

(c) is consistent with the objectives and policies of the relevant planning documents, and the proposed discharge regime will meet One Plan water quality targets or, where they are not met (such as for DRP), will move significant towards meeting those targets consistent with the One Plan policy direction;

(d) enables the ongoing efficient operation of the approximately $130m Aorangi plant;

(e) has been developed by AFFCO to ensure that adverse effects on the environment will be appropriately avoided, remedied, or mitigated; and

(f) ensures that any residual adverse effects of the Project will be minimal and acceptable, and the scale and degree of such effects do not outweigh the significant benefits of the continued operation of the Aorangi plant.

11. Ultimately, the Project refines the existing activities to provide significant environmental benefits by enhancing irrigation to land and significantly reducing the water quality and mauri effects of the discharge on the Oroua River. The Project, with the conditions proposed by AFFCO, achieves these significant environmental benefits in a manner that enables both flexibility in operation (and the ability to increase and decrease plant production) and the ongoing financial viability of the Aorangi plant in times of significant pressures within the meat processing sector. This will best enable investment in, and support the job and economic benefits from, the Aorangi plant.

12. The Project will achieve the sustainable management purpose of the RMA and, for that reason, the resource consent applications should be granted subject to the conditions as proposed by AFFCO.

Jurisdictional Issue

13. One jurisdictional issue arises regarding a memorandum from a Mr Curtis of AECOM dated 2 November 2016 addressing air quality matters. AFFCO's position is set out in full in **Appendix 1**, but in summary is that:

(a) this memorandum was provided very late (and outside the statutory timeframe), with no prior notification and no justification as to why, and introduced new material that was not contained in, or referred to in Horizon's section 42A reports;

(b) in the time available AFFCO has been unable to obtain an air quality expert to respond to it but **Mr Lowe** will respond to it in a practical manner in his supplementary evidence;

(c) AFFCO accepts the one change proposed to the conditions by **Mr Lowe** is response to the memorandum; and

(d) if the Panel is otherwise minded to apply any of AECOM's comments then it must:

(i) adjourn the hearing in relation to air quality matters;

(ii) provide directions as to the matters to be addressed with a timetable for evidence exchange to address those matters; and

(iii) reconvene the hearing to hear the matters.

BACKGROUND AND CONTEXT TO THE APPLICATION

Background

14. AFFCO operates a number of meat processing plants around New Zealand, including its Aorangi plant located on the outskirts of Feilding. As explained in the evidence of **Mrs Nuku** a meat processing plant was first established at the site in 1916, in the 1970's a wastewater system was installed (including treatment ponds) and in 1992 AFFCO rebuilt the plant. Over this time the quality and volume of discharges has constantly improved, for example in the 1970's there was five times the total volume of waste discharged than occurs today.[2] The plant led the way in applying treated wastewater to land and as explained by **Mrs Nuku** AFFCO has continued to proactively implement system improvements to reduce waste.

15. The value of Aorangi plant is approximately $130m. AFFCO has operated this plant since May 1992, which employs approximately 380 staff (and many more people as contractors) and presently processes approximately 120,000 cattle-beasts a year.

16. As shown in the Google maps attached in **Appendix 2**, the surrounding environment includes:

(a) to the north and west, the Oroua River and industrial and commercial areas of Feilding;

[2] Paragraph 35 of **Mrs Nuku's** evidence.

(b) to the north east and east, the Otoku Stream and rural farmland;

(c) to the south, State highway 54, the Feilding golf course and some dwellings.

The current AFFCO waste discharge system

17. The sources of wastewater to the treatment system, and the system itself, are summarised in the evidence of **Mr Lowe**. The system involves:

(a) a solids pond which separates wastewater from the solids (which settle out and are dried and used as a soil conditioner);

(b) an anaerobic treatment pond (organic matter is broken down in the absence of oxygen);

(c) an aerobic treatment pond (mechanical aeration and exposure to air and sunlight improve the wastewater quality); and

(d) two storage ponds.

18. Mr van Oostrom's report concludes that the treatment system reliably removes over 97% of BOD and suspended solids, over 50% of nitrogen, 5-10% of phosphorous and around 99.9-99.99% of faecal bacteria.

19. AFFCO currently uses a CLAWD system at its Aorangi plant as a means of discharging its treated wastewater, and has done so in various methods since the 1970's. From the storage ponds, treated wastewater is either:

(a) irrigated to land; or

(b) pumped to the river.

20. As explained in **Mrs Nuku's** evidence, AFFCO have proactively continued to improve the operations of the Aorangi plant. In relation to wastewater there have been significant changes costing over $2 million in the last 5 years.[3]

Past consenting history

21. Three of the activities for which AFFCO is seeking consent are currently authorised by consents which, although expired, continue to provide authorisation for the activities to be carried out until the new consent applications are determined. These 3 activities are:

[3] At paragraph 56.

(a) wastewater discharge to water;

(b) pond seepage; and

(c) wastewater discharge to land.

22. As set out in the evidence of **Mr Hill** (and the s42A report of **Mr Standen**), the compliance history has been very good, with one exception relating to an episode in December 2012 that involved a discharge of treated wastewater to the Oroua River in breach of consent conditions. As explained in Mrs Nuku's evidence,[4] AFFCO pleaded guilty, and has fixed the system to ensure that the cause of that discharge cannot occur again.

Current application

Best Practicable Option process

23. As explained in the evidence of **Mr Lowe** in developing the Project AFFCO has carefully considered a number of different treatment and discharge options before arriving at the Project. The way the Project has been developed and refined is consistent with a best practicable option ("**BPO**") process. In particular, this process has included looking at:

(a) alternative treatment options (costed at between $3.3m and $7.7m);[5]

(b) offsite treatment options (Palmerston North and Feilding WWTP were expensive (with Trade Waste fees beyond AFFCO's control), and those plants having existing issues, including the recent short term consent granted for Feilding WWTP);[6]

(c) various land discharge and storage options (with 100% land discharge requiring 250ha (plus) of land along with 180,000m^3 of storage (costing approximately $4.5m));[7]

(d) various surface water discharge options;[8]

(e) evaluation of internal plant processes to minimise water usage and waste production; and

(f) development of a wastewater and water balance model to represent a range of options and discharge regimes.

[4] At paragraph 60.
[5] At paragraph 113 of **Mr Lowe's** evidence.
[6] At paragraphs 110-111 and 116-120 of **Mr Lowe's** evidence.
[7] At paragraphs 4(b) and 121-131 of **Mr Lowe's** evidence.
[8] At paragraphs 132-137 of **Mr Lowe's** evidence.

24. The Project provides further refinement of the existing CLAWD system and benefits from over 30 years of operational knowledge of a system that has worked well. The CLAWD proposed by the Project was subject to a further optimisation process to provide for the sustainable use of the soils for land irrigation, maximise the use of storage, and minimise the discharge to the Oroua River at flows less than the 20th FEP (and avoids discharges at below median flows).

The Project

25. The current application does not propose any change to the treatment currently used. The differences between the current and proposed system are summarised in the evidence of **Mr Lowe**.[9]

26. In addition to refinement of the current activities, the Project includes a new land passage system for treated wastewater being discharged to water, utilising a new rock filter outlet on the banks of the Oroua River. This avoids the existing discharge into the Otoku Stream's lower reaches, provides cultural benefits, and also enables fish passage between the Oroua River and the Otoku Stream (which does not presently exist).

Consultation

27. AFFCO undertook consultation with neighbours, groundwater users and iwi as explained in the evidence of **Mrs Nuku**.

28. AFFCO acknowledges that Ngāti Kauwhata identifies as tangata whenua of the Feilding area, which includes the AFFCO plant and the Oroua River. AFFCO engaged with Ngāti Kauwhata in 2010 to discuss its plans to renew the resource consents, and has held a further 9 meetings since initial engagement to discuss aspects of the plant activities and resource consenting.

29. Through consultation it became clear early on that improvement in the condition of the Oroua River is an important priority for Ngāti Kauwhata.

30. More recently, Tanenuiarangi Manawatu Inc ("**TMI**" - Rangitaane o Manawatu's mandated iwi authority) and Ngāti Whakatere lodged submissions on the notified consent applications. Since then both iwi have been involved in discussions about the Project.

[9] At paragraph 48 of his evidence.

31. As a result of ongoing consultation with Ngāti Kauwhata, and discussions with TMI and Ngāti Whakatere, a number of changes have been made to the proposed design, and conditions proposed, to respond to cultural concerns. These are addressed in more detail below.

STATUTORY FRAMEWORK

32. Section 104 provides that when considering the applications for resource consent and any submissions, the Panel must, subject to Part 2 of the RMA, have regard to:

    (a) any actual and potential effects (positive and negative) on the environment of allowing the activity;

    (b) any relevant provisions of statutory planning documents;

    (c) any other matter the consent authority considers relevant and reasonably necessary to determine the application; and

    (d) the value of the investment.

Section 104B

33. The evidence of **Mr Edwards** describes each of the proposed activities as "discretionary" under the One Plan.

34. Under section 104B of the RMA, after considering an application for a resource consent for a discretionary activity or non-complying activity, the Panel may grant or refuse the application and, if it grants the application, may impose conditions under section 108.

Sections 105 and 107

35. Sections 105 and 107, which specify further considerations and restrictions in relation to consideration and determination of applications for discharge permits, are also relevant to the Panel's determination.

Part 2 of the RMA

36. Ultimately, the Panel must exercise an overall broad judgment and determine whether confirming the requirement and granting the resource consents meets the sustainable management purpose of the RMA, as set out in section 5.

37. That overall broad judgment by the Panel under section 5 is informed by the principles of the RMA as set out in section 6 (matters of national importance), section 7 (other matters) and section 8 (Treaty of Waitangi).

EFFECTS ON THE ENVIRONMENT

38. Under section 104, the Panel is to have regard to any actual and potential effects on the environment of allowing the activity, while section 5(2)(c) also refers to "*avoiding, remedying, or mitigating any adverse effects of activities on the environment*" as part of the sustainable management purpose of the RMA.

39. The environmental effects of the Project have been assessed in detail. These submissions focus on the key effects.

Positive effects

40. The positive effects of the Project are set out in the evidence of **Mrs Nuku**, **Mr Lowe**, **Dr Ausseil** and **Mr Edwards**.

41. Without the proposed consents the plant cannot operate. As explained in **Mrs Nuku's** evidence the Aorangi plant employs approximately 380 staff (and many more people as contractors). AFFCO pays around $22m in salaries and wages, and also contributes a significant amount to the local and regional economy, and supports the region's agricultural sector.

42. In addition, **Mrs Nuku** explains that the Manawatū-Wanganui Growth Study 2015 recognises the important role that the beef and lamb sector plays in the region (employing 8,343 people). The Growth Study identifies the significant economic pressures facing the region, and the need for growth, with sheep and beef farming and processing identified as one of eight 'opportunities' for growth. The Aorangi plant, and the Project, play an important role in providing for such growth opportunities. The consents sought provide flexibility and enable growth of plant output which results in more jobs and greater economic benefit for the district and region.

43. In addition to the positive economic and employment benefits, the Project:

    (a) enables more treated wastewater to be sustainably discharged to land (as discussed in the evidence of **Mr Lowe**);

    (b) results in a significant improvement to the water quality effects in the Oroua River (as discussed in the evidence of **Dr Ausseil**); and

(c) improves cultural effects by reducing water quality effects, provides overland discharge before entry of treated wastewater to the Oroua River, provides for fish passage to the Otoku Stream and provides for cultural health index monitoring.

Water quality effects

44. Development of the Project focused heavily on improvements to surface water quality, and it will lead to significant improvements in the quality of water in the Oroua River.

45. The Project's key refinement approach to reducing water quality effects is to avoid discharges below the median flow, significantly reduce (by 77.3% on average) discharge volumes below the 20thFEP such that the majority of the discharge occurs while the River is in flood (above the 20thFEP). This reflects the situation that the risk of adverse effects caused by the discharge is greatest at times of low river flow and least at high river flows. It also reflects the One Plan water quality targets whereby the targets for DRP, SIN, POM, ScBOD5, water clarity and E Coli do not apply above the 20th FEP[10] and is consistent with the Oroua Water Management Zone, zone wide value of the capacity of the River to assimilate pollution.

46. The current discharge, as explained in the evidence of **Dr Ausseil**, has no material effect on water quality over the summer period. For the rest of the year it causes material increases in in-river nutrient (DRP and SIN) concentrations at flows below the 20th FEP.

47. However, the nutrient targets are controlling factors for potential effects, and it is the consequence of the nutrient increase (i.e periphyton growth) as opposed to the nutrient increase itself, that may affect River values (and therefore constitute an effect). **Dr Ausseil** estimates that the material increase in DRP and SIN at flows below the 20th FEP, result in periphtyon biomass increases of 10-35% but whether these lead to exceedences of the One Plan periphyton targets is not known (it is known that 2 km downstream there is currently no significant periphyton issue).[11]

48. Only one set of macroinvertebrate monitoring results is available showing an exceedance of the One Plan target (of no more than 20% reduction in QMCI) on that occasion (November 2011).

[10] See paragraphs 69 and 70 of **Dr Ausseil's** evidence.
[11] At paragraph 9.

49. In relation to the Project the evidence of **Dr Ausseil** is that:

(a) in summer months, as no discharge will occur at flows below three times the median flow,[12] the discharge will comply with all One Plan water quality targets containing flow cut-offs, and is not expected to result in any more than minor effects;[13]

(b) during the other months of the year, the proposed scenario eliminates any discharge to the Oroua River at flows below 7,590 l/s (the median flow) and therefore avoids any risk of directly causing effects during the most sensitive times;[14]

(c) it is predicted to cause lesser effects on water clarity and concentrations of $ScBOD^5$, POM, total ammonia-nitrogen and E. Coli than the current discharge so is unlikely to cause any significant effects (with the current discharges unlikely to cause any One Plan breaches);[15]

(d) below the 20th FEP flow (as above, above the 20th FEP the One Plan does not have DRP and SIN targets) DRP and SIN concentrations are predicted to be on average 87% less than the current discharge, with the greatest improvements (93% and 94%) occurring in the sensitive[16] (for periphyton growth) months of April and May with the increases in concentrations of DRP and SIN during those months likely to be minor in nature and unlikely to be confidently detected against background concentrations;[17]

(e) the effects on periphyton will be significantly less than the current discharge (as the fundamental combination of factors for growth will be significantly reduced) with increases in the order of 0-4% and in the April and May period specifically, the discharge is predicted to increase average biomass by 3.2% and peak biomass by 0.1%, such increases being very unlikely to be detectable and the risk of causing One Plan target exceedances is relatively low;[18]

(f) the proposed discharge regime will significantly mitigate the known mechanisms of effects of the discharge on macro invertebrate

[12] **Dr Ausseil** (at his paragraph 10(a)) discusses a complete elimination of the discharge to the River at flows below 7,950 L/s (10% above median flow). This was an error and the median flow is 7,590 L/s.
[13] At paragraph 8.
[14] At paragraph 80.
[15] At paragraphs 9(a) and 10(b).
[16] Summer is also a sensitive time for periphyton growth but discharges do not, and will not, occur during this time.
[17] At paragraphs 10(c) - (d).
[18] At paragraphs 10(f) - (h) and 11 – 12.

communities. Whilst **Dr Ausseil** considers the effects of the discharge on macro invertebrate communities will be significantly reduced, the exact degree of improvement and any residual effects cannot be predicted with certainty and will be confirmed by monitoring.[19]

50. In relation to potential cumulative effects with Feilding WWTP (i.e measured downstream of the Feilding WWTP) on the Oroua River, the combined predicted effects are:[20]

    (a) with regard to SIN concentrations, a reduction in the combined effects against the One Plan target levels from the current 120% to 38% for flows less than the 20th FEP. Overall, the One Plan target is predicted to be marginally met downstream of the Feilding WWTP;[21] and

    (b) with regard to DRP, the concentration increase caused by the two discharges combined is predicted to reduce from 120% of the One Plan target currently to 33%. Overall, the One Plan target is still predicted to be exceeded downstream of Feilding, but by a significantly lesser amount.

51. Through the Project AFFCO is doing its fair share in enhancing the water quality of the Oroua River. As the Environment Court stated in the Feilding decision, "*at face value removing it without reducing other DRP contributions first would appear to have limited benefit. This contributes to our view that considering the effects of the discharge in isolation of other discharges is likely to be inequitable and unsustainable*."[22]

52. In relation to the Manawatu River as a whole the current AFFCO discharge contributes:

    (a) about 0.8% of the SIN load at Shannon (< 20th FEP) which will reduce to 0.2% with changes to the existing system proposed by the Project; and

    (b) about 3.6% of the DRP load at Shannon (< 20th FEP) which will reduce to 0.8% with changes to the existing system proposed by the Project.

[19] This is consistent with the position adopted by the Environment Court for periphyton and macroinvertebrate values in the Feilding decision – see paragraphs 116 and 118 -120.
[20] At paragraphs 13 and 100-109.
[21] This is consistent with paragraph 111 of the Environment Court's Feilding decision.
[22] At paragraph 108.

53. Overall, the Project will significantly enhance the water quality of the Otoku Stream, Oroua River and Manawatu River as a whole and will lead to compliance with One Plan targets, apart from DRP which although exceeded:

    (a) the target is essentially already reached upstream of the AFFCO discharge;

    (b) the current effects on DRP concentrations at < 20th FEP will be reduced by 87% by the Project; and

    (c) the periphyton effects (which are why DRP is a measured contaminant) will be significantly less than the current discharge and very unlikely to be detectable, and the risk of causing One Plan target exceedances is relatively low.

Soil Health

54. The soil is the primary receiving environment for the irrigation to land aspects of the Project. The potential impact of the discharge on the soil and plant system may be on soil structure, erosion potential, contamination, and nutrient uptake and removal.

55. As explained in the evidence of **Mr Lowe**, the proposed system provides for more land than is needed, providing operational flexibility. The system is designed using best practice to only irrigate treated wastewater under a deficit situation where the water applied is determined by the water demand of the plants growing.[23]

56. The opinion of **Mr Lowe** is supported by the overall view of **Dr Horne** that the proposed irrigation system is "*sound*" and that there are a number of features that will help minimise environmental effects.[24]

57. Overall, the land irrigation system has been carefully designed to ensure the sustainable use of the soil resource of the irrigated land.

Groundwater

58. Groundwater issues relate primarily to seepage from the treatment and storage ponds which occupy an area of approximately 6ha. The ponds are lined with a clay substrate, but as they were installed over 40 years ago the

[23] At paragraphs 8 and 55 of **Mr Lowe's** evidence.
[24] At paragraphs 10 and 11.

exact permeability of the clay lining is unknown. What is clear from the evidence of **Mr Lowe**,[25] is that:

(a) the Horizons permitted activity level for pond seepage is 1 x 10^{-9} m/s, which for the ponds equates to a change in surface level of 0.6mm per day (well within variations created by evaporation and rainfall levels);

(b) over their 40 year life sludge settling in the ponds will have further filled any gaps in the clay substrate improving retention rates;

(c) seepage of 1 x 10^{-7} m/s would equate to a rate of seepage loss of approximately 75% of the inflow and be readily identifiable so can be discounted;

(d) seepage of 1 x 10^{-8} (50m^3/day) is feasible and realistic;

(e) while there is elevation of contaminants in one groundwater monitoring bore immediately adjacent to the ponds:

(i) there are other neighbouring sites unaffected by pond seepage that have higher contaminant levels; and

(ii) any adverse effect attributable to seepage from the ponds does not occur further away, and there is no evidence of a contaminant plume despite 40 years of operation of the ponds;

(f) there is no effect on down gradient groundwater users;

(g) while there is no direct groundwater path to the Oroua River the groundwater appears to run parallel to the River so seepage to the River may eventually occur;

(h) any such seepage would be a partial volume contribution (i.e not all the seepage would reach the River) well away from the ponds, thereby providing time for attenuation of contaminant levels; and

(i) there is no evidence of any significant effects resulting from pond seepage after 40 years of operation (which is supported by **Mr Thomas'** section 42A report).

59. The overall position of **Mr Lowe** is supported by **Ms Manderson's** section 42A report stating "*although uncertainty [as to seepage rates] exists, neither of the experts [Mr Brown and Mr Thomas] suggest effects or impacts of this*

[25] At paragraphs 82 – 103.

are significant. *More likely it is adding to the overall cumulative effects of the receiving environment.* … ."[26]

60. As explained in **Mr Lowe's** evidence[27] AFFCO proposes conditions for more monitoring bores related to pond seepage. This monitoring will enable further information to be obtained on the effect of the ponds on groundwater quality. AFFCO will also investigate in greater detail the potential seepage rates. If the monitoring shows a significant effect in relation to One Plan water quality targets then AFFCO will consider mitigation options based on the actual data.

61. This approach is consistent with Ms Manderson's section 42A report and appropriate given the significant $1-2.5m cost[28] (as well as plant disruption) to line the ponds. As explained in **Mrs Nuku's** evidence, the ongoing viability of the Aorangi plant needs to be considered in light of a very competitive market and this cost will affect the plant's viability in the current market.[29]

Odour

62. The irrigation of wastewater has the potential to release odour and aerosols into the air that can travel and affect people beyond the irrigation area. The AEE addressed potential odour issues and referred to buffer distances, wind speed limits, and an operation plan, to ensure such that objectionable odours will not occur beyond the boundary.[30] The AEE assessed potential odour effects to be consistent with those of dairy effluent application, which is a common practice in the surrounding environment, and the overall effect to be no more than minor.[31]

63. While submissions were received opposing the discharge to air consents they were related to opposing the suite of consents, as opposed to raising any air quality issues. The section 42A report of **Mr Standen**, and the evidence of **Mr Hill**, is that there have been no odour complaints despite irrigation to land occurring for over 40 years. AFFCO also proposes installing a weather station with wind direction and speed shut offs, which provides further mitigation for a potential effect that from over 30 years of irrigation operation has not lead to odour complaints.

[26] At paragraph 57 of **Ms Manderson's** section 42A report.
[27] At paragraphs 95, 96 and 169.
[28] At paragraph 94 of **Mr Lowe's** evidence.
[29] At paragraphs 45 and 57 of **Mrs Nuku's** evidence.
[30] At section 5.8. Air quality matters were also addressed in the response to the section 92 request dated 29 May 2015.
[31] At section 8.10.

64. **Ms Manderson's** section 42A report referred to the proposed irrigation operation protocols and buffer margins and concluded that these would "*ensure potential effects will be no more than minor*."[32]

65. The position of the effects being no more than minor is supported by the section 42A report of **Mr Standen** and the evidence of **Mr Hill**, neither of which raise any odour compliance or complaint issues.

66. As addressed in the jurisdictional section above, since the filing of the Applicant's evidence, Horizons has obtained a memorandum from a Mr Curtis of AECOM regarding air quality matters and proposing a number of new conditions. **Mr Lowe** will address these matters in his supplementary evidence, and counsel will cover air discharge matters if necessary further in closing submissions.

Cultural

67. AFFCO acknowledges Ngāti Kauwhata as tangata whenua with primary kaitiaki role over the area, including the Oroua River, in the vicinity of the Aorangi plant. Consultation has occurred over a long period of time with Ngāti Kauwhata, and a Cultural Impact Assessment ("**CIA**") was commissioned in February 2016 to address the effects of the Project on Māori values. Specific comments on the CIA and the matters that it addresses are provided in the evidence of **Mr Lowe**, **Mr Edwards** and **Dr Ausseil**.

68. In addition to Ngāti Kauwhata, submissions were received by TMI and Ngāti Whakatere.

69. As explained in the evidence of **Mr Lowe**[33] the CIA does not acknowledge that the existing, and proposed, discharge does not occur over summer months (unless the river is in flood flow). This avoids effects at the time of year when activities, such as swimming, are more likely to occur.

70. The evidence of **Dr Ausseil** identifies that the reports relied on in the CIA are all pre-2007 and since that time there has been significant reductions in contaminants into the River. **Dr Ausseil's** opinion is that these old reports do not provide an accurate representation of the current state of the Oroua River, and that there are a number of more up-to-date reports available from Horizons.

[32] At paragraph 73.
[33] At paragraph 152.

71. The CIA seeks 100% discharge to land, and differentiates between scientific (physical) water quality effects and cultural (metaphysical) effects related to water. AFFCO acknowledges and accepts that difference, but the Environment Court has repeatedly found that bio-physical effects provide useful, tangible, evidence as to the scale of meta-physical effects.[34] In this case too so do the One Plan targets. In terms of meta-physical cultural effects that relate to beliefs, the High Court has observed that beliefs are not resources that can be sustainably managed.[35]

72. While AFFCO agrees that a 100% to land discharge option is an ultimate goal, the cost of approximately $4.5m as set out in **Mr Lowe's** evidence[36] for the land and storage required is simply too expensive. As stated in the evidence of **Mrs Nuku** in the current commercial environment such costs would make the plant unprofitable and likely lead to its closure.[37] To the extent iwi submitters seek there be no cultural effects, case law is clear that the RMA is not a "*no effects*" statute.[38] Given the severe social and economic costs associated with a 100% discharge to land it is not a sustainable option. Further, for the reasons set out below, the Project is consistent with the One Plan objectives and policies which include cultural values.

73. However, in order to mitigate adverse effects, including cultural effects, AFFCO have proposed significant changes to the current system and additional provisions to provide for cultural concerns, as raised in the CIA and submissions, including:

    (a) developing a discharge solution that removes the existing discharge from the Otoku Stream;

    (b) developing a design solution that provides for fish passage from the Oroua River to the Otoku Stream (presently such passage does not exist);

    (c) developing a discharge solution that uses a land passage system on the banks of the Oroua River so there is land passage of treated wastewater before it enters the River;

[34] See for example *Mahuta v Waikato Regional Council* (EnvC) A91/98
[35] *Friends and Community of Ngawha incorporation v Minister of Corrections* [2002] NZRMA 401.
[36] At paragraph 4(b).
[37] At paragraph 77. In this respect the Project is akin to the Environment Court's statement at paragraph 133 of the Feilding decision where it commented "*There is no obvious way in which the Applicant can satisfy the aspirations of Ngati Kauwhata and Ngati Whakatere relating to mauri, at least in the short term and perhaps not fully in the longer term*."
[38] See for example *Royal Forest and Bird protections Society v Buller District Council and West Coast Regional Council* [2013] NZRMA 293 at [52] and Shirley Primary School v Christchurch City Council [1999] NZRMA 66.

(d) providing for a discharge system that, as explained in the evidence of **Dr Ausseil**, significantly reduces the effects of the existing discharge on the Oroua River, in particular with the bulk of the discharge being shifted to above 20th FEP flows; and

(e) providing for conditions, as explained in the evidence of **Mr Lowe** and **Mr Edwards**, that are effective in addressing issues raised in the CIA, including:

(i) a proposal that every 5 years AFFCO investigates the potential to apply more wastewater to land which will include consultation with tangata whenua; and

(ii) providing for cultural health index monitoring to better recognise tangata whenua's kaitiaki role with the river and area and to better identify the health status of the river as it relates to tangata whenua.

74. In addition, outside of the consenting process, AFFCO is working with Ngāti Kauwhata to:

(a) provide planting on land it owns adjacent to the Otoku Stream and the Oroua River; and

(b) assist in re-establishing a koura fishery in the Otoku Stream, to be managed by Ngāti Kauwhata.

75. Finally, the CIA also seeks that the consent be limited to a term of 10 years to provide for consideration of a 100% to land irrigation system and on the basis that this is the same as the Feilding WWTP. Term is addressed in detail below.

76. AFFCO appreciates the recognition in the evidence of **Mr Emery** on behalf of Ngāti Kauwhata of the amount of work that has occurred, and also strongly values its relationship with Ngāti Kauwhata and the members of the Oroua Catchment Care Group. AFFCO also hopes that its collaborative approach provides long term sustainable outcomes.

77. To the extent **Mr Emery's** evidence refers to cultural health index monitoring, AFFCO has proposed a process for such monitoring in its proposed conditions. The water quality matters identified by **Mr Emery** have been appropriately covered in the evidence of **Dr Ausseil**, and the Project, with the

proposed conditions attached to **Mr Edward's** evidence, will significantly reduce water quality effects.

River works

78. The section 42A report of **Mr Bell**, and the evidence of **Mr Hill**, is that subject to the proposed conditions, the land passage discharge structure will have less than minor effects.

Overall

79. Based on the AEE, the section 42A reports and the evidence prepared by AFFCO's other witnesses, **Mr Edwards** concludes that no unacceptable adverse environmental effects have been identified despite a meatworks processing plant having been operational at the site since 1916, and a CLAWD system being operational for over 30 years (and the ponds for over 40 years). Over this time the system has operated well and, apart from one system failure in 2012, has had no compliance or complaint issues. Despite this, the Project will significantly reduce the existing water quality and cultural effects while enabling the long term operation of the Aorangi plant.

80. Where the potential for more than minor adverse effects has been identified, measures are proposed (primarily to be given effect through conditions) to remedy or mitigate the adverse effects to an acceptable level. Overall, AFFCO's experts conclude that the effects will be significantly less than those that presently exist and have been appropriately avoided, remedied or mitigated.

PLANNING DOCUMENTS

81. The evidence of **Mr Edwards** steps through all the relevant planning documents and planning provisions.

82. The Project will enhance the existing water quality of the Otoku Stream, Oroua River and Manawatu River and is consistent with Objectives A1 and A2 of the National Policy Statement for Freshwater Management ("**NPSFM**").[39] The Project is also consistent, to the degree relevant, to Objective D1 and Policy D1 of the NPSFM for the reasons set out in the consultation and cultural sections above, and Part 2 discussion below. In addition, AFFCO, and iwi, are part of the Oroua Catchment Care Group.

[39] Noting that Objective A2 is "maintain or improve".

83. In terms of the RPS:

(a) the Project is consistent with Chapter 2 – Te Ao Māori due to:

(i) regard being given to mauri and kaitiakitanga through the proposed provisions by AFFCO as set out in the cultural effects section above, in particular the overland flow system prior to discharge and the cultural health index monitoring (consistent with Objective 2-1); and

(ii) Policy 2-4(a), which relates to management of water quality for the special qualities significant to Maori, and 2-4(d), which relates to access to clean water, have been recognised[40] through the significant reduction in water quality effects by the Project, the provision of overland passage of treated wastewater, and all other proposed benefits including cultural health index monitoring discussed in the cultural effects section above (consistent with Policy 2-4(a) and 2-4(d)).

(b) the Project is consistent with Chapter 5 – Water due to:

(i) the significant enhancement of water quality as explained in the evidence of **Dr Ausseil** so that One Plan values are supported and where those values are not supported significant enhancement will occur (consistent with Objective 5-2 and Policy 5-1);[41]

(ii) consistency with the value for the River's capacity to assimilate pollution;

(iii) compliance with One Plan targets where existing targets are achieved (consistent with Policy 5-3);

(iv) enhancement of water quality where the targets are not met (noting that these are not limits), for example with DRP concentrations are predicted to be on average 87% less than the current discharge, with the greatest improvement (93%) occurring

[40] Noting the even with the complete removal of the discharge the water in the Oroua River will not be clean at the site and that it is not a targeted catchment (under Policy 5-7) so there are no restrictions under that policy on intensive farming activities as discussed below.
[41] Table 5-2 provides the management objectives for the surface water management values. Many of these values, such as for mauri, require maintenance or enhancement.

in the sensitive[42] (for periphyton growth) months of April and May (consistent with Policy 5-4);

(v) groundwater quality beyond the ponds is maintained and immediately below the ponds where there are elevations in some parameter concentrations (but not out of step with the wider area[43]) water quality will be maintained and the BPO system has been adopted as set out in **Mr Lowe's** evidence (consistent with Objective 5-2 and Policy 5-6);

(vi) the site is not within a targeted catchment (under Policy 5-7) where intensive farming requires active management, a fact picked up on by the Environment Court in the Feilding WWTP decision[44] when it stated "*We cannot help seeing a degree of incongruity in this, the Regional Council is putting clear pressure on the Applicant to reduce nutrient inputs to the River, apparently without at least requiring some other dischargers to do the same. … The need for further future upgrades to the WWTP or its associated discharge regime should not be considered in isolation from responsible, wider catchment management initiatives directed at reducing nutrient loads to the River generally*";[45] and

(vii) the point source discharge is consistent with Policy 5-9 as it relates to Policies 5-3 to 5-5 above and also is consistent with the factors in paragraphs (a) to (g) for the reasons set out in the evidence of **Mrs Nuku**, **Mr Lowe** and **Dr Ausseil** (including using a BPO process to maximise discharges to land and (with the use of storage) to avoid any discharges below the median flow); and

(c) the Project is consistent with Chapter 7 – Air as ambient air quality will be maintained (consistent with Objective 7-1) and air quality will be managed in accordance with Table 7-3 to not cause an offensive or objectionable odour beyond the property boundary (consistent with Policy 7-3) through the proposed management practices, wind cut offs and buffer distances. There is no compliance or complaint history relating to odour despite the 30 years of operating an irrigation to land system. Also, no submissions raised odour issues.

[42] Summer is also a sensitive time for periphyton growth but discharges do not, and will not, occur during this time.
[43] Paragraph 90 of Mr Lowe's evidence.
[44] Manawatu District Council v Water Protection Society and Others [2016] NZEnvC 53.
[45] At paragraph 148.

84. In terms of the Regional Plan:

(a) Chapter 12 - the General Objectives and Policies are discussed in relation to term in detail below;

(b) Chapter 14 – Discharges to Land and Water:

(i) Policies 14-1 and 14-2 set out decision-making matters for discharges to water and land and refer to Chapters 2 and 5 (addressed above) and the appropriateness of the BPO is considered above;

(ii) Policy 14-3 relates to examination of industry best practice standards, which do not exist for processing plant wastewater (which is why it is not addressed in **Mr Edwards'** evidence). However, the Aorangi plant is, and has been, a leader in the use of a CLAWD system. In relation to pond seepage **Ms Manderson** claims[46] that guidance should be taken from IPENZ dairy farm practice note.[47] However, this practice note applies to new ponds rather than existing ponds. **Ms Manderson's** position also does not recognise that the treatment and storage ponds for the Aorangi plant are a significantly different type and scale to dairy farm ponds (plus existing monitoring will continue, and is proposed to be expanded);

(iii) Policy 14-4 sets out consideration of discharge options and regimes. These are addressed in the evidence of **Mr Lowe** in the BPO/option selection section above, and for those reasons the Project consistent with this policy; and

(iv) Policy 14-8 sets out monitoring requirements with which the proposed conditions comply; and

(c) Chapter 15 – relates to air quality. The Project maintains air quality (consistent with Objective 15-1) and the rural location of the site, along with existing land uses, and the proposed management techniques provide for the Project to be consistent with Chapter 7 above and Policy 15-2. Land application has occurred for over 30 years without compliance or complaint issues and no submissions on odour issues were received.

[46] At paragraph 127.
[47] **Mr Lowe** and **Mr Hill** were contributing authors to this practice note.

85. Overall, the Project is consistent with the relevant national statements, regional and district policy and plans. This is because, in summary, the policy framework:

(a) recognises and seeks to provide for the positive effects of the Project in terms of enhancing water quality and, where One Plan targets are exceeded, moving towards achieving those targets as well as enabling people and communities to provide for their social and economic wellbeing; and

(b) calls for the efficient use of physical and natural resources, safeguarding of the life supporting capacity of water bodies, and supporting sustainable land management practices. The Project can be implemented in a manner that operates within the stipulated planning criteria and can be monitored, and sufficiently managed, by way of conditions of consent to appropriately avoid, remedy, or mitigate adverse effects on the environment.

OTHER MATTERS

86. Both **Mr Edwards** and **Ms Manderson** consider the Manawatu River Leaders Accord to be a relevant other document. The main goal of the Accord is to improve the mauri (life force) of the Manawatu River, while the goals include the sustainable use of land and water resources of the Manawatu Catchment to underpin the economic prosperity of the region. While AFFCO is a signatory to the Accord, it does not have any specific actions related to it. However, for the reasons set out above in relation to water quality and cultural matters, and the social and economic benefits, the Project is consistent with the goal(s) and intent of the Accord.

87. Again both **Mr Edwards** and **Ms Manderson** consider the Manawatū-Whanganui Growth Study 2015 to be a relevant other document. As discussed above, and in the evidence of **Mrs Nuku**, the Growth Study identifies the significance and opportunities of the sheep and beef sector to the region's economy and growth prospects. It also identities the pressures facing the industry and the likely significant job losses in the region should consolidation of the processing sector occur.

VALUE OF THE INVESTMENT

88. As stated in **Mrs Nuku's** evidence, the value of the Aorangi plant is $130m. This is a significant amount and makes the plant a important physical

resource both in the Manawatu District and in the region. As **Mr Edwards** states, the value of the investment is greater than its purely monetary value; in particular it provides 380 direct jobs and contributes significant money into, and supports the broader agricultural sector, of the district and regional economies.

FURTHER CONSIDERATIONS FOR DISCHARGE CONSENTS

Section 105

89. In relation to the discharge permits sought for the Project, section 105 requires the Panel to have regard to:

    (a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects;

    (b) the applicant's reasons for the discharge; and

    (c) any possible alternative methods of discharge, including discharge into any other receiving environment.

90. For the reasons explained in the evidence of **Mr Edwards**, the requirements of section 105 are satisfied by the Project,[48] and are set out in:

    (a) the evidence of **Dr Ausseil** and **Mr Lowe** in relation to the nature of the discharge and the sensitivity of the receiving environment to adverse effects;

    (b) the evidence of **Mrs Nuku** and **Mr Lowe** in relation to AFFCO's reasons for the discharge (in particular the cost of acquiring land and providing storage to achieve a greater discharge to land); and

    (c) the evidence of **Mr Lowe** in relation to the alternative methods of discharge considered in the options selection (BPO) process.

Section 107

91. Section 107 contains particular restrictions on the grant of certain discharge permits. The evidence of **Dr Ausseil**, **Mr Edwards** and the section 42A report of **Ms Manderson** is that the proposed discharge activities are consistent with section 107.

[48] At paragraphs 135 – 139.

CONDITIONS

92. As stated in **Mr Edwards'** evidence there is a large amount of agreement between the experts for Horizons and AFFCO on conditions. Since filing evidence there have been discussions with Horizons experts to try and clarify the intent of conditions and AFFCO's experts are awaiting responses from Horizons.

93. With the conditions proposed by AFFCO's experts, as attached to the evidence of **Mr Edwards**, and as updated before this hearing and reported on during the hearing, the adverse effects of the Project are appropriately avoided, remedied and mitigated and appropriate management, monitoring and reporting regimes are in place to ensure sustainable outcomes.

CONSENT TERM

94. AFFCO sought a term of 35 years in the application for the discharge consents. Based on the common expiry date, **Mr Edwards** supports a term of 32 years for the discharge consents (and AFFCO agrees). **Mr Edwards'** reasons are set out in detail in his evidence but in summary:

    (a) applying Policy 12-5(b):

        (i) the Project applies appropriate industry benchmarks and standards:

            (1) while the industry has no standards for wastewater discharges the Aorangi plant has been, and remains, an industry leader in utilising land irrigation techniques and the optimised CLAWD system applies industry best practice as set out in the evidence of **Mr Lowe**;

            (2) while the ponds are clay lined **Ms Manderson** has raised seepage from them as an issue. The evidence of **Mr Lowe** described above is that this seepage is likely to be at a rate of 1×10^{-8}, and no expert has raised significant adverse effects arising from the seepage despite the ponds operating for over 40 years. The permitted activity standard is 1×10^{-9}. The permitted activity standard cannot be a requirement for term considerations, and is inappropriate for existing operations and a plant the scale of the Aorangi

plant where monitoring has occurred and further monitoring is proposed;

(ii) the Project applies the most appropriate balance between environmental protection and investment by AFFCO:

(1) based on the evidence of **Mr Lowe** and **Dr Ausseil** the optimised CLAWD system will enable the sustainability of the irrigated soils and significantly reduce current contaminant loads into the Oroua River below the 20th FEP (and avoid them under median flows);

(2) based on the evidence of **Mr Lowe** and **Mr Hill** the proposed discharge regime will mitigate cultural effects, including by avoiding discharges into the Otoku Stream, providing for land passage using a rock filter system and providing for fish passage to the Otoku Stream;

(3) based on the evidence of **Mrs Nuku**:

A. AFFCO proposes a 5 year review, in consultation with iwi, of options to increase discharges to land and also cultural health index monitoring;

B. lining the ponds to achieve the permitted activity standard for seepage is a significant cost that will affect the economic viability of the Aorangi plant during a time of significant sector pressures; and

C. providing 100% land discharge is a significant cost that will likely, in the current sector environment, make the Aorangi plant unprofitable and lead to its closure;

(iii) the proposed conditions of consent attached to the evidence of **Mr Edwards** include a review condition; and

(iv) the Project is essential to enable the ongoing operation of the $130m Aorangi plant and all of the associated jobs and economic benefits associated with its operation. There is no dispute that the Aorangi plant is significant infrastructure at a district and regional level; and

(b) in addition:

(i) the pond treatment system is widely used in New Zealand and popular due to its simplicity and reliability;[49]

(ii) the management of a CLAWD system is well understood after over 30 years of operation (and no management, monitoring, compliance or complaint issues have arisen, excluding the one failure in 2012 which has been rectified with no further compliance issues occurring);

(iii) the effects of the Project, after 30 years of operation (and 40 years for the ponds) and a processing plant operating and discharging at the site for over 100 years, are predictable;

(iv) there are significant positive social and economic effects in providing for the ongoing operation of the Aorangi plant on a long term sustainable basis;

(v) the Project will either achieve One Plan targets or where those targets are not achieved (such as for DRP) significantly enhance the current situation in accordance with the objective and policy direction move towards achieving target compliance such that AFFCO is doing its 'fair share';

(vi) while there was a compliance issue in 2012, as stated in the evidence in **Mr Hill** and the section 42A report of **Mr Standen**, that has been the sole compliance issue and, as **Mrs Nuku** states in her evidence, AFFCO has learnt from this and implemented systems to ensure it does not occur again (which is supported by the clean compliance history since);

(vii) the quality of the discharge is consistent, as stated in the evidence of **Mr Lowe**, and the nature of the treatment process and any changes will not change the characteristics of the discharge;

(viii) as explained in **Mrs Nuku's** evidence a shorter term, such as 10 years sought in the CIA, fails to provide sufficient financial certainty for investing in and operating a processing plant in today's commercial environment and is likely to lead to closure of

[49] Section 5 of Mr van Oostom's report.

the plant. The Aorangi plant needs long-term certainty. A shorter term will significantly constrain any growth of the plant and will likely shift investment to other plants. In an industry facing significant drivers to consolidate in the short term, it will make it more likely that should consolidation occur another site with greater certainty will be preferred; and

(ix) the 32 year term aligns with the relevant common catchment expiry date.

95. The CIA comments that a 10 year term is consistent with the recent Feilding WWTP consent term. This is not a lawful reason to apply 10 years to the AFFCO consents.[50] In addition:

(a) there is no discharge of human effluent (as for the Feilding WWTP) in the AFFCO discharges and Policy 5-11 does not apply (despite that AFFCO is proposing a land passage discharge system);

(b) despite one incident in 2012, the treated wastewater discharges from the Aorangi plant have a clean compliance history and there is not at least a "*moderate risk*" of non-compliance over the consent term;[51] and

(c) AFFCO's operations are common place and benefit from a long history of operation, and use simple and reliable technology, such that uncertainty as to output of effluent quality and associated non-compliance issues do not apply and hence:

(i) it is not novel technology and the only such system in Australasia;[52] and

(ii) a precautionary approach as commented on in the Environment Court's Feilding decision,[53] is not required.

96. Overall, a 32 year consent term is appropriate for the Project, and, for the reasons set out above, achieves the purpose of the RMA.

[50] This equally applies to the fact that simply because the Shannon WWTP got a 32 year term does not mean that a 32 year term should be applied to AFFCO.
[51] At paragraph 169 of the Environment Court's Feilding decision the Court comments on the Feilding WWTP's poor compliance history, at paragraph 67 the Court commented on a "history of non-compliance" and at paragraph 54 the Court stated that it could be "*at least a moderate risk that compliance will not be consistently achieved over a 10-year consent term … .*".
[52] See paragraphs 38 and 53 of the Environment Court's Feilding decision.
[53] At paragraph 148.

OVERALL PART 2 RMA ASSESSMENT

97. The Panel's ultimate decision on these applications is to be made under Part 2 of the RMA, which sets out the purpose and principles of the RMA.

98. The overriding purpose of the RMA is to "*promote the sustainable management of natural and physical resources*". Sustainable management is defined in section 5(2) of the RMA and is discussed in more detail below.

Section 6 Matters of national importance

99. Section 6 provides that the Panel shall, in achieving the sustainable management purpose under section 5, recognise and provide for the matters of national importance set out in that section. The matters relevant to the Project are addressed below.

Section 6(a)

> *"the preservation of the natural character of … rivers and their margins"*

100. While the Oroua River (and the Otoku Stream) and its environs as it passes the site is largely modified in nature (including stopbanks and river control works, industry, roading and farming) the natural character will be maintained through the proposed rock filter river structure, which is more natural in character than a pipe directly into the river, and the structure will enable fish passage into the Otoku Stream which presently does not exist. As explained in **Mrs Nuku's** evidence, while not part of the consents, AFFCO is working with Ngāti Kauwhata to:

    (a) provide planting on land it owns adjacent to the Otoku Stream and the Oroua River; and

    (b) assist in re-establish a koura fishery in the Otoku Stream, to be managed by Ngāti Kauwhata.

101. In addition, as explained in the evidence of **Dr Ausseil**, the Project will significantly improve the water quality of the Oroua River.

102. Overall the Project recognises and provides for the natural character of the Oroua River (and the Otoku Stream) and its environs.

Section 6(e)

> *"the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga"*

103. This relationship has been recognised and provided for by AFFCO in the following ways:

(a) since lodgement, AFFCO has undertaken extensive consultation with Ngāti Kauwhata as tangata whenua and has resourced the preparation of the CIA. AFFCO looks forward to continuing to work with iwi to improve the mauri of the Oroua River through planting, fish passage, fishery opportunities, through the proposed cultural health index monitoring and the Oroua Catchment Care Group;

(b) the Project avoids discharges to the river over the summer months (unless the river is in flood flow) avoiding effects when recreational activities are more likely to occur;

(c) the Project enhances the amount of treated wastewater irrigated to land, and will discharge at higher river flows than present, significantly improving the existing water quality of the Oroua River;

(d) the Project refines the existing CLAWD system by:

(i) removing the existing discharge from the Otoku Stream;

(ii) providing a design solution that provides for fish passage from the Oroua River to the Otoku Stream (presently such passage does not exist); and

(iii) providing a discharge solution that uses a land passage system on the banks of the Oroua River before treated wastewater enters the River; and

(e) the proposed conditions will ensure the improved environmental outcomes in relation to water quality, discharge design and operational matters, and include:

(i) a proposal that every 5 years AFFCO investigates, in consultation with tangata whenua, the potential to apply more wastewater to land; and

(ii) providing for cultural health index monitoring to better recognise tangata whenua's kaitiaki role with the river and area and to better identify the health status of the river as it relates to tangata whenua.

104. In addition, as set out above, outside of the consenting process AFFCO is working with Ngāti Kauwhata to:

(a) provide planting on land it owns adjacent to the Otoku Stream and the Oroua River; and

(b) assist in re-establish a koura fishery in the Otoku Stream, to be managed by Ngāti Kauwhata.

105. While the CIA seeks a 100% discharge to land the evidence of **Mrs Nuku** is that the price of this is presently unaffordable and is likely to lead to closure of the Aorangi plant. The CIA also seeks a 10 year term. Issues as to term, and the ongoing viability this would create for the Aorangi plant, are addressed above.

106. AFFCO appreciates the recognition in the evidence of **Mr Emery** on behalf of Ngāti Kauwhata as to the amount of work that has occurred and looks forward to continuing its collaborative approach with iwi to provide long term sustainable outcomes, including through the wider Oroua Catchment Care Group.

Section 7 Other matters

107. Section 7 provides that the Panel shall, in achieving the sustainable management purpose under section 5 of the RMA, have particular regard to the matters set out in that section. The matters relevant to the Project are addressed below.

Sections 7(a) and 7 (aa)

"kaitiakitanga" and "the ethic of stewardship"

108. The kaitiaki role of tangata whenua has been reflected in the strengthened working relationships formed between AFFCO and tangata whenua, such as planting and fishery opportunities. The conditions also provide for the kaitiaki role of the tangata whenua by seeking to draw on their knowledge and skill through Cultural Health Index monitoring (and the Oroua Catchment Care Group).

109. The ethic of stewardship (these factors are also relevant to iwi's kaitiaki role above) has been promoted as the Project enhances irrigation of treated wastewater to land in a sustainable manner. Further, the discharges to the river will be at a time when the river has much greater assimilative capacity

(in accordance with the One Plan value) such that the effects on water quality will be significantly reduced. AFFCO has proposed a condition where every five years it investigates opportunities to provide greater irrigation to land. The Project removes discharges from the Otoku Stream and enables fish to access that waterway. In addition, AFFCO is planting land it owns adjacent to the Otoku Stream and the Oroua River, and AFFCO and iwi are also part of the wider Oroua Catchment Care Group.

Section 7(b)

"the efficient use and development of natural and physical resources"

110. The Project promotes the efficient use and development of natural resources. The irrigation to land utilises and enhances the existing physical irrigation infrastructure and maximises the natural soil resource to sustainably accommodate treated wastewater. The Project also makes efficient use of AFFCO's existing treatment and storage ponds. Overall, the Project enables the continued operation of the Aorangi plant which is a significant district and regional physical resource valued at approximately $130m.

Section 7(c)

"the maintenance and enhancement of amenity values"

111. The Project maintains and enhances amenity values, including in the following ways:

(a) avoiding discharge into the Otoku Stream and providing irrigation buffer distances from waterways and boundaries;

(b) due to buffer zones and other management measures (including a weather station and wind direction and speed shut offs), the potential odour, and spray drift effects are acceptable and effects (if any) at the boundary will be minimal;

(c) construction effects of the new over land rock filter discharge system will be experienced for a very limited period and is minor in scale; and

(d) the additional irrigation systems are consistent with those already operated in the local rural environment.

Sections 7(d) and (f)

"intrinsic values of ecosystems" and *"maintenance and enhancement of the quality of the environment"*

112. The Project maintains and enhances the intrinsic values of ecosystems and the quality of the environment by enhancing irrigation of wastewater to land in a sustainable manner, and by significantly reducing water quality effects on the Oroua River. Where adverse effects have been identified, measures are proposed to remedy or mitigate the adverse effects to an acceptable level. Through the Project AFFCO is doing its fair share in enhancing the water quality of the Oroua River.

Section 8 Treaty of Waitangi

113. Section 8 provides that, in achieving the sustainable management purpose of the RMA, the Panel shall take into account the principles of the Treaty of Waitangi.

114. As set out above, AFFCO has undertaken considerable consultation with Ngāti Kauwhata as tangata whenua and the Project has been designed in light of the consultation (and the later CIA). AFFCO also proposes ongoing consultation with tangata whenua in relation to the potential over time for greater irrigation to land and also proposes that the same iwi work with AFFCO in providing for cultural health index monitoring. AFFCO and iwi are also part of the wider Oroua Catchment Care Group and AFFCO agrees with **Mr Emery's** evidence that this collaborative approach will hopefully provide long term sustainable outcomes.

Section 5 Sustainable management purpose of the RMA

115. The ultimate question for the Panel is whether granting the resource consent applications will promote the sustainable management purpose of the RMA.

116. The Environment Court in *North Shore City Council v Auckland City Council* described the application of section 5 as follows:[54]

> *"The method of applying s5 then involves an overall broad judgment of whether a proposal would promote the sustainable management of natural and physical resources. That recognises that the Act has a single purpose. Such a judgment allows for comparison of conflicting considerations and the scale or degree of them, and their relative significance or proportion in the final outcome."*

[54] (1996) 2 ELRNZ 305 (EnvC) at 347.

117. The matters in sections 6 to 8 inform and assist the consideration of the section 5 purpose:[55]

> *"The remaining sections in Part 2, subsequent to s5, inform and assist the purpose of the Act. We may accord such weight as we think fit to any competing consideration under Part 2, bearing in mind the purpose of the Act. These subsequent sections must not be allowed to obscure the sustainable management purpose of the Act. Rather, they should be approached as factors in the overall balancing exercise to be conducted by the Court."*

118. The Project will achieve the sustainable management purpose of the RMA. In particular, the Project:

(a) enables people and communities to provide for their social and economic wellbeing, in particular through the direct employment of 380 people, but more broadly supporting the economically significant agricultural sector in the district and region;

(b) sustains the potential of natural and physical resources to meet the needs of future generations, particularly by enhancing irrigation to land and significantly reducing water quality and cultural effects of the discharge of contaminants to the Oroua River;

(c) is consistent with the objectives and policies of the relevant planning documents, and the proposed discharge regime will meet One Plan water quality targets or, where they are not met (such as for DRP), will move significant towards meeting those targets consistent with the One Plan policy direction;

(d) enables the ongoing efficient operation of the approximately $130m Aorangi plant;

(e) has been developed by AFFCO to ensure that adverse effects on the environment will be appropriately avoided, remedied, or mitigated; and

(f) ensures that any residual adverse effects of the Project will be minimal and acceptable, and the scale and degree of such effects do not outweigh the significant benefits of the continued operation of the Aorangi plant.

---

[55] *Genesis Power Limited v Franklin District Council* [2005] NZRMA 541 (EnvC), at [53].

119. Ultimately, the Project refines the existing activities to provide significant environmental benefits by enhancing irrigation to land and significantly reducing the water quality and mauri effects of the discharge on the Oroua River. The Project, with the conditions proposed by AFFCO, achieves these significant environmental benefits in a manner that enables both flexibility in operation (and the ability to increase and decrease plant production) and the ongoing financial viability of the Aorangi plant in times of significant pressures within the meat processing sector. This will best enable investment in, and support the job and economic benefits from, the Aorangi plant.

120. The Project will achieve the sustainable management purpose of the RMA and, for that reason, the resource consent applications should be granted subject to the conditions as proposed by AFFCO.

EVIDENCE TO BE PRESENTED]

121. AFFCO will call the following witnesses:

    (a) **Ms Ann Nuku**;

    (b) **Mr Hamish Lowe**;

    (c) **Mr Peter Hill**;

    (d) **Dr Olivier Ausseil**; and

    (e) **Mr Hywel Edwards**.

David Allen / Annie O'Connor
Counsel for AFFCO

Appendix 1 – Jurisdictional issue

1. This section solely discusses a jurisdictional issue regarding a memorandum from a Mr Curtis of AECOM dated 2 November 2016 addressing air quality matters. Potential air quality effects are addressed below.

2. On 3 November 2016, after it had filed evidence, the AFFCO received a memorandum from Mr Curtis to Horizons dated 2 November 2016 regarding air discharge matters.

3. It appears that Mr Curtis reviewed the application in early 2015 and provided some questions which formed part of a section 92 request. The applicant responded to that request on 29 May 2015.

4. AFFCO understands that Horizons asked Mr Curtis to review that response in 2015 but then never provided the response, nor mentioned its existence, to AFFCO. In preparing for the hearing, AFFCO asked Horizons who would be preparing section 42A reports and was provided with a list of people and topics that did not include Mr Curtis nor air quality. AFFCO therefore prepared its evidence accordingly. However, it appears that Horizons asked AECOM to review the conditions attached to its section 42A reports but after they were finalised and provided to AFFCO and the parties to this hearing.

5. The memorandum must be rejected by the Panel. It was provided outside of the statutory timetable, without any justifiable reason, adds new technical material that had not been in issue after AFFCO had filed its evidence, clearly prejudicing AFFCO and submitters and breaching natural justice.

6. If the panel is minded to accept the memorandum, despite the above concerns, then the Panel should give it very little, if any, weight as:

   (a) although it is unclear, it does not appear that Mr Curtis will attend the hearing to present any 'evidence' and answer any questions (and abide by the Code of Conduct);

   (b) it is not apparent from the memorandum what expertise Mr Curtis may have;

   (c) the memorandum, despite being "*from*" Mr Curtis, is drafted in the third person (AECOM) and therefore provides no expert opinion;

(d) the memorandum is very short, failing to provide any robust analysis justifying AECOM's conclusions; and

(e) it is not apparent if Mr Curtis has ever been to the site such that he has an understanding of the existing system, its over 30 years of operation, its clean odour compliance and complaint history, and the local receiving environment.

7. Out of an abundance of caution, if the Panel is minded to accept Mr Curtis' memorandum, and even if it agrees to give it little weight, **Mr Lowe** addresses the matters raised in Mr Curtis' memorandum in his supplementary evidence. In the limited time available AFFCO has not been able to get an air quality expert to respond to AECOM's statements. The Panel must give more weight to the practical evidence of **Mr Lowe** even though he is not an air quality expert. AFFCO however accepts that the Panel can amend the conditions as proposed in **Mr Lowe's** supplementary evidence. If the Panel is minded to not accept **Mr Lowe's** practical evidence and instead apply anything in Mr Curtis' memorandum then, in order to ensure natural justice, the Panel must:

(a) adjourn the hearing in relation to air quality matters;

(b) provide directions as to the matters to be addressed with a timetable for evidence exchange to address those matters; and

(c) reconvene the hearing to hear the matters.

APPENDIX 2 – GOOGLE MAPS OF THE LOCAL AREA


South St
East St
South St
Johnston Park
Feilding Croquet Club
South St
Harris St
Owen St
Feilding SPCA
Awa St
Fruehauf Pacific
(Fruehauf Trailers)
Turners Rd
Edmay St
Aorangi Marae
Feilding Tyre Service
Darragh Rd
Turners Rd
Mahinui St
Waughs Rd
Mahinui St
Aorangi Rd
Durie Rd
Aorangi Rd
Durie Rd
Wallace Corporation
Hides & Skins Division
Affco New Zealand
- Manawatu Plant
Ratanui St
Matai St
Ratanui St
Campbell Rd
Waughs Rd
Aorangi Rd
Durie Rd
Matai St
Campbell Rd
Feilding Golf Course